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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
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Hemicrania or Sick-headache.

Under the name of cephalalgia, or headache, are included several complaints, having their seat in different parts of the cranium and its contents—viz., the bones, brain, or membranes. There are also various kinds of functional and temporary headaches, associated for the most part with disorders of the abdominal viscera, or symptomatic of all forms of fever. It would be highly instructive to consider all these varieties, with their causes, and they will be necessarily alluded to under special diseases; but there is one form which I shall dwell upon for a short time because it is so common and peculiar in its nature that it deserves a place by itself, and because, as far as I know, a good description of it has not yet found its way into Medical literature. The reason of this omission probably is that Medical men have cared little to make such a study of a mere functional disorder as they would of a more marked or tangible malady, and perhaps also because, personally, they have had no conception of the symptoms attending it. I once knew a very eminent Medical man of the melancholic temperament, who told me he had no conception of what was meant by the term headache. I am sorry to say that this is not my case, and therefore I take this opportunity to draw your attention to a malady the particulars of which are, for the most part, gathered from personal experience. I am alluding to the affection popularly known as sick-headache, or technically as hemicrania or migraine. Like many other complaints, it is hereditary, and in a most marked degree. Thus it is a complaint met with in members of particular families, and transmitted from father to son, whilst there are other families of different temperaments in which a headache is unknown. All the members belonging to a particular family may suffer, both male and female, and therefore the complaint is not to be considered as identical with the clavus hystericus, although the latter, I have no doubt, owns the same immediate cause. This might be included with hemicrania under the term nervous headache; but if, because styled hysteric, it be regarded as a trifling disorder, there can be no doubt that the true hemicrania is a reality of the gravest kind, unfitting its victim, while it lasts, for all the avocations of life.

Being so frequently associated with stomach disturbance, it is often styled a sick headache; head and stomach disorders standing in the relation of cause and effect, though constantly changing places. Remembering, however, that the gastric disturbance is often greatest when the primary cause is in the brain, the term hemicrania is not an unfit one; for, as a rule, although the pain may reach far over the head, it is most usually fixed to one spot, or is more concentrated on one side than the other. It may commence as a dull pain over the forehead, then, as it increases, pass down to one eye, and so to the temple, where it remains fixed. Exceptionally the pain is at the top or back of the head. The pain is sometimes so violent as to deserve the name of neuralgia, but generally it is somewhat duller and of a most sickening character. Its great peculiarity is the throbbing that occurs with each beat of the heart, aggravated by every movement of the body, and more especially of the head itself. The movements required for washing and dressing on rising can scarcely be endured. The sufferer walks slowly, since everything which tends to make his arteries beat a degree more violently adds to his misery; in his head he perpetually hears or feels "throb," "throb," "throb," and his only relief is to support the head against a pillow or rest it on the hand, and avoid all possible excitement. His whole attention is distracted by the painful throbbing, and he becomes utterly incapacitated for business; every movement, every word spoken aggravates the pain. His only desire is to be let alone and be unspoken to. During this time he looks exceedingly ill, very pale, with a dark margin round the eyes, and the pupils contracted; there is a general feeling of chilliness over the whole body, excepting the head; the pulse at the wrist is feeble, whilst that in the head is strong. The anorexia is complete; the loathing of food so great that it is often impossible to swallow a single mouthful of food, and sometimes there is actual vomiting. In a bad attack the stomach generally refuses food for twenty-four hours. There may have been no error of diet to account for the attack, nor any constipation of the bowels, as is often thought; although a disturbance in these parts is often one of the symptoms of the complaint. The duration of a bad attack is generally several hours. If the person awake with it, the headache persists during the day, and it is only after another night's rest that he rises free. If it should come on during the day, it gradually increases in force, and then the night brings little comfort, for the throbbing, aching head entirely precludes sleep. When the attack is less severe, there is, fortunately for the sufferer, a strong disposition to slumber—he lays his head against any surface, and readily sleeps. I have observed in my own case that if, during the evening, I feel sleepy, and on lying down, very quickly become insensible, on the following morning I rise with the headache. How far the sleepiness induces the subsequent attack, or how far it is a mere symptom of the approaching disorder, I am uncertain, but I am inclined to think the latter.

Now, as to the cause of this misery. I have already said that whilst the body is cold the head is hot, and that whilst the radial artery is small the carotid is full: in fact, if the term determination of the blood to the head is applicable to any malady, it is assuredly to this. This irregularity in the circulation due to nervous influence has created much interest of late years, as I have already told you in describing various diseases. It has been clearly shown that the blood-vessels are regulated in calibre by the sympathetic nerves, and that the supply of blood is immediately under nervous control. Now, in this complaint of which I am speaking, the carotid on one side with its branches is dilated, throbs inordinately, and sends too much blood to the brain and its coverings. The fact I knew when quite a boy, for when leaning my head on my hand I distinctly felt the increased size of the throbbing temporal artery on the side of the pain, which would be sometimes on the right and sometimes on the left side. I remember mentioning the circumstance to more than one Medical man, and they received the statement with incredulity. I knew it, however, to be a fact, nevertheless, and am sorry to say I have been too fully aware of it up to the present day. The fact is, that in this dilated throbbing carotid and its branches lies the source of the trouble. The vaso-motor nerve on one side is for the time paralysed, the vessels of the head dilate, more blood is sent to it; and thus the increased heat, throbbing, and pain which the patient has to suffer until the tone of the nerve is restored. The most important question to solve is the immediate cause of the function of the nerve being thus temporarily in abeyance. Since a stomach derangement usually accompanies the hemicrania, it is very frequently thought that the source of the trouble is always gastric, and that medicine of a particular kind will relieve. That this is partially true is no doubt correct, but just as frequently the complaint arises from a direct influence on the nervous system. Besides, if arising from the stomach, the cause is not the same as that which operates injuriously in the mass of people from over-indulgence in eating and drinking, and which produces a more general headache in consequence, but the cause is a slighter one, and dependent upon a number of trivial circumstances which the sufferer himself alone could detail. It may be said, no doubt with truth, that gastric derangement is a very common exciting cause in those who are subject to the complaint, but very frequently no cause for the attack is apparent, and certainly none attributable to the stomach. When the cause is evident, it is very often one which has acted directly on some portion of the nervous system, and to the non-susceptible would scarcely be credited with so powerful an operation. Thus all worry, excitement, or overwork will readily produce a headache; walking in the sun is a very sure method of inducing an attack; strong impressions on the olfactory nerve, as the smell of paint, and in some persons the odour of spring flowers; also impressions on the retina, as long use of the microscope, or a protracted visit to a picture gallery. An atmosphere overcharged with carbonic acid is one of the most fruitful sources of headache, as that of a crowded assembly-room, and what would affect myself at once and in the most intense degree would be the presence of unconsumed carbon from candles or lamps. Loud noises in the ear will also cause a headache; and, in fact, it would seem that a strong impression made upon any part of the nervous system is sufficient to induce an attack. Probably derangements of any organ might also bring it on, as of the stomach, which we constantly see, and in women the uterus, more especially at the catamenial periods. Some of the most violent attacks which we witness are in women at these periods. There are those who are doomed

every month to an illness of a few days, with intense headache, prostration, and sickness; if there be much uterine pain, the case is styled one of dysmenorrhœa, and the cause attributed to the uterus, which may or may not be true. Those, both men and women, who are thus liable to these violent headaches are proscribed many of the pleasures of life, since irregularities of any kind are so apt to lead to their wonted complaint. Under the most favouring circumstances, however, it is my experience that they can never escape an occasional attack.

As such trivial causes are sufficient to induce an attack of this hemicrania or migraine, it might be supposed that some equally slight circumstance might be sufficient to counteract or cure it. I should think it probable that such is the case, although, after long searching for the remedy, I have not yet discovered it. Certainly the ordinary aperient doses which the Medical man so commonly prescribes for a headache are useless; besides, the attack may have spontaneously subsided before there could be any expectation of a result from the medicine. The act of vomiting, however, does in some cases afford very speedy relief. This is not by getting rid of any crudities, for the stomach may be empty, and therefore the effect must have been through the nervous system. As regards stimulants, as a rule they cannot be prescribed; they often aggravate the complaint to an intense degree, although I have found that in some milder cases a little brandy-and-water or a glass of champagne has, after a short period, been apparently beneficial; sometimes a cigar. Of all remedies, perhaps tea is the best, but I am not quite certain what amount of benefit is to be ascribed to the tea and what amount to the hot water. Tea, of course, is well known to have a direct and marked action on the nervous system, and thus it might appear absurd to raise a doubt as to its efficacy did not I know more than one person who obtains more relief for a headache by sipping very hot water than by any medicine which has ever been prescribed.

Those who have any knowledge of the perpetual and horrible throbbing in the brow or temple, also know that nature prompts relief by pressure on the aching part. The leaning the head against the hand or other object is in obedience to what instinct dictates. On lying down, the aching brow is always pressed against the pillow. By more direct and intentional pressure a more marked relief is obtained. Thus, a pressure on the carotid in the neck will produce a suspension of the throbbing and the pain, but the effect is only for a time, as the blood apparently soon finds its way to the head by other channels. Although the use of pressure may at the present time have a show of reason, it has no doubt always been adopted at the dictate of nature. It is probable that Medical authors may allude to the method, but we need only go to our own Shakespeare, who appeared to be possessed of universal knowledge, to lead us to the belief that it must always have been in common use. Thus, in the scene between Hubert and Arthur, in King John, when the latter is petitioning for the preservation of his eyes:—

> "When your head did but ache,
> I knit my handkerchief about your brows."

Also, as you know, in "Othello" the main feature of the play lies in the loss of a handkerchief, which Desdemona produced for the object I have been mentioning.

> *Desdemona.* Why do you speak so faintly?
> Are you not well?
> *Othello.* I have a pain upon my forehead here.
> *Desdemona.* Faith, that's with watching; 'twill away again:
> Let me but bind it hard, within this hour
> It will be well.

Then, again, besides pressure, the application of cold gives relief, as a wet cloth bound round the temples. I have already alluded to the effects of cold and heat upon the nerves, and the resultant influence on the blood-vessels; thus, cold is said to depress the action of the nerve-centres or ganglia, and heat to excite it; consequently the former would be used when we wished to remove nerve stimulation and cause a greater flow of blood, whilst heat would be used for a contrary purpose to check hæmorrhage—at least, I believe it is said, for example, that heat to the spine will repress hæmorrhage from the uterus, whilst cold would produce warmth in the extremities. However this may be, and supposing the theory true, there may be immense difficulties in the way of making the application to the appropriate part; it is cold, and not heat, which affords most relief in this form of headache. It may be that the cold acts directly on the vessels to constringe them, and thus causes their diminution and lessened blood-supply. The object required is to lessen the size of the vessels, for it is certain that whilst the pulse at the wrist is low, and the whole body inclined to be cold, the head is hot and throbbing. As the cause is nervous, our agencies should be directed to the fountain-head, and thus it is by no means improbable that something may be discovered which may have the power of stimulating the sympathetic in the neck, and cure the malady. For this purpose various remedies have suggested themselves, and I am not sure that in nux vomica some efficacy may not be discovered. Theoretically galvanism to the neck or head would be beneficial. I have only used it a few times, and with some success.(a)

The immediate seat of headache is not known; various opinions have been given. Many have denied that it is in the brain itself, seeing that the organ may be diseased in various ways without pain being present. Some have considered that the pain resides in the dura mater, and occurs through the branches of the fifth nerve which are distributed to this membrane. Briquet, who has in his investigation of various hysterical conditions shown that many local pains are in the muscle, or myalgie, considers that headache is of the same kind, the seat of it being in the temporal and occipito-frontalis muscles. I suppose that one's own feelings ought not to influence the judgment; otherwise it would be thought that the pain is situated in the very depths of the brain itself.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON
THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,
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LECTURE III.

OF THE GERMINAL MATTER OF THE TISSUES OF THE BODY—VERY SOFT CONNECTIVE TISSUE—WHITE FIBROUS TISSUE—YOUNG AND OLD WHITE FIBROUS TISSUE—REPAIR—GERMINAL MATTER OF THE CORNEA—OF YELLOW ELASTIC TISSUE—OF CARTILAGE—OF THE GERMINAL MATTER AND OF THE FORMED MATERIAL OR MATRIX—OF ARTICULAR CARTILAGE—OF THE GERMINAL MATTER OF FIBRO-CARTILAGE—JUNCTION BETWEEN CARTILAGE AND TENDON—OF SPONGY AND ELASTIC CARTILAGE.

(*Continued from Vol. II.* 1868, p. 693.)

YELLOW ELASTIC TISSUE.

THE germinal matter of yellow elastic tissue is so very indistinct in specimens examined in the ordinary way, that many authorities have concluded that this tissue is altogether destitute of this substance, and that its formation is not due to nuclei or cells (germinal matter). It is, however, obvious, that in ordinary specimens the small masses of perfectly clear, transparent, structureless germinal matter would be completely hidden by the highly refractive, firm, well-defined fibres of the elastic tissue. But no difficulty is experienced in detecting the germinal matter of this tissue, if it is prepared according to the plan I have described. The carmine fluid tinges the germinal matter of this as well as every other kind of tissue; and in properly prepared specimens oval masses of germinal matter are seen adhering to the fibres of yellow elastic tissue, and bear to it the same relation as the germinal matter of some other tissues to the formed material of these. The germinal matter of yellow elastic tissue is so easily demonstrated in young ligamentum nuchæ, as in specimen No. 39 from the lamb, in which the oval masses are seen so distinctly and in such great numbers, that you will feel surprised that any doubt should exist on this point. By careful examination fibres may be found in various stages of development, from the thinnest and scarcely visible line to the well-known distinct cylindrical fibre. The germinal matter is seen as an oval mass upon one side of the fibre, and passing from either extremity to the surface of the fibre may be detected, with the aid of high powers, an extremely delicate tissue, which is probably soft and imperfectly formed yellow elastic ligament. In the case of some of the larger fibres, I have been able to trace a gradual alteration in density of the delicate tissue just referred to in proceeding

(a) Since this lecture was delivered, the late Dr. Kennion, of Harrogate, recommended the local application of the vapour of the bisulphide of carbon. I am now prescribing it, and, I think, with benefit.

from the mass of germinal matter towards the fibre until the firm dense texture of the actual yellow elastic tissue is reached. The tissue thus produced contributes to the thickening of the fibre. The appearance seen in many cases is such as to justify the conclusion that the germinal matter moves along the surface of the fibre, leaving behind it as it goes a small proportion of soft formed material, which gradually undergoes condensation, and becomes slowly converted into yellow elastic tissue. In this way each fibre may be increased in thickness. Of the origin of the finest fibres of yellow elastic tissue from oval masses of germinal matter, there will not be the slightest doubt in the mind of any one who examines properly prepared specimens of this tissue at an early period of its development. Other forms of yellow elastic tissue from the ligamenta subflava, vocal cords, coats of arteries and veins, and from other parts, also contain masses of germinal matter, which may be demonstrated in the manner I have referred to.

Ligamentum Nuchæ of the Giraffe.—The fibres of the ligamentum nuchæ of the giraffe are very large, and remarkable for exhibiting at short intervals transverse markings, which were first noticed by Professor Quekett. These markings are situated in the internal part of the fibre, and do not usually extend quite to its outer surface. They probably depend on contraction of the oldest part of the formed material taking place after its formation. Unfortunately, I have not had an opportunity of obtaining a portion of fresh ligamentum nuchæ of a giraffe, so that specimen 39* is defective in not exhibiting the germinal matter of this form of yellow elastic tissue.

Cartilage.

In the next place I propose to refer to the germinal matter of *cartilage*, a tissue which possesses many points of interest, and which has formed the subject of many an anatomical controversy. It is generally supposed that cartilage is composed of "*cells*" and "*intercellular substance*," and that the latter is formed and deposited in the intervals between the former, the cells being embedded in the intercellular substance as bricks are embedded in mortar. No one, however, who has studied the changes taking place in cartilage during its formation can accept this doctrine, for he will find that at an early period cartilage, like other tissues, consists of spherical masses of germinal matter only, around each of which is the merest trace of soft and delicate formed material. The observer will be able to satisfy himself that the germinal matter is in direct continuity with the formed material which exists, and in some forms of cartilage from the frog the passage of the one material into the other and their continuity can be most positively demonstrated. As the cartilage advances in development it will be found that the formed material between the masses of germinal matter increases in proportion, so that, if several specimens of the same kind of cartilage be taken from the same part of the body of the same species of animal at different ages, the proportion of germinal matter corresponding to a given bulk of cartilaginous tissue gradually diminishes as the tissue advances in age. In this drawing, sections of the sternal cartilage of the kitten at birth, of the cat six weeks and three months old, and of the full-grown animal, are represented, and the fact just referred to is clearly indicated. (See also specimen 45.) In this way it will be seen that the equable increase of the cartilaginous tissue in all directions is effected, and the expansion of the whole, without folding, crumpling, contraction, or stretching of any part, is beautifully provided for.

In those specimens of cartilage in which each individual mass of germinal matter divides so as to produce clusters of four or more, and these again divide to produce secondary or tertiary clusters, it will be found that the quantity of formed material between the primary clusters is greater than that between the secondary and tertiary clusters, a fact which receives ready explanation upon the view of the formation of cartilage just given. As growth proceeds, the deposition of cartilaginous tissue takes place more slowly, while, by the condensation of that which has been already formed, room for the addition of new tissue is obtained. As the cartilage approaches its fully formed state, the tension resulting from the deposition of new tissue containing much fluid immediately around the germinal matter gives rise to a slight difference in refraction of the formed material in this situation, and it appears glistening and more translucent than the tissue generally.

It not unfrequently happens that, in adult cartilage, the germinal matter becomes detached from the formed material, and appears as a spherical or oval body with a dark outline, lying in a cavity (vacuole or closed space) in the so-called matrix of the cartilage. The surface of the mass of germinal matter may afterwards become further condensed, and thus results the appearance which has led many to the conclusion that a true cell wall or cell membrane encloses the remains of the germinal matter. The examination of old cartilage in which these changes have occurred has led many observers to infer that complete "cells" occupied spaces scooped out in the matrix, while others thought that these cells were first formed, and the matrix deposited from the blood in the intervals between them independent of any cell action whatever.

Such doctrines as these could only be maintained and taught by those who were contented with the conclusions arrived at from the examination of fully formed cartilage, without studying the characters of the tissue at different periods of its development.

Of the Formation of the Septa or Partitions between the Cells.—The formation of the so-called septa between the cells or masses of germinal matter has been explained in different ways. Instead of the germinal matter being considered as the active, growing, living part of the cartilage, it has been supposed that the formed material *extends itself inwards* into the germinal matter, and divides this substance into two or more parts; but it need scarcely be said that this matrix, like other kinds of formed material, is perfectly passive: it may be added to, but it has no faculty of formation, nor can it move. It is very surprising that this view should still be entertained, because any one can so easily demonstrate that the germinal matter always exists before the formed material is produced, and that the latter is never found without the former having been present. In specimen 12, Lecture I., some masses of germinal matter are actually seen in process of dividing. They have been stained with carmine, and preserved while they were undergoing the change in question. In one there is a deep fissure, but in a neighbouring mass there is a mere indentation on one side, indicating the spot at which the division is about to occur. Any one who examines these specimens will, I think, feel satisfied that the process does not differ essentially from the change which occurs in the amœba and the mucus corpuscle when these masses of germinal matter undergo division; while I am quite sure no one would maintain that the appearance results from the ingrowing of the matrix or formed material of the cartilage. After cartilage tissue has been formed it often undergoes a certain amount of change. A fibrous appearance sometimes arises in that part of the matrix which was first formed. This probably depends upon contraction taking place in the oldest part of the formed material, but in certain forms of cartilage fibres are developed from distinct masses of germinal matter lying in the interspaces between those which are termed the cartilage cells. These masses of germinal matter are often so very small that their presence has been entirely overlooked.

Junction between Cartilage and Tendon.—Wherever different tissues are connected with one another, the formed material of the one passes by continuity of structure into that of the other. This point is well seen in the case of cartilage and tendon. In specimen 40 the fibrous tissue of the tendon gradually shades into the apparently homogeneous matrix of the cartilage. Muscle is seen to pass into tendon, and the latter into cartilage, by continuity of tissue, and in each of these three textures we observe masses of germinal matter bearing the same general relation to the formed material of the respective textures, which differ so very much in physical proportion, chemical composition, structure, and action.

In many cases very gradual transition may be traced from cartilage to white fibrous tissue. The external limitary structure of membraniform cartilage called *perichondrium* is distinctly fibrous, with elongated masses of germinal matter; but beneath this are larger masses, which assume more and more the character of those belonging to cartilage as we recede from the surface. It is immediately beneath the perichondrium in growing cartilage that the chief multiplication of the masses of germinal matter takes place, and masses which at one time belong to the perichondrium, at a later period are surrounded by the cartilage tissue which they have gradually produced.

Cellular Cartilage from the Mouse's Ear.—Some forms of cartilage are said to be destitute of matrix or intercellular substance, and to consist of "cells" only. Specimen 43 is a good example of what has been termed purely cellular cartilage. It is from the thin part of the ear of a young white mouse. In one part some very young cells or elementary parts are seen in the course of formation. The germinal matter is very distinct, and lies upon the surface of the formed material, which is seen as a roundish mass of delicate transparent tissue. This form of cartilage is formed somewhat differently from ordinary cartilaginous tissue, for the formed material corresponding to each mass of germinal matter is distinct from that of adjacent masses.

Instead of expanding uniformly in all directions as it grows, it forms a thin lamina which increases quickly in extent by the formation of new cells at its free edges. Its increase in thickness is very slight in comparison with its increase in extent, and takes place very slowly.

In the *spongy cartilages*, as, for example, the epiglottis and some of the other cartilages about the vocal apparatus, are many fibres reacting like yellow elastic tissue. Of these many are very fine, and so arranged as to form the boundaries of oval spaces, in each of which a mass of germinal matter is lodged. This is often angular, and from the angles delicate fibres may be traced, which are at length lost amongst the plexuses of those which form the tissue itself. It is probable that these masses of germinal matter slowly move round the cavity, and form the delicate interlacing fibres which accumulate, and constitute the elastic walls of the oval and circular spaces characteristic of this form of tissue.

Few who have not examined specimens prepared according to my method will be disposed to accept the view of the structure and formation of the tissue here given. It is strongly opposed to the doctrines generally taught, which have been arrived at from studying sections immersed in water, serum, or other limpid fluid, in which it is impossible to discern the real arrangement of the elements of the texture. It is, however, quite useless to discuss the question with those who persist in preparing specimens by drying and boiling, and such structure-destroying operations.

In disease the germinal matter of cartilage, being supplied with an undue proportion of pabulum, increases. The formed material becomes softened by the altered characters and increased proportion of fluid which traverses it. The germinal matter may even appropriate the formed material itself, as we found happened in the case of the formed material of mildew, epithelium, and other kinds of this substance. The increased access of pabulum continuing, the masses of germinal matter may at last multiply to such an extent as to form a very soft pulpy texture quite unlike cartilage, or they may divide and subdivide with still greater rapidity, so as to produce pus.

Fibro-Cartilage.—Although this tissue, in its fully developed state, differs remarkably in structure and properties both from fibrous tissue and cartilage, at an early period of development some forms of it could not be distinguished from embryonic cartilage. The fibro-cartilage of the vertebral discs, at an early period of formation, approximates very closely to certain forms of fibrous tissue. In all cases germinal matter takes part in the formation of the fibrous-like tissue and the transparent cartilaginous matrix. The former does not result from the latter, nor are the two kinds of tissue produced by the "differentiation" of an originally homogeneous plasma, as some have supposed, nor is the fibrous tissue the consequence of a process of "fibrillation" occurring in a previously transparent cartilage matrix. If this complex tissue be studied at different periods of development in specimens prepared according to the process I have described, it will be found that the mode of its formation differs in no essential particulars from that which obtains in the case of many other textures which we have already considered. *Why* some of the masses of germinal matter produce the peculiar substance we know as cartilage, and others give rise to that called fibrous tissue, is a question which cannot be satisfactorily answered. We are equally incompetent to tell *why* some masses of germinal matter form *muscle*, others *nerve*, others *epithelium*, and so forth. But it is very important to ascertain if the different kinds of tissues are formed according to one general principle, or if the processes which lead to the production of tissues differing much in structure, composition, and function, are essentially different in their nature. There is good reason for thinking that the conditions present exert a certain influence upon the formative process, because the formed material resulting varies to some extent if the conditions under which its production takes place be modified. But, on the other hand, it is quite certain that no conceivable alteration in external conditions will cause the germinal matter which was to produce muscle to give rise to nerve, cartilage, or elastic tissue. And yet each of these kinds of germinal matter, instead of producing its characteristic formed material, might, if the conditions were modified, form connective tissue instead. Altered conditions may cause a given kind of germinal matter, which, under favourable circumstances, would form a high tissue of a special kind, with peculiar properties, to produce a low, simple kind of connective tissue: but under no circumstances do altered external conditions determine the production of a texture higher than that which the germinal matter was destined to produce originally. The formative powers of germinal matter seem readily to deteriorate or retrograde, but never to advance under the influence of altered external circumstances.

LIST OF MICROSCOPICAL SPECIMENS ILLUSTRATING LECTURE III.

No. of Specimen.		No. of diameters magnified.
35.	Simplest form of connective tissue; lamb, at a very early period of development, showing germinal matter and tissue	215
36.	Simplest form of connective tissue; human subject, at a very early period of development, showing germinal matter and tissue	215
37.	Tendon at birth, showing rows of oval masses of germinal matter very near to one another	215
38.	Tendon; old man, age 74, showing rows of oval masses of germinal matter, separated from one another by much tissue	215
39.	Yellow fibrous tissue, showing oval masses of germinal matter	215
*39.	Yellow fibrous tissue; lig. nuchæ giraffe, showing transverse markings	215
40.	Junction of fibrous tissue and cartilage, frog; showing germinal matter of both tissues	215
41.	Fibrous tissue of the cornea, rabbit; showing stellate masses of germinal matter which anastomose with one another in many situations	215
42.	Germinal matter of growing fibrous tissue; green tree frog	215
43.	Cartilage, mouse's ear; showing germinal matter and cartilage cells	215
44.	Cartilage, rib; very young lamb; showing multiplication of germinal matter near external surface	215
45.	Cartilage, rib of kitten one day old (above), of adult cat (below); showing different proportions of germinal matter and formed material	215
46.	Articular cartilage and subjacent bone, human finger	130
47.	Fibro-cartilage, intervertebral discs; kitten, one day old	215
48.	Germinal matter of spongy elastic cartilage; epiglottis	215

ORIGINAL COMMUNICATIONS.

NOTES OF

INTERESTING SURGICAL CASES.

By J. FAYRER, M.D., F.R.S.E.,

Companion of the Order of the Star of India, Professor of Surgery and Senior Surgeon to the Medical College Hospital, Calcutta.

Removal of a Fibrous Tumour from the Thigh.

On June 11, 1868, I removed a large fibrous tumour from the inner side of the right thigh of a Mahomedan, named Ismael Khan, aged about 20 years. The tumour had been growing for about three years, and lately had been painful as well as inconvenient from its size. It was situated on the inner aspect of the thigh, and was firmly attached by deep-seated adhesions to the rami of the ischium and pubis. It was partially movable, and was very dense and unyielding. Its growth had been so rapid lately as to be suggestive of malignancy, but the lad looked healthy and had no other indication of being of a carcinomatous diathesis. The tumour formed a large swelling on the upper and inner side of the thigh, and it had begun to interfere with the use of the limb. There was no swelling of the lower extremity, although the femoral vein and artery were subjected to considerable lateral pressure; he said, however, that at times the leg did swell.

I determined to attempt its removal, as its rapid growth threatened serious consequences, and accordingly I proceeded to do so by making a vertical incision about ten inches in length along the inner side of the thigh in the axis of the tumour, and corresponding to the direction of the gracilis muscle. On dividing the integument and fascia, I found that the tumour was covered by the gracilis, which was stretched out like a membrane over it. Dividing this transversely, I then, by a process of dissecting and tearing, exposed the tumour, which lay between the adductors and muscles on the anterior surface of the thigh, having deep adhesions, which were very firm where it was connected with the

rami of the ischium and pubis. This I was obliged to divide with the scalpel, the remainder being enucleated by dissection. The femoral vessels were pushed to the outer side. The hæmorrhage during the operation was rather profuse, and several ligatures were applied: one large and deep branch, probably of the obturator, was troublesome. He became rather low on the table, but, on the whole, bore the operation well. All bleeding having ceased, and the surface of the deep cavity having been sponged with carbolic acid, the edges of the wound were brought together with horsehair sutures, and he was put to bed, having rallied under the influence of stimulants. The operation was necessarily a tedious one, but he was kept under the influence of chloroform throughout. The carbolic oil dressing was applied, and continued throughout. He made a very good and rapid recovery. The wound granulated with less suppuration than I ever remember to have seen in a similar wound. He had slight irritative fever and temperature of 103° for a few days, but subsequently he had no untoward symptoms, and was discharged from the Hospital on August 11, just two months after the operation, in excellent health, with the wound almost cicatrised. A trip to sea with his master completed the recovery, and he is now in perfect health, and the wound has left a lineal scar which causes him no inconvenience. The tumour was examined by Dr. Ewart, and proved to be of dense fibrous tissue, with no indication of the existence of carcinoma.

Wolf-bite of Forearm, followed by Necrosis—Hæmorrhage, Ligature of the Brachial Artery, and subsequently Excision of Elbow-joint.

A Hindoo named Issur Suddoo was admitted, on September 9, 1868, with necrosis of the central portion of the shaft of the right radius, the consequence of a bite from a wolf inflicted about seventeen months ago. The arm was distorted from shortening of the radius, the styloid process of the ulna prominent, and the hand twisted towards the radial side. The elbow-joint was perfectly anchylosed in the extended position of the forearm.

On examination of the two sinuses leading to the dead bone, I ascertained that there was a sequestrum detached, and requiring removal.

On September 13 I removed the sequestrum, and to do so it was necessary to enlarge the sinus. In making this incision an artery of some size was wounded, and the hæmorrhage was profuse, but it was arrested by graduated compress and bandages. Hæmorrhage recurred several times, and exhausted him very seriously. It was impossible to find the bleeding point, though every effort was made to do so.

On the 16th, as hæmorrhage had again recurred, I applied a ligature to the brachial artery, at the junction of the lower with the middle third. This arrested the hæmorrhage, and it did not return. The wound rapidly healed, the ligature having come away, and by October 17, the wound and the sinuses having all closed, I performed excision of the elbow-joint by the H-shaped incision. On exposing the bones, I found the joint firmly united by bony anchylosis. The olecranon was first sawn off, and next the bony adhesions between the humerus and ulna were divided. The ends of both were sawn off, but the head of the radius was preserved. The wound was closed, after the application of several ligatures, with wire sutures, and dressed with the carbolic oil dressing, and placed at rest on a pillow in the extended position, on a straight splint placed along the anterior surface of the arm. The wound healed rapidly, and with very little suppuration. Passive motion was begun as soon as the transverse incision had fairly united, and was carefully practised daily. His general health improved, and he soon recovered from the loss of blood.

He is now (on November 28) doing well. He begins to move the arm, and it is probable that, notwithstanding the loss of bone, the distorted condition of the wrist-joint, and the excision of the elbow-joint, he will have an arm that will be of some use to him.

The case is interesting from the sequence of operations on the same limb—the bite, then the removal of the sequestrum, next the attempts to arrest hæmorrhage, the ligature of the brachial artery, and finally the excision of the joint.

Traumatic Tetanus treated by Chloroform, Hemp, Ice to the Spine, Opium-smoking, and Section of the Median Nerve.

A Mahomedan, aged 25 years, was admitted (on September 11, 1867) with a severe lacerated wound in the palm of the left hand, inflicted the day before by a piece of wood falling on it. The wound extended from a little above the middle of the wrist outwards and downwards to the inner aspect of the root of the thumb. It was about four inches in length. Another wound extended from the same point along the centre of the palm halfway to the fingers. There was considerable hæmorrhage at first. The hand and fingers were also much swollen. The wounds were dressed with the carbolic acid and oil. Quinine and tinct. ferri muriatis were ordered.

In the course of a few days the swelling subsided; the wound suppurated, but not excessively. There was very little constitutional disturbance. The surface of the wound was granulating healthily, and all seemed progressing most favourably until September 30, when symptoms of trismus set in. The muscles of the jaw and neck became rigid, and he complained of pain in the muscles of the back. A mixture containing chloroformi mx., ext. cannabis gr. ij., mucilag. ʒj., mist. camph. ʒj., was prescribed, to be given every third hour, and an enema of ol. ricini ʒij., ol. terebinth. ʒj., tinct. assafœtidæ, æther. sulph. āā ʒij. in a pint of tepid water every six hours, with a nourishing diet of beef-tea and port wine to be given as much as the contracting state of the jaws would admit of.

The trismus gradually increased, and the tetanic condition became general. The lower extremities became more rigid than the upper. He still retained the power of partially opening his mouth and swallowing fluids. He was also made to smoke opium, and had ice applied to the spine.

Under this treatment he continued much in the same condition for seven days, when the symptoms became worse, for he had violent fits of tetanic spasms on the slightest irritation, if touched, or if a current of air came in contact with his body. In the hope of affording relief in this very critical state, I cut down on the median nerve above the wrist, and divided it. I was led to this from having seen good results in a former and similar case, in which, as in this, it was evident that the median nerve was the channel by which the irritation was conveyed to the nerve-centres.

The improvement was not immediate, but on the second day it began to manifest itself. The rigidity diminished generally, the patient opened his mouth more freely, the number as well as the severity of the fits diminished, and the improvements continued until October 23, when all tetanic spasm had ceased. During this time the chloroform, hemp, and opium-smoking, with a nourishing diet, were continued. The bowels were also kept freely open with enemata, and ice applied to the spine. The wound healed, and had completely cicatrised on December 10, when he was discharged. The cicatrix contracted, and the hand was distorted, being flexed towards the forearm, with an inclination inwards. He had regained perfect sensation in the fingers, and could move them, but the hand is permanently crippled and partially atrophied. This is, no doubt, due mainly to division of the nerve trunk, and it was remarkable how little sensation seemed to be affected by it, both at and after the operation.

The same wasting and contraction took place in the former case to which I have alluded, and in time it was to some extent remedied; but a certain amount of distortion, I fear, is permanent in both cases.

I think there can be little doubt that the division of the median was beneficial, and I believe that if the particular nerve trunk which conveys the irritation to the centre could be early isolated and divided, the treatment of traumatic tetanus would be more satisfactory than at present. The cases in which this isolation could be made certain are, of course, rare; but it suggests the reconsideration of early amputation in this dreadful disease.

Due credit must be given to the powerful remedies that were administered throughout the treatment, but it is remarkable that improvement commenced and progressed only after the division of the nerve.

I would here remark, with reference to the use of carbolic acid in the treatment of wounds or breaches of continuity, that its chief use is in the earlier stages before repair has commenced—that is, before healthy granulations have appeared. When this has occurred, I believe that, in ordinary circumstances, it is better to lay aside the carbolic acid, for it is detrimental to all development and retards, rather than expedites, repair. But I believe that in the earlier stages of treatment of wounds, abscesses, etc., it is invaluable, and should be generally resorted to. I propose trying petroleum, which is abundant in some parts of Assam and Burmah, as an antiseptic, in the cases in which carbolic acid is now used.

SCARLATINA produced 67 deaths in London in the week ending December 26, and 1580 in the fourth quarter of the year 1868.

ON EXCISION OF THE KNEE-JOINT.

WHEN ARE WE TO EXCISE?

By THOMAS BRYANT, F.R.C.S.,
Assistant-Surgeon to Guy's Hospital.

The subject of the excision of joints has been fairly before the Profession for some years, and a large amount of material has been collected to help the Surgeon to solve the many questions which it contains. Nevertheless, it can hardly be said that the Professional mind has yet quite formed a decision upon any of the points on which our Surgical practice should be based, or has any definite rules on which the practice of excision should be carried out.

It may, however, be confidently asserted that, in a general way, most Surgeons now admit the excision of a joint to be a justifiable operation, although of all joints this opinion is only partially true. In the shoulder- and elbow-joints it is true to a degree, and yet how diverse is the practice of different men at the different Hospitals with respect to these articulations! In one institution a shoulder- or elbow-joint will be excised directly sufficient evidence exists that the joint, as a movable articulation, has become seriously damaged; in another such a practice will only be followed when all hope of obtaining a cure by natural processes has been abandoned, and some operative measure is imperatively demanded. With the hip-joint some Surgeons now deny its value and even its necessity; and with the knee the battle is still being fought out by rival schools; with the wrist and ankle there is still less unanimity, and, it must be added, still fewer facts upon which opinions can be formed.

In the following paper I propose to consider some of the questions which appear to require a solution, and I do so with the hope that other Surgeons will add their contributions to the subject, and thus help to solve the many points involved in them.

My remarks will chiefly apply to the knee-joint, for it has been in reference to the operation as applied to this articulation that the great battle of excision has been fought, and in a measure won; for, in a partial sense, the question has been decided that in certain cases the operation of excision of the knee is justifiable, if not a good operation; in this most men, if not all, are now agreed.

But when is excision to be performed?

Is it to be postponed till the articulation has been thoroughly disorganised, and the health of the patient so undermined by the local disease as to render some operative proceeding a matter of necessity? Is it to be a question between excision and amputation in the last stage of joint disease? or is excision to be performed as soon as evidence clearly exists that the articulation is seriously involved in organic disease—osseous or synovial—and that a sound or useful joint is not to be secured to the patient within a reasonable time by the expectant treatment?

These questions will be answered according to the particular bias of the individual Surgeon to whom they may be addressed. Those who practise the operation of excision freely would by no means consent to the first query I have just written, for, as a rule, they act upon the principle involved in the second; whilst those who regard the operation of excision with only partial favour would give a favourable answer to the first question, and negative the last, for they maintain that natural processes are amply sufficient to perfect a cure from the most destructive joint disease in the majority of cases, although that cure may be by anchylosis, and that the Surgeon is not justified in performing such a serious operation as resection of a large joint until Nature's powers have been proved wanting, and some operative measure is absolutely demanded to save life.

Some Surgeons maintain, moreover, that there are less severe measures than resection at their command, through which a natural recovery can be obtained, and amongst them a free incision into the articulation is the foremost.

It must be admitted, moreover, that these arguments are tolerably strong; they are supported by a long array of facts, the accumulation of ages, for these show that Nature's processes, assisted by art, are amply sufficient to effect a cure in the most severe forms of joint affection, although that cure may be by anchylosis. And it is well that every Surgeon should have strong faith in the power of Nature's processes to cure disease, and that he should not rashly interfere with them in any case, nor attempt to do by art what can be done without, for such a principle of practice is the basis of a scientific surgery, and without it our art would cease to be a science.

But are there no other elements in the case which should be taken into account? The advocates for an early excision say there are. They admit the force of the arguments I have already stated; they admit that natural processes are sufficient to effect a cure in joint disease even of the severest type; they recognise the principle that Surgery should not hastily interfere with a natural recovery, and that good grounds should always be given before Surgical interference is sanctioned in any case; but they believe in this question of excision—they possess such arguments, and, whilst admitting the possibility of natural processes curing severe joint mischief, they dwell upon its uncertainty, and even when admitting its certainty they assert that the process of recovery is too long and too tedious for so remote a result—at least in the generality of cases. As a matter of expediency they consequently assert that it is better to excise a knee-joint the subject of serious organic disease at a comparatively early period, when the health of the patient is good, than to wait months or even years for a cure by natural processes, which may not even then be secured. They assert, moreover, that in operating upon such cases at an early period of disease the results of the operation are good and the recovery rapid, whilst in waiting for a cure by natural processes disappointment too often follows after a tedious treatment of many years and many relapses.

These arguments, it must be admitted, are of great weight, and are worthy of the closest attention. They are clearly based on questions of expediency; they refer more to the difficulties attending the treatment of a case than the necessities; they admit the fact that the most severe joint-disease may be capable of cure by natural processes, but at the same time maintain that it is inexpedient to make the attempt; they place Surgical treatment before natural processes, and assert that as good a limb is to be secured by means of resection as by natural processes, and that it is to be secured much more rapidly.

I am free to admit the force of these arguments, and yield my assent partially to these conclusions. I am disposed to think that the advocates for an early excision have, to some extent, the best of the matter. I confess the opinions I have hitherto held respecting excision of the knee to have been in a measure wrong. Having been too much influenced by the prejudices of my Professional education, the strong conservative tendencies of all large institutions, and the power of the strongly impressed important principle that where natural processes can effect a cure, guided by arts, active Surgical interference is always to be avoided. But in saying this it is not to be understood that I renounce the principles upon which my practice has hitherto been based. I do nothing of the kind. I possess unbounded faith in the power of Nature's processes in the cure of a large number of diseases, and particularly joint diseases, and in further papers propose to illustrate this more fully. I believe that the Surgical art is never practised to greater advantage than when acting in conformity with such a principle, and believe that very strong facts and reasons ought to be advanced before Surgical interference is brought to bear on any given case, and natural processes discarded for Surgical art. But in this question of excision of the knee-joint, facts and arguments go together. The facts are from the hands of the Surgeons who advocate early excision, for they have fairly proved to us that good limbs are to be secured to patients who have been subjected to the operation. The arguments employed to support these views are also to a degree sound.

It is probable that the limbs secured after resection of the joint are no better than those obtained by a natural anchylosis, but they seem to be as good, and they are obtained with no greater amount of uncertainty as to the result, but with a far greater expedition, although, it must be added, with a greater risk.

But still the question has yet to be decided—When is the knee-joint to be excised?

At what period of the disease is the Surgeon to interfere? for how long a period is he to wait for a natural recovery? and when is it expedient to give up making the attempt? Is suppuration of a joint to be the clinical point indicating the time for operation? or is excision to anticipate joint disorganisation? and if so, by how much?

These are some of the difficulties which now beset us. We admit the value of excision of the knee, and its advantage over amputation when successful. We have been convinced by the facts and arguments brought forward by the advocates for early excision, that it is expedient to operate in certain cases at an earlier period of joint disease than that at which the question of amputation has to be entertained to save life. But the "when" to operate is the practical point now to be solved.

(To be continued.)

ON THE EARLY PROGRESS OF ARMY SANITATION IN INDIA.

By C. A. GORDON, M.D., C.B.,
Deputy Inspector-General of Hospitals.

(*Continued from "Med. Times and Gaz.," Vol. II. 1868, page 498.*)

Soldiers' Rations.

In 1827 soldiers respectively quartered in the upper and in the lower provinces of Bengal received different scales of rations.(a) In the former each was daily supplied during the hot season with one pound and a quarter of meat with bone, and during the cold with one pound and a half. He had one pound of bread and two ounces of salt daily throughout the year. The meat supplied was for the most part beef, it being at this time issued on five days per week, mutton on two. Some years afterwards—namely, in 1839(b)—mutton had generally to be issued, a difficulty having been experienced in obtaining beef. In the lower provinces, on the contrary, the soldier, at the time to which we refer, was only allowed daily twelve ounces of meat and half a pound of bread. He had, moreover, as part of his ration one dram of spirits, while in the more northern stations he was allowed double that quantity of intoxicating drink. Dr. Burke was not long in making this difference the subject of a memorandum to the commander-in-chief. "Among the anomalies of this command," he wrote,(c) I had to observe upon the great difference made in the diet, etc., of the soldiers in his Majesty's service in the full and half batta stations. In the former not only are the allowances and batta greater, but the ration of meat, bread, and spirits was nearly double that of the latter." That no alteration in these arrangements, however, had taken place in 1836 is evident from the nature of the remarks on the subject which he offered in the report for that year. "It not unfrequently happens," he there observed, "that when meat is of inferior quality the quantity issued to the men is smallest;" and what was, if possible, an equally faulty arrangement, the sum deducted from the soldier's pay was the same for the smaller as for the larger scale of food.

Salted meat was never issued to the troops, except under circumstances that rendered impracticable the regular supply of fresh. Such circumstances very seldom arose; and, indeed, we only read of one occasion when they occurred. This was in 1835,(d) when the 62nd Regiment was sent to Moulmein from Masulipatam. For some time after the arrival of the corps at that place salt rations had to be issued to the men; but no sooner was a full supply of fresh provisions provided than the practice ceased.

In 1840 an improved scale of diet for the soldier was laid down.(e) It came into operation on January 1 following. According to it each man was allowed, and provided by the commissariat daily, with 1 lb. of meat, 1 lb. of bread, 4 ounces of rice, $1\frac{2}{7}$ ounce of sugar, $\frac{5}{7}$ ounce of tea or coffee, and 2 ounces of salt. An allowance of firewood at the rate of 3 lbs. daily was at the same time granted for the purpose of cooking the above ration.

On the subject of spirit drinking I will not, in this portion of my remarks, enter at full length. Suffice it for the present to observe that in 1828, and more recently than that year, soldiers were permitted in all but a few regiments to drink the whole of their daily allowance in an undiluted state. In those few it was permissible to mix a portion with water, and in this shape it was drunk by the men at their dinners,(f) in the same manner that beer has more lately been. In 1830 this ration of spirits was withdrawn from the soldier, and a sum of money allowed to him in lieu of it—that being as nearly as possible the equivalent in value of the spirits. Canteens were, as will be elsewhere more particularly described, instituted in 1830-31, and since the year 1840 the ration of spirits and its equivalent in money have been alike withdrawn by Government.

Adverting to the quality of the rations, we find it recorded(g) that the men have a good supply of vegetables in season, but that the meat was occasionally complained of, though, on the whole, good. The mutton supplied to the Hospitals was described as inferior; the bread as bad, insufficiently baked, and often sour. "These defects," Dr. McLeod observed, "have been represented to the proper authorities, but hitherto without success; nor is it likely," he adds, "that any amendment will take place while the bread contractor is paid at a much lower rate than the market price."

In 1840 the Government, taking these circumstances into account, and with a desire to compensate the soldier, agreed to give him in money a sum equal to the difference between the market value of his ration and what it actually cost—a sum which amounted monthly to two, and in some instances three, rupees. It was soon found, however, that the compensation thus granted only supplied the men with the means of indulging in vice and dissipation, and of thereby injuring their own health and military efficiency. The very next year we find the Surgeon of the 9th Foot expressing an opinion that drunkenness had increased in that regiment, and that this had arisen from the new mode of rationing and paying the soldiers just alluded to. In 1843 Dr. Davidson, of the 50th Foot, had occasion to report(h) that in July of that year dissipation to a great extent prevailed in the regiment, which was then stationed at Cawnpore, this being "caused by the inferiority of the rations issued to the men and the balance between the stoppages and the actual cost of the rations being repaid by Government to the troops."

Anxious as were the responsible officers that everything that was possible to be effected should be done in order that our soldiers might obtain a ration that was not only sufficient in quantity, but good in quality, Dr. Clarke entered in his report into an explanation of some of the circumstances that then caused the difficulties which he himself saw, and which, it is feared, must for many years to come—if, indeed, not so long as we hold India—continue to operate in this way. "During certain periods of the year," he observed, "the pasturage of some districts becomes deficient or altogether wanting." But there was another circumstance, which even then admitted of easy remedy. It was this:—"The low price," said this Medical officer, "paid to the contractor cannot cover the expense of feeding at this time his cattle with gram(i) (pulse), hay, etc. The consequence is, the meat is inferior in quality;" and he adds, "it is difficult to suppose that a pound weight, including bone, of such meat can afford sufficient nourishment." The actual quantity of meat had, it will appear, been reduced, at the same time that the quality had not been improved, by the orders which had but recently come into force. Nor had Dr. Clarke occasion to be altogether satisfied with the manner of supplying the rations. "Some Medical officers," he observed, "declare that the contractors are too much under the exclusive control of the commissariat, and often appear to receive from it an unmerited protection when complained of for not having fulfilled their contract;" and he adds, "when bad or indifferent meat and bread are issued to the troops, it appears to be a work of trouble and delay to remedy it."(k)

In 1844 a very great improvement was effected in the rations of soldiers. By an order of the Governor-General in Council, dated August 24 of that year, it was directed that the bread issued to them should be equal in quality to that which had heretofore been issued for the use of the sick; mutton was to be issued twice a week in lieu of beef, coffee to be substituted for tea at the option of the soldier, in the proportion of two pounds of the former for one of the latter. Notwithstanding these improvements, however, Dr. Clarke took occasion to remark this very year that the contracts entered into for the supply of the soldier's ration was faulty, the principle of economy being carried too far. Grass-fed meat is the quality now demanded in many districts where, and at periods of the year when, there is no grass to be found. The low price given the contractor will not allow him to feed his cattle with grain or hay, and the consequence is they become without flavour and thin, affording little nourishment.

It does not appear that at any time our soldiers in India have found their bare rations sufficient for their requirements. The system of what has of late years come to be called "extra messing" has apparently been in force in that country ever since 1826, and we may presume also before that year. The manner in which it was carried out differed in different regiments, but for our present purpose one example will suffice.

In the 11th Light Dragoons the men were in 1828(l) divided into messes. Each mess consisted of eight to twelve members, and contracted with the bunniah, or native merchant, at the rate of three rupees or 6s. per head per month, to be supplied with various extras, which, in addition to the government rations, enabled a dragoon to live pretty much as follows—namely, to have for breakfast tea, coffee, fried meat, rice and butter; for dinner, roast or boiled meat (beef or mutton), with a good supply of such vegetables as were in season, and, after dinner,

(a) Report, page 311.
(b) Report for 1839.
(c) See Report for 1833, page 233.
(d) Report for that year, page 435.
(e) By general orders of June 1.
(f) Report for 1829, page 214.
(g) Report for 1836.
(h) Report for that year.
(i) Report, 1843.
(k) Report, 1844.
(l) Report for 1828, page 308.

a plain pudding. In this regiment the men also had supper, consisting of the cold meat unconsumed at dinner, with tea, milk, and bread. In infantry regiments the system of extra messing was evidently less successfully carried out than in the cavalry. The means of the soldiers then, as now, would not afford it. In some, however, one of the measures upon which most stress is now being laid as a preventive of disease was in operation in 1828. In that year, for example, an arrangement existed in the 14th and 16th Foot(m) by which, during the cold season, each man could have a cup of coffee before proceeding on morning parade. But I have it in my power to give some further particulars of the nature of the meals of the infantry soldiers in India about forty years ago. Of the 16th Foot, for example, we learn(n) that in 1829 the soldiers of that regiment had, in addition to the government ration, ½ lb. of potatoes, as also rice, vegetables, tea, eggs, and butter. Each man usually had for breakfast a portion of his meat, together with tea and eggs; for dinner he had the remainder of the meat, with potatoes and vegetables; or, if he so desired, he might have flour, to be made into puddings, in lieu of potatoes. For supper he had tea and bread. The dinner hour in those days, as now, was one o'clock. The meal(o) consisted of boiled or roast meat, soup, vegetables, stews, curries, hashes, according to the desire of the men, expressed through the orderly man of the mess; and, in regard to the favourite manner of having this meal prepared, we learn that the Scotch and Irish preferred soup and boiled meat—the English, fried or roast, vegetables when in season, and curry and rice. But although for the most part the men had an evening meal, consisting of tea or coffee and bread, there were several regiments in which supper did not constitute a regular meal. So recently as 1843-4 we find Dr. Clarke loud in condemnation of this omission. "The hour of dinner," he observes, "being one o'clock, there are eighteen hours of fast" till breakfast at eight next morning; and he adds, "this long abstinence cannot be borne long." The men, therefore, have recourse to spirits in place of wholesome food.

We have remarked that so long ago as 1829 each mess appointed one of its members to superintend its cooking. This duty, we learn from the reports(p) of that time, was taken according to regular roster, each man taking his regular turn in rotation, and thus regulating the manner of cooking for his day. The subject is again alluded to by Dr. Donald McLeod in his report for 1838. He there mentions that "the common practice is for one of the mess to take charge of the cooking process for the day, and be answerable for the conduct of the cook; and that each man has what he had ordered prepared for him." It is to be observed that then, as now, each mess had its own native cook. In some regiments even further precautions than these were taken to insure the greatest possible care being paid to the preparation of the soldiers' meals. In the 13th Foot, for example, we read that in 1834(q) the messing of the men was superintended by a captain and subaltern of the day, whose duties were "to inspect the provisions before they were issued, and afterwards to see that the men sat down regularly to their meals." Every possible precaution was at the same time taken to prevent the soldier from using articles of diet that were unwholesome in their nature. In 1829(r) Dr. Burke reported that fresh pork was not allowed to be purchased by him. We moreover read that in the Buffs, in 1835,(s) "the use of pork had been prohibited on the recommendation of the Medical officers, in consequence of the number of men who had been admitted into Hospital with diarrhœa and dysentery," and that "since the prohibition was enforced there has been a great decrease of sickness under those diseases."

In the preceding remarks we have briefly traced, step by step, the improvements effected in the manner of rationing our troops in India, and the representations made on the subject by army Medical officers. Let us shortly recapitulate them:—

1st. We have, in 1828, the system in force of varying the ration of the soldier according to season and climate.

2nd. The system of issuing spirits was, in 1828, condemned, and the practice abolished shortly afterwards, in the hope of diminishing intemperance among the soldiers.

3rd. The defects in the rations issued were, by Dr. McLeod, represented in 1836, and were partially remedied in 1840. Those that still remained were urged upon the authorities in 1843 by Dr. Clarke. In 1844 a further improvement took place.

4th. The system of what is called "extra messing" has been in operation in India since 1826, and, there is every reason to believe, prior to that date.

5th. So long ago as 1828 an arrangement existed in some regiments at least, if indeed not in all, by which, during the cold season, the soldiers might have a cup of coffee each before going to morning parade.

6th. In some regiments, the men had only two meals a day. In 1843, Dr. Clarke recommended that in such a supper meal should be introduced.

7th. In 1829, the system was in force of appointing a soldier to superintend the cooking, and in at least one regiment the officers of the day were held responsible that the meals were properly prepared.

8th. The use by the soldiers of fresh pork and other unwholesome articles was, in 1829, carefully guarded against.

(To be continued.)

(m) Report for 1828, page 231.
(n) Report for 1829, page 231.
(o) Report for 1829, pages 230—235.
(p) Report, 1829, page 235.
(q) Report, page 59.
(r) Report, page 230.
(s) Report, page 433.

ON

CRANIOTOMY AND CÆSARIAN SECTION.

By THOMAS RADFORD, M.D.

The relative position which craniotomy and the Cæsarian section should hold in obstetricy is unsettled. There are some obstetrists—no doubt the great majority—who consider that craniotomy should stand as an operation of election, and the Cæsarian section as one of necessity. Others think differently. There is no law to tie Practitioners to adopt either one course or the other, but the decision is left to the judgment of the Medical attendant of the case.

Dr. Barnes, in his lecture (*Medical Times and Gazette*, December 5, 1868), has expressed opinions as to the practice to be adopted in cases of difficult labour from extreme distortion of the pelvis in which either craniotomy or Cæsarian section may be required, which are so much at variance with those I entertain, that I am induced to make a few comments, and in so doing I hope he will not consider them made with an unfriendly spirit.

It would be well if moral laws governed Medical men in all their Professional undertakings, not only in reference to the Cæsarian section, but especially so when craniotomy is contemplated. No man would preferentially adopt the Cæsarian section because he was an expert, or because he was "dazzled, perhaps, by its false brilliancy, as an operation deserving to be raised into competition with turning, craniotomy, or cephalotripsy." Any man undertaking such an important operation with any such motive must be deficient in both morality and common sense.

Dr. Barnes, at the commencement of his lecture, denounces the Cæsarian section as "too often sacrificial in fact," although "conservative in its design." An unjust or wanton sacrifice of life is criminal, but how the death of a woman, happening after the performance of an operation legally permitted, and sanctioned by Medical ethics, and undertaken for the preservation of the lives of both mother and infant, if then living, can be placed in such a category, I am at a loss to understand. Now, Dr. Barnes admits "the operation must be studied," and no doubt it must be practised (as it cannot by its strongest opponents be eliminated) as one of necessity, although he has characterised it as sacrificial.

The Cæsarian section is strictly conservative, for what can entitle an operation more to such an appellation than the salvation of nearly all the infants which are living at the time when it is commenced? Sixty to seventy per cent. have been saved, and if the operation was performed early, before the influence of protraction was produced, I have not the least doubt but many more would be preserved.

Statistics, as put forward to prove the necessity of any operation, may not be altogether reliable, but there is not a chance of greater fallacy existing in respect to the Cæsarian section than would be found in relation to craniotomy or to any other operation.

In this country mothers saved are only comparatively few, being only 16 to 17 per cent., but if the causes of mortality were strictly sought for it would be considered a high percentage. The operation has not, in the great majority of the cases, been performed before the woman has been nearly brought to the brink of the grave. If all cases in which fatal morbid effects had been stamped upon the woman by neglected protracted labour were excluded from the calculation, the result would show a very favourable aspect.

In all my statistics I have confined my statement to British

and Irish cases. But those of foreign operators show a very considerable difference in the number of recoveries.

Dufeillay (quoted by Dr. Barnes) "declared that the operation, performed under favourable circumstances as early as the impossibility of delivery *per vias naturales* is recognised, gives nearly 75 per cent. of recoveries." There is no ground whatever to doubt the truth of this author's statement.

It is impossible to have a correct estimate of the fatality which really belongs to either the Cæsarian section or to craniotomy so long as the operation is delayed until irretrievable mischief is inflicted. Craniotomy is most assuredly a sacrificial operation "in its design and in fact."

I have in a former communication stated we have no authentic registry of fatal cases consequent on this operation when performed in cases in which the pelvic apertures are very much diminished. Dr. Churchill states one woman in 5½ (or 27·27 per cent.) dies. His table contains all kinds of craniotomy operations. If the Cæsarian section is only accepted as an operation of necessity, it is very important for its advocates to know, if possible, the exact degree of pelvic contraction which limits delivery *per vias naturales*. There is a considerable difference of opinion between different writers as to the space required to drag a craniotomised full-grown infant through the pelvis. Dr. Osborn has said he delivered a woman by craniotomy whose pelvis only measured 1⅓ inch in its antero-posterior diameter, having removed the parietal and frontal bones, and afterwards having turned the base of the skull edgeways. Now this is a physical impossibility, which I have practically proved.

Dr. Hull, as I have before said (*Medical Times and Gazette*, November 21) has proved, by measurement and experiments, Dr. Osborn's fallacy. Dr. A. Hamilton has most unquestionably refuted the statement of Dr. Osborn (see his letters to this writer), and says it is impossible to deliver *per vias naturales* unless there is greater pelvic space. Dr. Burns says Dr. Osborn has been deceived in his estimate of the pelvic conjugate diameter in his case, and says that a full-grown infant cannot be delivered by craniotomy unless the short pelvic diameter fully measures 1¾ inch. Dr. Kellie says he delivered one woman whose pelvis measured in the antero-posterior diameter 1⅛ inch, on one side 2⅛ inches, and on the other 1½ inch. He delivered another woman whose pelvis measured antero-posteriorly only 2 inches. Dr. D. Davis says, if the intermediate space between the pubes and the promonotory of the sacrum be no more than 2 inches, there would be the greatest risk of inflicting such injury to the maternal structures as to lead to the death of the woman. His statement of the powers of his osteotomist in enabling him to bring a full-sized infant's head through a block of wood carved pelvis-like, having only an inch in diameter, I have already shown (*Medical Times and Gazette*, November 21), is no proof that the same could be effected on a living woman. Dr. Churchill states two inches at least are required to exist in the pelvic conjugate diameter for delivery of a full-grown infant by craniotomy. It is quite unnecessary to adduce further evidence as to the required space for delivery by craniotomy, or else a number of high authorities could be brought forward to prove that a pelvic space not less than from 2 to 1¾ inches must exist in the antero-posterior diameter.

Some writers who advocate and sanction craniotomy in cases of extreme pelvic distortion have never performed the operation, nor ever even witnessed a labour which was thus obstructed. Some of them, however, have the candour to acknowledge their want of personal experience. Although it is so positively stated that a mutilated full-grown infant can be brought through the minimum of pelvic space, can we be assured that this operation can be safely performed? and is there not quite as much danger to the life of the woman as is incurred by the Cæsarian section? I have not the least doubt there is quite as much risk to the life of the mother from craniotomy performed in the higher degrees of pelvic distortion, as there would be from Cæsarian section—both operations being freed from the contingent mischief produced by protracted labour. Writers of great eminence entertain the same opinion.

Can the dimensions of the pelvic apertures be ascertained with such mathematical accuracy as to justify the Practitioner in having recourse to craniotomy in the more extreme cases of pelvic distortions? From my own long and extensive practical experience I am firmly convinced that it is impossible to ascertain with precision the exact degree of pelvic contraction in such cases as those in which a very small fractional mistake makes the difference between life and death of the woman. Even in the lighter shades of pelvic distortion it is quite impossible to compute the exact measurements. My opinion is substantiated by our best writers and able Practitioners. Practical results also corroborate the above statement.

Many cases are recorded in which the head of the infant has been opened by obstetricians of high rank, but who have afterwards been unable to deliver the woman; the patients have been left to die after the infants had escaped into the abdomen through a laceration in the uterus. I have met with cases of this kind. One is recorded in the London *Obstetrical Transactions*, vol. viii. p. 158. In some other cases abdominal section has been performed in order to extract the mutilated infant. A dogma in obstetrics is sometimes highly dangerous to set forth, especially if practice based upon it leads to the sacrifice of life.

It is stated, if there be a space in the antero-posterior conjugate diameter of 1¾ inch, and a transverse diameter equal to 3 inches, the base of the head of a full-grown infant, face brought first, can be dragged through the pelvis. I deny the truth of this statement, unconditionally put forth as a general rule, regardless of the kind of distortion or the parts of the pelvis involved in the mischief.

The comparative difficulty of performing craniotomy, and the issue to the mother, are in a great measure dependent on the characteristic differences which exist in the distorted or contracted pelvis. In the rickety pelvis or in those in which the brim is ellipsoid or oval, varying in degree of contraction in different parts of the opening, craniotomy can be performed with greater ease and under higher relative degrees of contraction, because the outlet is more capacious; but in those in which the pelvis is distorted by malacosteon, and all the parts of the pelvis, brim, cavity, outlet, depth, etc., are more or less affected, there is more difficulty in and more danger from the operation. In many of this kind of cases the antero-posterior diameter is considerably greater than the measurement fixed by craniotomists as ample for the base of the skull of a full-grown infant to be brought through, and yet it would be found quite impossible to do so. There is positively more space than is said to be required, and yet relatively there is less. As an example, let us take the case already referred to (*Obstet. Trans.* vol. viii.), in which the brim is less contracted than the outlet. A line drawn from the lower edge of the fourth lumbar vertebra, which had fallen downwards and forwards to the symphysis pubis, measures 2½ inches, and there is a space across in an oblique line of three inches. The outlet measurements are as follows:—From one pubes to the other below the symphysis, ¾ of an inch; from one ischial tuberosity to the other, 1½ inch; ischial spinous process on right side to the upper part of the coccyx, ⅝ of an inch; on the left side, ¼ of an inch; from one ischial spinous process to the other, 1 inch.

The consultants in this case were Hospital Surgeons, and ranked high—a majority of them were anti-Cæsarianists. Two or three proposed the Cæsarian section, but their proposition was overruled. The head of the infant was perforated, and small portions of the cranial bones were brought away, but the operator was unable to further lessen its bulk and to draw it down. She was abandoned to die, with a mutilated infant having escaped into the abdomen. The perforator and common crotchet were the instruments used in this case.

I have attempted to introduce Dr. B. Hicks's cephalotribe into a cast of the pelvis, but I found it quite impossible to place it within the cavity in its unexpanded state, much less to open it for the purpose of embracing a head for the purpose of crushing it.

This case is a type of many others, and I think it indisputably proves that it is not as easy as it is represented to define the exact limits of pelvic brim contraction which are to stand as the immutable boundary which embraces the capabilities of craniotomy as an operation of election.

How can it be stated that when the Cæsarian section is performed with the express object of saving both the life of the mother and of the infant "it is taking the woman's life into our hands and deliberately subjecting it to the most imminent hazard for the sake of probably saving her child?" This is an assumption which neither morals, religion, nor obstetrical experience warrants. My opinions on the comparative value of maternal and infantile life are already before the Profession (see *British Medical Journal*, vol. i. 1865, p. 365; also, "Observations on the Cæsarian Section," p. 55), and therefore it is quite unnecessary for me to repeat here what I have already fully discussed.

Is it more true that "he who accelerates death is responsible for having caused death" in cases of Cæsarian section than in cases of craniotomy? In the latter case there is intentionally murder committed, which is translated into "justifiable homicide." Dr. Barnes has been more successful in curing

osteomalacia than I have been, and my experience warrants me in stating that I have never known a case to be permanently arrested which has happened during the child-bearing period.

Dr. Barnes again asks—"Shall we dare to put a mere vegetative life—that of an unborn child—into the scale against that of a being like ourselves accountable to the Almighty?" This low estimate of the life of an unborn child is remarkably at variance with social views. Life is life, and the law of the land and the consciences of the public equally recognise its value. How, then, can any one speak so lightly of the life of a child as to say its life is vegetative?

Dr. Barnes has left the two operations in precisely the same position he found them. Sentimentalism on such grave subjects will never make a difference in the opinions of honest and conscientious men. Judgment and sound indisputable facts based upon the comparative results of these two operations will alone, in the end, form rules for the guidance of those who have to decide.

Manchester.

A NEW INFECTIOUS FEBRILE DISEASE.

By C. ALBERT HINGSTON, M.D. Lond.,

Senior Physician to the Plymouth Public Dispensary.

My attention was first directed to the disease I am about to describe in the second week of September of last year, when I was requested to attend three children, each of whom was suffering from it, though at different stages of the complaint. During the succeeding week I saw seven or eight cases of it, and not a week has passed since without one or more coming under my notice, though latterly they have been becoming much more scarce, and during the last ten days I have seen but one case. In all I have visited about twenty-five or thirty cases. I may add that I brought this disease under the notice of the members of the South Devon and East Cornwall Medico-Chirurgical Society, several of whom had had similar cases under their care, and bore witness to the entire novelty of the symptoms.

The disease is, for the most part, confined to children, though I have seen a few adults suffer from it. It is very infectious, few children that come within its influence escaping. The incubation period is very short—in some instances it could not have exceeded two days. Its ordinary course is as follows:—The patient appears feverish and weak, and complains of slight soreness of throat and stiffness of neck. On the following day all the symptoms have increased; the mucous membrane of the throat, on examination, is found to be slightly red, without any swelling or ulceration of the tonsils, the tongue remaining moderately pale and clean. Some of the anterior cervical glands begin to swell, usually the highest first, and rarely both sides simultaneously, the pulse being generally 100 or upwards. The salivary glands are never affected.

On the third or fourth day, generally, all the glands become enlarged, though frequently, in mild cases, one side alone suffers. From that time the feverish symptoms decrease, and the appetite returns, though the glandular swellings do not wholly disappear until eight or ten days from the commencement, and in no single case has the swelling passed into suppuration. There is never any rash. The bowels are costive throughout the complaint, requiring purgatives.

The only inconvenient sequela I have noticed, and this in but two or three cases, is the formation of an ulcer on the lower lip, which causes it to swell much, and which bleeds freely. The tongue is at the same time covered with minute ulcers. This condition usually lasts a week, and prolongs the disease—which would otherwise occupy only ten days—to three weeks. In no instance have I seen the slightest danger, though the high febrile symptoms always cause the parents and friends much anxiety.

The town, with this exception, is remarkably free from any epidemic, not a single death having been caused by scarlet fever for five months, and but comparatively few from typhoid.

3, Sussex-terrace, Plymouth.

HEALTH OF ALDERSHOT.—Scarlatina continues to prevail among the children in the camp at Aldershot. Some cases have occurred among the women, of whom also two have lately died from puerperal peritonitis. Among the men there is no prevalence of epidemic disease.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

WESTMINSTER HOSPITAL.

FIBRO-PLASTIC TUMOUR AT THE ELBOW-JOINT, IMPLICATING THE MEDIAN NERVE—AMPUTATION OF THE ARM—RECOVERY.

(Under the care of Mr. BRUCE.)

I WAS requested by my friend Mr. Charles Read, of Tillingham, Essex, to examine, in June last, the arm of a woman in the village who was the subject of a tumour of the elbow. On visiting her I obtained the following history of her case:—Mrs. P., aged 40, has generally enjoyed good health, but suffered from ague when a girl, and is somewhat sallow in complexion. Five years ago she noticed a small tumour beneath the skin, at the bend of the elbow, on the ulnar side of the right arm. It was at first small, freely movable, lying immediately beneath the skin, and doughy to the feel. It was situated above the expansion of the bicipital fascia. For four years it slowly increased in size, and gave rise to no pain or inconvenience; during the last year, however, it has increased much more rapidly, and especially during the last few months. It is now (in June, 1868) as large as a good-sized orange, and presents two principal lobes, one above and the other below the bicipital fascia, the latter being much the smaller of the two, and being also of a much more recent date. It occupies chiefly the ulnar side of the arm, is uniformly smooth on the surface, with a semi-elastic and slightly doughy feeling, and gives a sensation of indistinct fluctuation at the most prominent spot. Although it is bound down by the fascia, it is slightly movable, and does not appear to be in any way attached to the bone. The brachial artery can be felt pulsating in front of the mass, crossing its upper and outer part, and there is distinct pulsation in the arteries at the wrist. Some pain is felt in the parts of the hand supplied by the median nerve, with tingling and numbness in the outer portions of the hand, but no loss of motor power in the muscles of the forearm. The patient being now far advanced in pregnancy, no active treatment could be adopted; rest, and the application of gentle pressure, were therefore recommended.

One month after her confinement the patient was admitted into the Westminster Hospital (August 25). She is paler and rather more sallow than when last seen; states that she has had a satisfactory confinement; the breasts are turgid, and the flow of milk plentiful; the lochia have not completely ceased. The tumour has increased rapidly during the last two months, and is now a source of distress from its size and weight. She has lost almost all sensation in the thumb, and in the index, middle, and half the ring finger, and is much troubled with numbness and a feeling of "pins and needles" in these parts. The mass now projects very much in front of the inner condyle, and immediately below this there is a deep groove showing the line of the tense band of bicipital fascia which divides the tumour into two lobes. (See Fig.) At the most prominent

part fluctuation is very distinct, and the skin here is of a purplish hue, whilst over the rest of the surface it presents a natural appearance, being marked only by distended and dilated veins, and is not affected except by pressure. The tumour itself is for the most part semi-elastic, with some slight doughiness at the lower portion. It is fixed to some extent, but not completely so, and it does not appear to be attached to the bone, and certainly does not spring from the interior of the canal. On measurement it is found that its greatest length from above down is 6½ inches, its greatest breadth 7¼ inches, while the whole circumference of the arm at the elbow-joint is 16½ inches. The brachial artery cannot now be felt in front of the mass; it can be traced along the inner edge of the biceps muscle as far as the upper border of the tumour, which appears to envelope it;

pulsation can be felt, but not very distinctly, in the radial and ulnar at the wrist. There is no enlargement of the lymphatic glands in the axilla, and the patient is free from the severe lancinating pain which usually accompanies cancerous growths; the only pain from which she suffers is that caused by pressure upon the median nerve.

Diagnosis.—Fibro-plastic, or some form of sarcomatous tumour; attached to the fascial intermuscular septa, or the origin of the superficial muscles; enveloping, and perhaps implicating, the median nerve; and pressing upon, but probably not otherwise implicating, the vessels. My reason for forming this opinion was founded upon the slowness of its early growth and the rapidity of its later increase; the freedom of the skin and axillary glands; the absence of distensile pain in the bone, or of lancinating pain in the limb; the partial freedom of movement noticed in the mass, especially at an early period; the semi-elastic feel and the presence of distinct fluctuation at one part. The history and present condition of the patient excluded cancer; the physical characters excluded enchondromatous or other tumours of bone; and the existence of a cyst at one part, as well as the general aspect of the growth, excluded the possibility of its being a fatty tumour.

The patient, having agreed to submit to any operation which might be considered necessary, was placed under chloroform. On laying open the cyst, a quantity of reddish fluid escaped; the incision was then continued over the tumour, and the skin dissected off; after dividing the tense bands of fascia which crossed the surface of the mass, it was easily enucleated except at three points:—on the inner side it was closely adherent to the tendinous origin of the muscles attached to the internal condyle; in the middle the median nerve passed through its substance, and could not be separated, whilst on the outer side the artery was completely enveloped by the mass, so that it could not be detached without injury to its sheath. There was evidently no hope of saving the limb; I proceeded, therefore, with the concurrence of my colleagues, Mr. Hillman and Dr. Bird, to amputate the arm at the junction of the lower and middle thirds by the circular method. Four ligatures were applied, and the wound was freely washed with carbolised oil; sutures were then employed in the usual manner, and the stump was covered with an outer casing of carbolic paste and tinfoil. The patient was then returned to bed, and a full dose of opium administered. At 10 p.m. the pain was still severe, and the patient was much depressed in consequence of the loss of her arm. Pulse 110.

August 26.—She has suffered much from the "jumping" of the arm, and from "feeling her fingers and hand." Pulse full, 120; tongue moist, furred; breast full, turgid, and knotty to the feel. Lead lotion and belladonna were ordered to be kept constantly applied, and, as the patient were distressed by the noise in the street, she was removed to a quieter ward.

August 27.—The breasts are less painful and hard. Pulse is still 120, and not so strong. Great tenderness above the shoulder and in the stump; some dark discoloration of the skin covering the deltoid.

28th.—Has not slept well; arm very painful; marked discoloration of a purplish and tawny colour extending above the shoulder to the back and clavicle. The dressings were therefore removed; the stump was found to be very tense, the margins of the wound being much swollen. On removing the sutures a large clot was removed from the interior of the stump, and on pressure being applied upon the shoulder a quantity of bloody serum escaped from the upper part of the wound. No vessel could be detected which required ligature. After the clots had been removed the wound was washed out with carbolic acid and oil, and the dressings were reapplied, but more loosely, so that any fluid which might again collect could escape. The patient felt much relieved, and slept well during the night.

The discoloration over the shoulder and clavicle rapidly disappeared, but in consequence of the large amount of discharge which collected in the wound it was found necessary to dress it afresh every second or third day. The use of carbolic acid, either mixed with oil or water, was persevered in, and, although the amount of discharge was considerable, it never gave evidence of any putrefactive changes, as might ordinarily be expected. The ligatures were slow in separating, one being removed from the outer side on September 18, and the remaining three a few days later. After this the wound healed rapidly, and the patient left the Hospital on September 29. Since her return home she has regained her strength, but still suffers some pain in the stump, and feels fingers with great distinctness. There is some slight enlargement at the extremity, but no distinct evidence of any return of the growth, or of any secondary reappearance in the axillary glands.

The tumour, after removal, was found to be more lobulated than it appeared when examined *in situ*. On section it presented a tawny yellow surface, mottled in parts with patches of a pinker colour, and with a few spots of a deep hæmorrhagic hue scattered over the surface, but chiefly seen in the neighbourhood of the large cyst, the wall of which was of a deep purple colour. At one spot, which corresponded to the attachment of the mass to the tendon at the inner condyle, a considerable quantity of calcareous matter was found imbedded in the substance of the tumour. The sheath of the median nerve was closely united to the growth. On microscopical examination the mass was found to consist almost entirely of fusiform and long oval cells, each containing a distinct nucleus and a glistening nucleolus. These cells were arranged between bands of fibrous tissue in a more or less parallel manner. No milky juice could be expressed, but on gently scraping the surface a large number of cells were detached, and presented an appearance that might be readily mistaken for that of a true juice.

Remarks.—This case presents several points of interest in connexion with the development of the growth, its physical characters, and treatment. A period of four years' comparative quiescence, or of very slow development, is greater than is usually met with in these cases; whilst the rapid growth during the last year, and especially during the last few months, was remarkable. It would almost seem as if pregnancy had had some influence in determining its increase. The large cyst, apparently, did not exist in June, or, if so, it must have been very small or deeply seated. It probably arose from some hæmorrhage taking place into the substance of the tumour, and its situation at the most exposed portion would render this explanation the more probable. The very circumstantial account given by the patient of the early characters presented by the growth makes it appear probable that it might have been removed with perfect success some years ago without resorting to the necessity of removing the arm; and it should be borne in mind that tumours of this kind, although apparently slow in their development, may at any time exhibit a greater activity, at which time all minor operations become attended with increased risk of recurrence. So little is at present known as to the conditions which determine the recurrence of fibro-plastic growths, that it is impossible to adopt any positive rule as to the character of the operation which should be performed in these cases; but, from my own limited experience, I should be inclined to consider the following as useful guides in practice, viz.:—If the tumour arise within the medullary canal, or from the periosteal sheath of a bone, amputation should be performed above or through the next joint, and never through the affected bone, however distant that point may be from the seat of disease; but if the tumour spring from the fascia, intermuscular septa, or tendons, amputation may be performed through any convenient portion of the limb above the origin of those muscles amongst which the growth may be lying. In the above case the tumour was intimately connected with the superficial muscles of the forearm, and amputation was performed above their origin from the internal condyle.

The value of carbolic acid as an antiseptic dressing was clearly seen in this case, although the thickness of the dressings probably tended to excite the slight amount of consecutive hæmorrhage which prevented early union of the flaps. The recent improvement in the use of carbolic acid introduced by Mr. Lister will probably lessen this tendency to hæmorrhagic oozing, which has often proved a troublesome accompaniment of his method.

THE LONDON HOSPITAL.

WOUND OF THE ABDOMEN—DEATH TEN WEEKS LATER FROM PERITONITIS, WITH PECULIAR SYMPTOMS.

(Under the care of Mr. HUTCHINSON.)

THE following case, which excited much interest during life, seems worthy of narration on account of the unusual character of the symptoms which attended the traumatic peritonitis:—

An Irishman, aged 24, was stabbed in the abdomen on October 10. The wound was on the left side, just below the lower edge of the costal cartilages, and about four inches from the middle epigastrium. It passed quite through all the walls, and a knuckle of intestine escaped. He was seen by Mr. Ross, of the Commercial-road, soon after the accident, who returned the bowel, and closed the wound with sutures. The

bowel was not wounded. After the man's admission at the Hospital all disturbance of Mr. Ross's dressings was carefully avoided; ice was applied over the abdomen, and small doses of mercury were given. During the first few days he was a little feverish, but there were no material symptoms. When at the end of a week the wound was exposed, it was found to be well healed.

A few days later the wound reopened at one point, and during the next fortnight there was constantly discharge of a small quantity of discoloured pus, occasionally mixed with bubbles of air. The discharge was never positively feculent; the air was never in large quantity; and although it was much suspected that the fluid came from the intestine, this diagnosis was not considered certain. At this time the man had no distension of the abdomen, and he had never had any material tenderness, excepting close around the wound itself. He suffered much from sickness, and was unable to take food. Occasionally he had troublesome diarrhœa. After about a fortnight the little fistula healed, and from this time till the man's death the scar remained quite sound, and there was neither tenderness nor any swelling whatever around it. A hernial protrusion had formed beneath it, but the bowel only escaped when the man coughed, and its escape under the skin gave him no pain. It was clear that the muscular layers had not united, and it seemed equally clear that no abscess existed under the site of injury.

The local condition being so satisfactory, it was expected that the man would now steadily recover. He continued, however, to lose flesh, and to take little or no food. His tongue was red and often dry, and his stomach irritable. Often it was necessary to feed him entirely by enemata. At other times he would be for a week or two together free from sickness, and able to take a little food.

At length, having become extremely emaciated, and having for a fortnight scarcely taken anything except a little brandy, he sank. He had been admitted on October 10, and died on December 19, nearly ten weeks after the injury. At the time of his death his abdomen was sunken, and quite free from tenderness.

At the autopsy the peritoneal cavity was found to contain a considerable quantity of air. The intestines were contracted, and, excepting where adherent to it, did not touch the anterior wall; near the scar, and in the umbilical region, they adhered firmly to the parietes and to each. In the pelvic cavity was a quantity of discoloured pus, not less than a pint or pint and a half. The intestines and the parietal layer of peritoneum were everywhere coated over with dirty lymph. The viscera, wherever they came in contact, were adherent to each other, and several partially encysted collections of matter were thus walled off from the general cavity. One of these, above the right lobe of liver, contained more than a pint of pus, almost as white as milk, and thicker and more gruelly. The muscles of the abdominal wall and the diaphragm were sodden and discoloured by the contact of pus.

Thus it was clear that the cause of the man's death, and of the symptoms which he displayed during life, was purulent peritonitis. There was no proof that the intestine had ever given way, but the manner in which it was matted to the abdominal wall by adhesions precluded any certainty on this point.

It is worth while to note that during the man's life his symptoms had differed very strongly in some respects from those common in traumatic peritonitis. They had never been very acute, and they had been most unusually prolonged. Tenderness of the abdomen and tympanitic distension are almost always present in acute peritonitis, and had here been markedly absent. Over and over again at the bedside Mr. Hutchinson had directed the attention of the class to their absence. Once or twice, for a day or two at a time, the abdomen filled a little, but usually it was no fuller than natural, or even retracted. As a rule, the man did not complain of pain, and although now and then he would have a few hours of severe twisting pain, he never had any general tenderness. Peritonitis cases usually die of pain and shock, but this man died very slowly of inanition from inability to take food. His symptoms much more nearly resembled those of enteric mischief than those of peritonitis.

The absence of tenderness might perhaps be explained plausibly by reference to the air which intervened between the abdominal wall and the viscera at most places and over the whole lower half of the abdomen. This air had probably been present from an early period, as bubbles were noticed to escape at the wound during the second week. The supposition that minute perforation of the bowel took place, and was attended by the escape of gas, is perhaps not improbable, though, on the other hand, it is quite possible that the inflammation resulted solely from the wound of the parietes, and that the air was spontaneously generated. It is possible that the exhibition of mercury during the first week controlled the symptoms somewhat, and prevented their development in the usual way. The man was never quite salivated.(a)

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SATURDAY, JANUARY 2, 1869.

PROFESSOR OWEN'S "CONCLUSIONS" IN THE SCIENCE OF LIFE.

At the end of his now completed "Anatomy of Vertebrates," Professor Owen gives a summary of his conclusions as to many of the great questions in the "Science of Life" which have been debated within the last forty years. We propose to give a short account of these conclusions, which will have all the greater interest for our readers, inasmuch as Professor Owen indicates clearly that they are final, and that the present is the last general summary of work which he is likely to find time to complete—on which the wish will rise unprompted in our readers' minds that he may long live, and devote the clearness, vigour, and courage apparent in this his latest work to the benefit of science.

Professor Owen says that in 1831, at the close of his studies at the Jardin des Plantes, he returned home "strongly moved to lines of research bearing upon the then prevailing phases of thought on some general biological questions." The existing platform of opinion was much as follows:—Cuvier, his great master, held that "species were not permanent," and taught this not doubtfully or hypothetically, but as a fact established inductively. He had enunciated the "law of the subordination of the different organic characters to the condition of the whole animal"—"a generalisation which," says Professor Owen, "may be paralleled with that of the principle of equivalents in chemical science." But as to the relations of present to past species, Cuvier had not an adequate basis of fact for a decided opinion; anyhow, he did not affirm "new creations," though he did affirm that species existing now did not exist always. Geoffroy St.-Hilaire, on the other hand, more boldly expressed his belief that the animals now living proceed, by uninterrupted generation, from extinct antediluvian ancestors, although admitting that the materials for proof were not yet, though he believed they soon would be, forthcoming.

(a) The following facts as to pulse and temperature may perhaps be of interest:—On the day of admission his pulse was 88, and temperature 100·5°, and during the next week his pulse varied from 76 to 92, and his temperature from 98·6° to 101°, being rarely more than 100°. During the second week, when he was worse, both rose, the pulse to 100, and the temperature to 101° or 102°. During November the pulse ranged from 98 to 120, and the temperature, usually 100°, once reached 103. As the end approached his pulse gradually rose.

The main questions in the science of life arising from the discussions of the great French biologists appeared at that time to Professor Owen to be the following:—

"Unity of plan, or final purposes, as a governing condition of organic development?

"Series of species—uninterrupted, or broken by intervals?

"Extinction, cataclysmal or regulated?

"Development, by epigenesis or evolution?

"Primary life, by miracle or secondary law?"

On each of these we will endeavour, as shortly as we can, to give the gist of Professor Owen's mature conclusions.

First, then, is unity of plan (*homology*) or final purpose (*teleology*) the governing condition of organic development? Cuvier held that it was final purpose. Geoffroy denied the existence of design, and contended for the principle of *unité de composition*. Unluckily the principle of unity was at that day suffering from the fantastic and exaggerated phraseology adopted by its advocates, of what was known as the "transcendental school." Owen, at first, had a strong bias in favour of Cuvier's views, according to which "answerable parts occur in the zoological scale, because they have to perform answerable functions."

But as he advanced in his original researches, and more especially in the task of arranging the osteological department of the Hunterian Museum, he felt himself forced to reconsider the conclusions of Cuvier, to which he had before yielded assent; and he adopted the device of an ideal archetype vertebrate animal, in order to demonstrate the principle of unity of organisation. He holds, therefore, the doctrine of unity of plan, although dominated by and associated with that of adaptation to purpose.

According to the homological doctrines of Owen, a vertebrate animal is a sum of successive segments known as vertebræ—developed under the influence of, as it were, two opposing tendencies: one being the tendency to repetition of similar parts, the other to specialisation. The principle of repetition—vegetative or irrelative repetition, as Owen calls it—is characteristic of the lower forms of life, and may be exemplified by the numerous and similar many-jointed terminal divisions of the pectoral limbs of the fishes, thence called Rays; by the multiplicity of similar teeth in the lower vertebrates; and by the multiplied vertebral segments of snakes, eels, and the like. If we compare the five fingers, the teeth, and the vertebræ of man with the like parts in the lower vertebrates, we shall get an idea of specialisation—of the advance from the "many and like" parts in the lower to the "few and unlike" parts in the higher, in which each finger, tooth, and vertebra can be singled out by a competent anatomist, and designated by its proper name and symbol.

Seeing, then, that every vertebrate animal is formed upon one model, by the special development of segments ideally alike, it follows that animals may have answerable part, though they have no "answerable functions" to perform; that any animal may have organs, or vestiges of organs, not because they are of (teleological) use to it, but because they belong to the general model; and that all the differences from lowest to highest are produced by degrees of development of parts common to all. As to the cause of these differences, Owen traces the successive manifestations of vertebrate life and form, not to direct or "miraculous creation," but to a natural law, or secondary cause, "operative in the production of species in orderly succession and progression."(a)

The second question is this—Is the succession of species broken or linked? It will be already gathered from the foregoing conclusions that Owen holds existing species to be linked to the past by derivation or filiation, and this by law continually operating, and not by miracle. And he shows that links between the present and past—as, for instance, between the palæotherium and existing hooted quadrupeds—which were not forthcoming in Cuvier's time, have been brought to light since. Species as they advance pass, like the fœtus in its stages of development, from more general to more special forms. This is evidenced by the "discovery of the *Hipparion*, which supplied one link between the palæotherium and the modern horse:" and "it is significant," says Owen, "of the fact of the filiation of species that the remains of such three-toed horses are found only in deposits of the tertiary period which intervene between the older palæotherian one and the newer strata in which the modern horse first appears to have lost its lateral hooflets."

The passage from the palæotherium to the horse through the *hipparion* is exemplified by the toes and by the teeth. The palæotherium has well-developed lateral hoofs; the hipparion lateral hooflets which dangle on either side; the horse mere splint bones without hoofs. Similarly, in the horse the first premolar tooth is minute and soon shed: it is "a mere rudiment of ancestral structure;" in the palæotherium it is a typical, functional, permanent tooth; in the hipparion smaller and intermediate.

Thus these successive species are derived from their predecessors by filiation. But what is the mechanism? How did the three-toed palæotherium become the single-hoofed horse?

It may be said, on Lamarck's hypothesis, that as the earth hardened, the middle hoof did more work, got more blood, and so throve, whilst its neighbouring digits dwindled. It might be suggested, on Mr. Darwin's hypothesis, that some palæotheria, having been born by chance with a single toe, found themselves better adapted for the struggle for life, and so were "naturally selected" as the prevailing type. Appetency and volition are clearly out of place. But as for the first hypothesis, why should the horse lose its lateral hoofs any more than the rhinoceros, which now flourishes with the zebra in Africa, as the horse does with the tapir in South America? If the altered foot were due to external conditions, what altered the teeth? Nothing, says Professor Owen, but mental confusion can arise from the obsolete metaphysical process of personifying the aggregate of conditions as "Nature," and saying that "Nature selected the mid hoof and rejected the other."

Is there, then, any fact on which a reasonable conception may be formed of the mode of operation of the derivative law of succession of species as shown in the horse tribe? The fact of the occasional birth of an animal with the ancestral hoofs (e.g. the famous *Bucephalus*) shows that "the change would be sudden and considerable; it opposes the idea that species are transmuted by minute and slow degrees. It also shows that a species might originate independently of the operation of any external influence; that change of structure would precede that of use and habit: that appetency, impulse, ambient medium, fortuitous fitness of surrounding circumstances, or a personified 'selecting Nature,' would have had no share in the transmutative act."

There is one generous and eloquent passage in which Professor Owen expresses his fullest conviction that the production of new species is governed by an intelligent and beneficent Will, which has not only predestined the conditions necessary for each, but has taken care for all as one harmonious whole. "Of all the quadrupedal servants of Man, none have proved of more value to him in peace or war than the horse; none have co-operated with the advanced races more influentially in Man's destined mastery over the earth and its lower denizens. In all the modifications of the old palæotherian type to this end, the horse has acquired nobler proportions and higher faculties, more strength, more speed, with amenability to bit. No one can enter the saddling-ground at Epsom before the start for 'the Derby' without feeling that the glossy-coated, proudly stepping creatures led out before him are the most perfect and beautiful of quadrupeds. As such," says Professor Owen, "I believe the Horse to have been predestined and prepared for Man." It is significant that the horse is coeval with the same geologic formations as Man.

(a) "Such cause being the servant of predetermining intelligent will."—P. 789.

We make no doubt that our readers will be glad to have a fuller account of Professor Owen's "conclusions" than we can give in one article; therefore we pause for the present with this one remark:—The successive development of species after species by differentiation and specialisation and divergence from a common form is one thing; *transmutation* is another; and to suppose that horse could be changed into rhinoceros is, says Professor Owen, "as unscientific, not to say absurd, as the idea which has been bolstered up by so many questionable illustrations, and foisted upon poor 'working men,' of their derivation from a gorilla!"

SPECIMENS OF THE EXAMINING ART.

VERY recently we called attention to the defective condition of the examining art among us, as evidenced by some late examinations for Medical degrees. Since then, we have been dipping somewhat deeply into what we may perhaps be permitted to call the literature of examinations—a literature which has been opened up for us by the labours of the visitors appointed by the Medical Council to report on the examinations of the different licensing bodies in the United Kingdom. These reports occupy the greater part of two large volumes, and although they can scarcely be looked upon as "light reading," their perusal is certainly instructive.

The first thing that strikes us in reading these reports is the notable change that has come over Medical examinations of late years, in the introduction into nearly every one of them of *practical* tests, mere paper work being, with very few exceptions, no longer trusted in.

In Anatomy and Physiology, dissections and demonstrations; in Chemistry and Toxicology, practical analyses and testing are required. In Botany and Materia Medica, actual specimens have to be recognised and described. In Medicine, Surgery, Midwifery, and Pathology, written and *viva voce* examinations are supplemented by clinical diagnoses, the actual use of instruments and appliances, and the demonstration of morbid specimens. All this is in the highest degree satisfactory, and evinces a wide-spread effort to guard the portals of our Profession against ignorant and unskilful men. Unhappily, it is not universal, and there are yet some examining bodies who appear to covet the bad reputation of affording an easy access to our calling for men who, to say the least, are no ornament to our ranks.

But those practical tests of which we have spoken, in order to be thoroughly just and effective, need much caution, discrimination, and skill in those who devise them, and in those who carry them out. Let us take the single example of the clinical examination of cases in the Medical and Surgical wards of our Hospitals. We shall find that the practice of different examining Boards varies widely in the amount of precaution and selection it is thought desirable to exercise. We are pleased to see, in the report of the "Visitation of Examinations at the University of Cambridge," in allusion to the clinical examination, that "the Hospital patients, whether Medical or Surgical, had, on the morning of the practical examination, *just been received*, and had *not before been examined by any students*." This precaution is always adopted in the Hospitals of Paris, where such examinations have been carried on for many years. We regret to say that this precaution (*essential* to the *fairness* of the examination, as we shall presently show) is entirely neglected by another of our examining boards; and this is the more remarkable, since the examining body to which we allude (the University of London) claims, and not unjustly, to have established one of the very best and most severe of any of our Medical examinations. It is precisely on this account that we have little hesitation in pointing out wherein their practice is defective.

We are authoritatively informed that, at one of the latest clinical examinations in this University, the candidates were examined in the wards of that particular Hospital which sends up the *greatest number of students* for the University degree, and that some of the cases allotted to the candidates to report upon had been in the wards of the Hospital for nearly three months. It is not unreasonable to assume that every student in for examination from this particular Hospital was familiar with most or all of the Medical cases in its wards at the time—a condition which seems to us to be fraught with injustice to the candidates from other schools—and it is the less excusable, inasmuch as there are several Hospitals in the centre of London which rarely send up students to the University examinations. We need only mention the Middlesex, Westminster, and Charing-cross.

We said we should show that it is essential to adopt certain precautions in the selection of cases in order to make a clinical examination perfectly fair. The chief of these precautions is, that the diagnosis of the cases should not have been previously made openly in the wards of the Hospital. Some examiners may think that this condition is of little importance; but, setting aside the fact that the experience of foreign universities has shown it to be necessary, we have abundance of information, some of which we are not permitted to reproduce, to prove the validity of our recommendations. We will refer to two cases only, which occurred in connexion with the clinical examinations in the London University, where the selection for examination of patients who had long been in the Hospital wards led to a facility of diagnosis hardly possible with new cases.

In one instance a shrewd Irishman, observing the embarrassment of the candidate examining him, proposed that in return for half a crown, "slipped under his pillow," he would give a "full and particular" account of his case. The offer was accepted, and a fully detailed description of the case, in good Medical phraseology, was given by the patient, who had been a very attentive, because a greatly interested, listener to the repeated descriptions of his case (one of considerable clinical interest) given by the Physician in attendance to his class.

In another instance the candidate, in answer to the first question he put, received the reply, "Please, sir, I've got an aneurism of the abdominal aorta."

We need not be at the trouble of pointing out how much the result of an examination is vitiated by such accidents as these—accidents which it is quite within the power of examiners to prevent.

Comparing together different methods of examination, we are inclined, on the whole, to prefer that adopted at the older Universities of Oxford and Cambridge to any we see in practice elsewhere. The questions are, for the most part, fair and well defined, and they extend over a wide range of subjects. At Cambridge it seems to be the custom to set, in nearly every subject, a large number of questions, from which each candidate can select those which suit him best. In dealing with subjects so unlimited in extent as are many of the branches of Medical study—Pathology, Physiology, Organic Chemistry, Medicine—it must happen that even the best men will be strong in certain points and weak in others. It needs more than a lifetime to be perfect in every detail of any one of the subjects we have just named, and few ever attempt the hopeless task. Surely, then, it is but right and fair to give those who are only passing out of their pupilage an opportunity of showing in what subjects they are especially versed; and this is what the Cambridge system attempts to do. The Cambridge minimum of marks, however, seems to us, in some of the subjects, to be too low. In Comparative Anatomy and in Botany it is only 25 per cent.; in Medical Jurisprudence, 30; in Chemistry, in Materia Medica and Pharmacy, and in the Medical treatment of Surgical and Obstetrical diseases, 35; in Physiology and Pathology, 40; and in Human Anatomy and Physiology, and in Pathology and Practice of Physic, 50 per cent. The clinical examination is not estimated by marks.

No detailed information is given as to the mode of marking

adopted at Oxford. We are, however, told that "in estimating the value of answers the examiners use numbers or any other system at discretion." With regard to the questions set at the Medical examinations in this University, we can confirm the statement of the visitors that "they are varied in character, eminently practical, and well calculated to test the knowledge of the candidate." Rarely do we meet in Medical examinations with such a thoroughly practical question as the following, which we take from one of the Oxford examination papers:—"Make such a dissection of the organ (an eye) put before you as will enable you to demonstrate and describe the greatest number of its internal structures and external appendages visible in one view. State any points in which these structures and appendages differ from those similarly placed in the human subject." We have before us the papers recently set (in December last) at the second examination for the M.B. degree at Oxford. They quite keep up the character we have just given of them. We are especially pleased to see that they do not neglect the study of therapeutics in this University, but that they devote a paper containing eight thoroughly sound and practical questions exclusively to this subject.

By the way, we should be glad to know the reason for putting the following question in the Materia Medica papers:—"What are the active ingredients in the following mineral waters:—Harrogate, Bath, Tunbridge Wells, Carlsbad, Töplitz, Vichy, Vals, Aix-la-Chapelle, Aix-les-Bains, Bagnères de Bigorre, Pfeffers?" After a Medical man has been in fashionable practice for five or six years, he will probably know the composition of these waters well enough, but we should feel no great respect for the student who had gone out of his way to get up the ingredients in the waters of Töplitz and Bagnères de Bigorre: it would indicate too decided a tendency towards cram. Technical knowledge of this kind will come soon enough to the *practitioner* of Medicine, but the *student* of Medicine, in the highest sense of the word, has far more important and essential matters to engage his attention in the earlier years of study.

We think it an advantage that at Oxford and Cambridge the *viva voce* examinations are open to the members of the University.

(To be continued.)

MR. TORRENS ON THE NEW METROPOLITAN POOR ACT.

It is fortunate that a new Ministry has come in, and that a man like Mr. Goschen, pledged to nothing as yet, has been appointed head of the Poor-law Department. A clear, unprejudiced, and firm mind is needed, free from vague impulsive feelings of humanity, and free from that hard-handed administrative system which sets aside sympathy, and which looks to little else than the rise and fall of rates. The late legislation was come to hastily by a weak government, under the influence of a "shock to the system." We have rushed into changes of the most extravagant kind before we had sufficiently weighed the whole matter, and we shall probably find that legislation under panic not only does not long serve its object, but is the very thing to bring about a recoil. It should be clearly understood that those who have come to want through age, sickness, or the fault or default of others, cannot be left to starve; equally so that persons able to work, who tear clothes, break windows, and bully guardians, should have no right under a sound poor-law. These should be handed over to the police. Neither should persons who need relief only to tide them over temporary difficulties be converted into chronic paupers.

We are now buying land and erecting hospitals and asylums at large cost; apparently we are not utilising the buildings we have. It strikes many that most of the existing workhouses might have been arranged and classified, this as an infirmary, that as an hospital, the other as a workhouse pure and simple; and that, had this been done, the present buildings might have almost sufficed. We want, even in our London parishes, something like cottage hospitals—airily situated, well-ventilated houses, frequently whitewashed and cleaned—into one or other of which our first fever cases, our first small-pox cases, our cases of illness where people are crowded, might be draughted. There are many such houses unused, or but little used, in most parishes; in these, with a simple inexpensive apparatus, a good nurse or two, with the frequent visits of Doctor and peripatetic superior nurse or matron, all, or nearly all, that could be wanted might be done, and done cheaply, near the habitations of the poor. The 14th and 15th Vict. cap. 34, sect. 36 and 38 indicates the way in which the want might be easily met. The cost of sites already bought and the plans of buildings appear astounding, and there are indications of costly blundering. When the bills come fairly before the public, there will, we fear, be an injurious recoil, adverse to true and effectual legislation. As yet there is but little real systematic discrimination between the sturdy pauper and the modest retiring deserving poor; in fact, these last are beaten off by the stern front and the hard word. We must set aside maudlin sentiment—discriminate and act. The Medical certificate must be carefully drawn up, signed and, if needful, countersigned, and upon this certificate the person pronounced able to work should be handed over to a police department, and should work or want; the other, pronounced not able to work, should be provided for and humanely treated during such disability. If not too late, it is a good notice that Mr. Torrens has given in the Commons—inquiry, that is, before we go further—as speedily as possible to get out the facts as to what has been done under the new Act, how and at what cost it has been done, and whether we are without doubt upon the right track.

THE WEEK.

TOPICS OF THE DAY.

The Medical Profession are too busy to observe times and seasons after the straitest sect. The Christmas festivities bring us a few more cases of dyspepsia to treat, a few more questions to answer on what to eat, drink, and avoid, and, if we are Hospital Surgeons, a few more street accidents to attend—and that is all. Professionally, the change from one year to another is marked only by a change of a figure on our prescriptions, or the annual issue of notes representing our claims on our patients. We cannot shut up shop or counting-house. We have no feasts of the Church or long vacations. From our standing-point one year is vastly like another. Our destinies, either Professional or personal, are not much affected by changes of Ministry; and our progress is neither arrested nor accelerated by decisions of law courts. And yet Medical existence is neither humdrum, uninteresting, nor unvaried. It combines the attractions of a life devoted to science, a fairly lucrative calling, a pleasurable sense of being active and useful, and an admission to the privileges of a large but clearly defined and select association of educated men. Unlike either of its learned sisters, Medicine is at present free to govern itself. We ourselves define heterodoxy and orthodoxy, and we find the force of Professional opinion amongst us ordinarily sufficient to maintain the distinction. Then there is no profession which offers so great a stimulus to unselfish work, both by the enormous progress which it has made and by the enormous progress which it has to make. It is our hope that this even, but far from drowsy, tenor of Medical life, this noiseless but certain advance of Medical science, may find, as heretofore, faithful reflection in our columns. No other profession can show a tithe of the constantly accumulating additions to its scientific literature which, apparently without effort, our own produces. Our volumes, we have a right to boast, are a repository and chronicle of a large portion of the advance which has been made since their commencement. In inviting

our Medical brethren to begin a new year in our company, we can promise them that, as far as mortals can command success, the *Medical Times and Gazette* for 1869 shall maintain the high position the journal has won as an expository of Medical ethics, a history of Medical affairs, and a record of scientific progress.

The ensuing week will be marked by the yearly meetings for the elections of officers of the Pathological, Obstetrical, and Clinical Societies. Dr. Quain will be proposed to fill the chair of the Pathological Society, which is to be vacated by Mr. Simon; and Dr. Graily Hewitt is nominated as the new President of the Obstetrical Society. In the list circulated by the Council of the Pathological Society, in addition to Dr. Bristowe, Dr. Peacock, Dr. Sibson, Mr. W. Adams, and Sir Henry Thompson, who are already Vice-Presidents of the Society, the names of three gentlemen are proposed for that office—Dr. Wilks, Mr. Timothy Holmes, and Mr. Simon. Dr. Murchison retires from the arduous work of the Secretaryship to the *otium cum dignitate* of Treasurer. Dr. William H. Dickinson succeeds Dr. Murchison as colleague with Mr. Hulke in the Secretariat. The gentlemen proposed as new members of Council are Dr. Austie, Dr. Charlton Bastian, Dr. Thomas Buzzard, Dr. W. Marcet, Mr. Arthur E. Durham, Mr. James Hinton, and Mr. Charles F. Maunder. At the meeting on Tuesday it will also be proposed to confer honorary membership on Drs. Claude Bernard, Th. Billroth, Ernst Brücke, Helmholtz, P. C. A. Louis, Ludwig, and Virchow. All who have watched the history of the Pathological Society will welcome the elevation of Dr. Quain to the Presidency as a fitting tribute of respect to one of the oldest and most distinguished members of the Society, and a due reward for long-continued and successful labour in the Society's interests. As long ago as 1855 Dr. Quain occupied the post of Secretary to the Society, and he only quits the office of Treasurer in consequence of his nomination to the President's chair. It is not too much to say that much of the Society's unexampled prosperity has been due directly to Dr. Quain's influence and work, and we look upon his accession to the Presidency as an augury of reform of which even the Pathological Society stands in need. The defects which, in our opinion, at present interfere with its usefulness, we have recently pointed out. They principally affect the mode in which the Society's business is conducted, the consumption of the Society's time with common-place specimens—the check given to discussion, however scientific, and the recitation of details, however essential—and the routine manner in which all subjects of real interest to the Society are disposed of by referring them to a committee. The great influence of the new President will, we hope, be exerted in making the Society of more practical use to the members. At present its functions are restricted to offering a fortnightly visit to a very small and certainly not select collection of morbid specimens.

At the meeting of the Obstetrical Society on Wednesday next, after the nomination of Dr. Graily Hewitt, whom the Council propose as the new President, Dr. J. Charles Langmore, Dr. William Leishman, of Glasgow, and Dr. Edward John Tilt, are to be proposed for the office of Vice-Presidents, in addition to Dr. Priestley, Mr. T. Spencer Wells, and Dr. Whitehead, of Manchester, who already hold that office. For new members of Council Dr. William Braithwaite, of Leeds, Dr. Edward Copeman, of Norwich, Dr. J. Braxton Hicks, Mr. Jonathan Hutchinson, Dr. Edward Parson, and Dr. Charles Taylor, are nominated by the Council. One of the chief excellences of this Society is the fair representation it offers in its government to provincial members. There is no fear that the Obstetrical, like some other of our Medical Societies, will degenerate into a London club.

The Clinical Society also holds its first annual meeting on Friday next. Mr. Paget is to succeed Sir Thomas Watson in the Presidential chair.

The President and Council of the Harveian Society have issued invitations to a *conversazione* on Thursday next. The President will deliver his annual address at half-past eight o'clock. Dr. Greenhow is, we believe, to be proposed as the new President.

We notice that the Council of the Pathological Society have given notice of their intention to propose at the next meeting that the payments of non-resident members shall be commuted for a life subscription of two guineas, and that they shall be entitled to purchase the *Transactions* at cost price. It will be seen that this is, in a degree, following an example which has been set with considerable success by the Medical Society. The Medical Society, however, have secured a large accession of strength by offering their Fellowship to country Practitioners on the life subscription of one guinea. It remains to be seen whether the offer of the Pathological Society, if made, will be equally attractive. The Council of the Pathological Society also propose that resident members should have the option of paying a composition fee of fifteen guineas in lieu of annual subscriptions. We wonder that this provision has not been adopted before.

The *Dublin Mail* has just published a correspondence between the late Chief Secretary for Ireland and Dr. McDonnell, one of the Poor-law Commissioners, on the subject of the propriety of Poor-law officials taking any active part in elections. Dr. McDonnell, it will be remembered, subscribed £100 to the expenses of Sir Dominic Corrigan's late candidature for the City of Dublin, and wrote a letter, stating the claims of Sir Dominic Corrigan on Professional support, which was published by Sir D. Corrigan's friends. It appears that, in the late election, a clerk in the Youghal Union was censured by the Commissioners for acting as a canvasser for one of the candidates. This fact is taken as a text from which to read Dr. McDonnell a lesson, who, being a Poor-law Commissioner, was represented as having acted a somewhat similar part to the delinquent clerk. The reply of the Doctor is, in effect, that his letter was written rather on Medical than on political grounds; that he did not write his letter to Sir D. Corrigan with a thought of its being published; that he did not publish it, but only permitted its publication; and that the distinction between himself and the censured clerk is that the part he took in the election could not be held to forfeit the confidence of the Poor-law Commissioners and the public in the faithful and impartial discharge of his duties, but that the part which the clerk took undoubtedly did. The correspondence closes with the somewhat oracular statement from the Chief Secretary, Colonel Wilson Patten, that in reference to the distinction drawn by Dr. McDonnell as to the faithful and impartial discharge of duties, "the rule of non-interference, as partisans, in elections by officers of the Poor-law Board is one which, for other public reasons than those referred to in your letter, it is desirable that they should observe." The force of Colonel Patten's observation would have been greater had he stated what those public reasons were.

In England, even with the din of High Church, Broad Church, Low Church, and No Church constantly in our ears, we can form but a faint idea of the religious amenities of our Irish fellow-countrymen. An amusing instance has lately occurred. As far as we understand it, it seems that the sick of the Limerick Union are nursed at the ratepayers' expense by Roman Catholic Sisters of Mercy. Dr. O'Sullivan, the Surgeon of the union, had the misfortune to disagree with the Sisters of Mercy, and he was dismissed by the guardians on the charge of having behaved disrespectfully to them. Thereupon the Doctor brings an action for wrongful dismissal against the Board of Guardians, who, just before going into court, acknowledge that they have been in the wrong, and compromise the matter by paying the Doctor 100*l.* and 600*l.* costs. The Doctor's dismissal had been carried by a majority of the guardians whom we may suppose to be Roman Catholics; the minority who voted against his dismissal seem to have been Protestants. After the

settlement with Dr. O'Sullivan the minority—perhaps naturally—object to saddling the ratepayers with the costs of what they consider to have been the blunder of the majority, and they petition the Mayor to convene a meeting "to consider what steps should be taken to prevent the heavy expenses incurred in the case of Dr. O'Sullivan *v.* the Guardians being added to the already oppressive rates with which the union is burdened." The meeting is accordingly called, but it is thronged by all the Roman Catholics in the town, clergy and laity, who attended to put down "Orange supremacy," and to support the majority of the guardians. A regular row ensued. At last the majority were triumphant, and passed a vote of thanks to the impeached guardians for sustaining the nuns against "the galling ascendency of their Protestant opponent." The whole affair has a delicious Hibernian flavour, which reminds us of scenes in Lever's earlier novels, but we are very glad that the Doctor got some redress.

On Wednesday last week, at the Thames Police-court, one James Jefferies, a rigger, living in Bermondsey, was summoned for refusing to comply with the provisions of the Vaccination Act. The excuse urged by the wife, who appeared in answer to the summons, was that her child had been ill and teething, and that it was not until that morning it had been in a fit state to undergo the operation, which had been then performed by a Mr. Jallard. The magistrate inflicted a fine of 5s., and 2s. costs. The woman said they could not pay seven farthings, whereupon she was told that if her husband did not pay he must go to prison for seven days. There will be two opinions, amongst those who have most faith in the benefits of vaccination, on the wisdom, to say nothing of the justice, of these proceedings. If anything could make vaccination unpopular with Englishmen, it would be the idea of imprisoning a man because he refused to subject his child to a morbid process, however innocuous and beneficial.

A shameful case of neglect on the part of the police was investigated on Wednesday by Mr. Humphreys, the coroner. A decent married woman, who had been ailing for some time, attempted suicide by throwing herself into the Regent's-canal. She was taken out of the water alive, and was carried to a tavern, where she was seen by a Medical man. All her clothes except her wet shift were taken off her, and she was placed upon a stretcher. Some good Samaritan threw a sack over her. In this condition she was taken to the police-station. At the station clothes were sent for, and she was placed before a fire for a time. She was then locked in a cold damp cell, and next morning was found dead from the shock and cold and exhaustion. The divisional Surgeon was not sent for, and bail was refused for her, because "an attempt at suicide was not a bailable offence." The jury returned the following verdict:—

"That the deceased expired from the effects of a shock caused by immersion in the water while she was of unsound mind, and they censure the police for not calling in the divisional Surgeon, and leaving her in a cell the whole of a night, when she might have been taken to the German Hospital or to a workhouse infirmary, and they say that the police should in future call in the divisional Surgeon of the force to see persons who have been rescued from drowning."

We hope that this case will attract the attention of the Home Secretary. Every person who is saved from suicide by drowning ought in the first instance to be taken to an Hospital.

The Registrar-General has given notice of his adoption of the nomenclature of diseases prepared by the Committee of the Royal College of Physicians, as far, at least, as continued fevers are concerned. Four forms of common fever are recognised—typhus fever, enteric fever, relapsing fever, and simple continued fever. Cerebro-spinal fever and plague are not included, as they do not prevail in England, neither febricula, as it is never fatal. The definitions of typhus and enteric fever given by the Committee of the Royal College of Physicians are adopted, and "Medical Practitioners are requested to use these names to enable the Registrar-General to distinguish the several forms of fever with precision in the returns of the ensuing year."

SPECIAL DEPARTMENTS.

At St. Mary's Hospital, Mr. Ernest Hart has been appointed to take further charge of the Aural Department, which he has held during the last four years in succession to Mr. Toynbee; Dr. Cheadle has been appointed to give demonstrations in the Department for Diseases of the Skin; and Mr. Arthur Norton to act with Dr. Sieveking in the charge of the Department for Diseases of the Throat.

MEDICAL VOTING AT THE LATE CITY OF DUBLIN ELECTION.

Messrs. Brown and Nolan, of Nassau-street, Dublin, have recently published a "List of Electors of the City of Dublin for the Year 1868, distinguishing the names of those who exercised their franchise at the above election, and showing for whom they voted." From an examination of this list, it would appear that about 215 Medical men voted on that occasion, of whom only 60 gave their voices in favour of Sir Dominic Corrigan, Bart., M.D., and Jonathan Pim, Esq., while 155 voted for Sir Arthur Edward Guinness, Bart., and the Hon. David Plunket, the Conservative candidates. It is hence evident that very few of the electors indeed were influenced by the desire for Parliamentary representation of the Medical Profession, and that the Medical electors, almost to a man, voted in accordance with their views upon the purely political questions of the day. The list is compiled from the poll-books of Jonathan Pim, Esq., and Sir Dominic Corrigan, Bart.

SOLDIERS' PACKS.

The Fourth Report of the Committee appointed to inquire into the effect on health of the present system of carrying the accoutrements, ammunition, and kit of infantry soldiers is now before us. The Committee have been unremitting in their exertions during the last four years in endeavouring to solve the difficult problem how military weights can be carried with perfect freedom to the chest, and without injurious pressure on important parts, and have found the valise equipment on the brace system, the greatest weight being borne on the strong hip-bones, to be the best, if not the only, means of effecting the purpose. One thousand sets of the new equipment have been in use in various regiments for the last three or four months. The large majority have reported very strongly in its favour. The valise is intended only to carry such very few articles as are actually necessary for a man's health and comfort when he is separated from his baggage. His surplus kit is now carried for him in squad bags. The present great-coat has been found one of the most awkward parts of the equipment to carry. It is in many respects excellent, but weighty and clumsy to pack. The Committee suggest that a lighter great-coat provided with a good waterproof cape, which might be worn separately or over the great-coat, would be a decided advantage. The Committee believe that no further trials on their part would lead to the discovery of a better plan, and conclude their report by expressing the hope that the time has at length arrived for the authorities to come to a final decision on this important question, more especially as several regiments require fresh equipments. The report is illustrated with drawings, which give an accurate idea of the proposed equipment in the various stages of putting on, wearing, and taking off, and it appears to us to have been devised on thoroughly sound anatomical principles. If no old-school martinet objections interfere with its general adoption, Major-General Eyre and the Committee over which he has presided will earn the gratitude of the soldier and of the country.

FROM ABROAD.—BOTANIC GARDENS IN FRANCE AND ENGLAND—PRIZE QUESTIONS AT THE ACADÉMIE DE MÉDECINE.

Professor Charles Martins, of Montpellier, in an article in the last number of the *Revue des Deux Mondes* upon the Botanic Gardens of France and England, acknowledges the great pre-

eminence we have arrived at of late years, the establishment at Kew being entirely unrivalled in the world, and many of our provincial gardens having attained great excellence. He speaks very despondently of the present position of France in this respect.

"More than one reader, after perusing this essay, will perhaps say that this inferiority of our botanic gardens as compared with those of England, after all, is a matter in which the national self-esteem need not be very sensitive. To think thus is to forget how much is contained within the domain of science. The sources of instruction and means of labour which are wanting to the botanist are alike deficient to the zoologist and geologist. All are alike paralysed. Long years since the Professors of the University have been making their demands in the name of science. Satisfied with their own moderate stipends, they have only been importunate for the establishments entrusted to their charge. Vain have been these demands, for nothing has changed; and in natural history we have stood stationary during the last thirty years, while all has been in progress around us. Decadence is the inevitable result of such a state of things. Forty years since, France was, in the eyes of all Europe, at the head of natural science. Cuvier, Geoffroy St.-Hilaire, Lamarck, De Blainville, Duméril, Latreille, Savigny represented zoology, and we had in botany Desfontaines, Mirbel, Cassini, Richard, La Billardière, Du-Petit Thouars, Brongniart, De Candolle, and Lamarck again; while at the same epoch the Jardin des Plantes, the theatre of their labours, was an establishment unique and unrivalled in the world. The gardens at Montpellier would also then bear comparison with those of Edinburgh, Dublin, and the small German Universities. This is no longer the case. Our gardens and natural history museums are now inferior to those of England, Germany, and the United States, and the illustrious men we have named will not have successors. Young persons are diverted from a career which, never leading to wealth and rarely to honours, is possessed of no other attraction than that of satisfying an irresistible passion for the study of nature. If even this passion does not find wherewith to feed on—if the naturalist is liable to be arrested at every step in his researches by material obstacles—if he meets with no compensation for the voluntary sacrifice he has made in disdaining more brilliant or more lucrative vocations—then discouragement seizes hold of him, and he abandons this impossible contest with that description of distress (*misère*) which has not yet been signalised—scientific distress. He struggles no more, and ceases to labour, for before undertaking a subject he finds that he is obliged to furnish the means for the expenditure into which this may lead him. Year by year he devotes to this purpose or to his travels a portion of his moderate stipend; but he soon finds himself arrested in a course which, if continued, would lead to the ruin of his family. This, in France, is the position of the greater part of contemporary zoologists, botanists, and geologists, and it is no illusion to say that while French science is in peril, foreign science is constantly augmenting."

From the above statement it is clear that the improvements in the means of scientific instruction and investigation entered upon by M. Duruy, to which we have lately adverted, require much expansion; and, while gladly accepting the testimony of so competent a witness as to the excellence of our botanic gardens, we cannot but regard this as due to somewhat exceptional causes, and we greatly fear that the position of investigators of natural science in this country is in nowise superior to that which M. Martins states they hold in France. If it be so, it is because a larger proportion of them are possessed of private means in the one country than in the other.

In addition to the prize questions for 1869 of the Académie de Médecine which we published last week, we furnish a list of those for 1870. 1. The Academy Prize (1000 fr.), "Traumatic Intracranial Effusions." 2. The Portal (1000 fr.), "The Condition of the Bones, and especially of the Vertebræ, in Cancer of the Viscera." 3. The Civrieux (800 fr.), "Do Diathetic Neuroses exist? If so, indicate the special characteristics which each Diathesis impresses on each Neurosis." 4. The Barbier (3000 fr.), for the discovery of the means of curing diseases usually reputed incurable, as hydrophobia, cancer, epilepsy, scrofula, typhus, cholera, etc. Rewards will be assigned to those who seem to have nearest approached this object. 5. The Capuron (1000 fr.), "The Precursory and Concomitant Phenomena of the Lacteal Secretion." 6. The Godard of 1000 fr. will be awarded to the author of the best work on internal pathology. 7. The Orfila (6000 fr.), "Digitaline and Digitalis. Separate the former, and describe the chemical characters which will enable it to be detected in Medico-legal investigations. What are the symptoms and pathological appearances observed in poisoning by digitalis?" 8. The Itard (2700 fr.), for the best memoir or work on practical Medicine or applied therapeutics. Such work must have been published for at least two years. 9. The Rufz de Lavison (2000 fr.), the same question as for 1869—acclimation. 10. The D'Ourches (25,000 fr.); this prize (instituted for the prevention of premature interment) we have described in our number for December 5, p. 649. 11. The St. Lager (1500 fr.) is to be given to the experimenter who is enabled to induce a tumour of the thyroid by administering to animals substances extracted from the waters or soils of localities where goître is endemic. The memoirs must be written in French or Latin, and delivered at the Academy prior to March 1 of the respective years.

PARLIAMENTARY.—LOCAL TAXATION—METROPOLITAN POOR-LAW ASYLUMS AND DISPENSARIES.

During the sitting of the House of Commons on Tuesday last, Mr. Acland gave notice that he would on Tuesday, March 2, move for the appointment of a Committee on Local Taxation.

Notice was given for Mr. Torrens that he would move for a return of Asylums in course of building under the Metropolitan Poor Act of 1867, and of those directed to be built, with an estimate of the cost; also a return of the districts that have complied with the provisions of the Act for building Dispensaries for supplying medicines to the poor at their own homes, and an estimate of the cost of such buildings.

ON THE USE OF COFFEE IN STRANGULATED HERNIA.

We believe that all our English writers on Surgery totally ignore the value of this remedy, trusting to what is no doubt a far more potent therapeutic agent—namely, chloroform. But there are cases where, for certain reasons, chloroform should if possible be avoided; and these are just the cases in which the other old remedies, such as the hot bath and tobacco enemata, are likewise dangerous. If a remedy could be found which would act in reducing a hernial obstruction without exciting dangerous symptoms of depression, it would obviously be a great boon to Surgeons. Dr. Marchand, in an elaborate article on the therapeutic action of coffee,(a) has collected a sufficient number of cases of strangulated hernia in which this simple remedy has proved successful, to warrant us in recommending its further trial. It appears that in the Havana coffee has from time immemorial been employed for the reduction of hernias. A French Surgeon, Durand (de Batignolles), when residing there, saw it several times applied with success, and on his return home in 1857, he tried the remedy in France. A hernia of thirteen years' standing became strangulated, and all ordinary means, as the taxis, ice, draughts containing belladonna, etc., proving ineffectual, an operation was decided on, when M. Durand declared that he knew a sovereign remedy, which he begged to be allowed to try. His offer being accepted, he ordered 250 grammes (about half a pound) of powdered roasted coffee to be added to twelve cupfuls of boiling water, and of this a cup was to be taken every quarter of an hour till eight cups were taken, after which half an hour was to elapse between each dose. After the fifth cup the patient felt gurgling in the tumour, and the ninth cup was followed by the spontaneous reduction of the tumour. This case was published by Triger in the *Gaz. des Hôpit.* for May, 1857, and, as might be expected, not only excited *un vif étonnement*, but led to further trials. In the following year (1858) Meyer reported the case of a man, aged 62, in whom there was a spontaneous reduction of hernia after the sixth cup; Czernicki reported a similar case which yielded to the fourth cup; and Barasent described the case of a

(a) Article "Café" in vol. vi. of the "Nouveau Dictionnaire de Médecine et Chirurgie." 1867. Paris: Baillière. London: Baillière, and Williams and Norgate.

woman to whom, after twenty-four hours' vomiting, he gave coffee, and whose hernia yielded to the fourth cup.

In 1859 Rouzier-Joly, of Clermont-l'Hérault, published two cases in which he combined the coffee treatment with the local application of belladonna ointment. Although there was intestinal hæmorrhage, in both these cases, from, as he thinks, the use of too large doses, he adds that we should not, on account of such accidents, renounce a remedy which is "as active as it is successful." In the same year we are told that "Sammert en Angleterre" reported another successful case. We suspect that some evil has befallen our compatriot's name in the hands of the French author.

In 1860 Paultrier, and in 1861 Lamare-Piquot (of Honfleur) and Cellarius, adduced additional evidence of the value of this remedy; but the two last-named writers differ as to its mode of action. The former holds that it acts by occasioning *decongestion* of the strangulated part of the intestine, while the latter thinks that it acts by exciting the contraction of the intestinal fibres, which thus gradually liberates the strangulated portion.

In 1864 Lamare-Piquot published his *Etudes Expérimentales de Médecine et de Chirurgie Pratiques: De l'Action Dynamique du Café et de son Emploi dans les Hernies Etranglees*, and this, so far as we know, is the latest work or memoir on the subject. If the above cases are worthy of credit, which there is no reason to doubt, surely coffee deserves a further trial in strangulated hernia before an operation is resorted to.

REVIEWS.

ON THE TEMPERATURE OF THE HUMAN BODY IN DISEASE.

1. *Das Verhalten der Eigenwärme in Krankheiten.* Von Dr. C. A. Wunderlich, Professor der Klinik an der Universitat Leipzig, &c. 1868. Leipzig: Wigand. London: Williams and Norgate.
2. *Chaleur dans les Maladies.* Par M. le Dr. Hirtz. (In vol. vi. of the *Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques*, 1867. Paris: Baillière. London: Baillière; and Williams and Norgate.)

Before attempting to draw any inferences from an abnormal temperature of the body, as determined by the thermometer, the Physician must have a clear and definite idea regarding the normal temperature and the extent of the thermometric range compatible with perfect health. To attempt to fix any definite number of degrees as universally representing the normal temperature of the human body under all conditions would be an absurdity, and those who wish to make themselves conversant with the influence of various circumstances—as of the temperature of the surrounding medium, of the seasons, of climates, of the hours of the day, of baths, of medicines, of age, of sex, of exercise, of sleep, of the rapidity of the inspirations, of digestion, of food, and of inanition—would do well to consult an excellent memoir on "Animal Heat," in the volume of the *Nouveau Dictionnaire*, quoted at the head of this article, by M. Paul Bert, the French physiologist, whose experiments a few years ago of grafting a living organ into the body of a living animal excited much attention. Moreover, Dr. Wunderlich devotes a chapter of his work to the "Temperature of Healthy Man," which embraces very similar topics. From these sources we shall glean a few physiological facts which have a bearing upon the subject of this article. The axilla being the region almost universally selected as the seat of investigation, its normal temperature may range from 36·25° to 37·5° C. (97·3° to 99·5° F.), the mean being 37° (98·6° F.). Without noticing the observations that have been made of the relative temperatures of the blood in various parts of its course—the brain, intestines, etc.—we may give those of the parts which are comparatively accessible to observation. Taking 37° (98·6° F.) as the mean temperature of the axilla, that of the mouth is one or two tenths higher,(a) and that of the vagina and the rectum is three or four tenths higher than that of the axilla. No influences affect the temperature of a healthy man in more than a slight degree, so slight as only to be expressed in tenths and hundredths. In a large number of observations made under various conditions, Dr. W. Ogle found 36·1° (96·8° F.) as the minimum (on a cold winter morning), and 38·1° (100·4° F.) as the maximum (in a Turkish bath).

(a) Since 100° C. = 180° F., 1° C. = $\frac{9}{5}$ths° F., or nearly 2° F., and $\frac{1}{10}$th of 1° C. = $\frac{1}{5}$th (nearly) of 1° F.

The average standard being thus established, we may now take a rapid glance at the history of the applications of the thermometer to Medicine. To Sanctorius (anno 1638) is generally awarded the double credit of having been the first who applied the thermometer and the balance to Medicine. Numbers of isolated observers might be mentioned who did good work in special departments, but in reality the thermometer has only become a recognised aid in diagnosis during the last quarter of a century. In Germany Bärensprung and Traube were independently working at the subject in the years 1850 and 1851, and neither can fairly lay claim to priority. In October, 1851, in consequence of an oral communication from Traube, Professor Wunderlich introduced the measurement of temperatures into his clinique. At first he only adopted it in special cases, but as he gradually recognised its value, he took to employing it constantly. For the last fifteen years no patient of his has escaped *thermometry*; and, while at first two measurements daily were regarded as sufficient, for the last ten years fever patients have had their axillæ disturbed four and even six times daily. The number of patients who have been submitted in his wards to this form of exploration is about 25,000, while the number of observations amounts to several millions. Amongst other German Physicians who have subsequently devoted themselves to this line of inquiry may be mentioned the names of Liebermeister, Wachsmuth, Ziemssen, Thomas, Billroth, O. Weber, etc. In England the names of Parkes, Ringer, and Aitken may be specially mentioned; the last-named writer giving, as Wunderlich observes, "my observations and many of my curves in almost every febrile disease." We hardly know whether or not this remark is intended as a gentle remonstrance against undue appropriation, but we are perfectly certain that by his full description of the Professor's labours Dr. Aitken has done a very great service to English Physicians, and has largely contributed to the diffusion of the thermometer as an aid to diagnosis and prognosis. In France the subject has been ardently followed by Charcot, Voisin, and Jaccoud, and, indeed, every civilised country has contributed its thermometric observers in disease. We need not remind our readers of Dr. Clifford Allbutt.

Taking 37·5° (99·5° F.) and 36·25° (97·3° F.) as the limits of the thermometric range in health, we shall give in a condensed form some of the *Fundamental-sätze* laid down by Dr. Wunderlich.

It does not follow that a normal temperature is indicative of health; but every one is in a diseased state whose temperature is above or below the normal limits.

The temperature in diseases has a definite range whose limits cannot be exceeded. This range extends over 12° or at most 13° (22° to 24° F.), being from 44·75° (112·5° F.), to about 32° (89·6° F.). It is, however, very rarely that the temperature exceeds 43° (109·4° F.) or falls below 33° (91·4° F.). If certain exceptional cases be put out of consideration, the morbid limits may be fixed at 42·3° (108° F.) and 35° (91·4° F.).

Influences which do not affect the temperature in health may act very decidedly in disease; and this mobility of the temperature is an indication of morbid action.

The deviations in temperature may be limited to those parts of the body which are the seat of diseased action. These local deviations are of little practical significance.

Abnormal temperature of the body is associated with a disturbed condition of the health generally. Thus a rapid augmentation of the temperature of the body, while the hands, feet, and nose remain cool, or are actually cold, is commonly associated with extreme chills and rigors, constituting the *cold stage of fever*. A more or less persistent temperature of 38·5° (101° F.) or more is associated with subjective sensations of heat, lassitude, headache, thirst, and with increased rapidity of the pulse, and after a time with loss of weight—in short, with *febrile heat*.

In some diseases, especially those which have a fixed typical character, as "abdominal typhus, exanthematous typhus, probably febris recurrens, the exanthemata generally, primary croupous and lobar pneumonia, and recent malarial attacks," the deviations of temperature follow definite laws. In the forms of disease which may be regarded as "approximately typical"—such as "febricula, pyæmia, and blood-poisoning generally, acute phosphorus-poisoning, erysipelas of the face, acute catarrhal inflammations, acute articular rheumatism, meningitis, epidemic parotitis, pleurisy, acute tuberculosis, etc.," the thermometric changes present a less regular series of changes.

The diurnal fluctuations of temperature which have been

shown by Dr. W. Ogle and others to occur in health, are usually much increased during disease.

The continuous observation (repeated several times daily) of the course of the temperature throughout the entire progress (or a great part) of a disease, yields the most important practical aid in the diagnosis of the disorder from which the patient is suffering. We can thus not only diagnose one kind of fever from another, but can tell the stage at which the disease has arrived, and whether it has undergone any irregularity in its course. It naturally contributes also to the knowledge on which we form our prognosis.

In the course of febrile diseases there are certain periods to be considered in relation to the march of temperature. These are divided by Wunderlich into (*a*) the periods into which the disease may be divided in the course of its progress, as that of its development, or the initial period, that of completion (the *acme* or *fastigium*), and, in severe cases, the period of fluctuation (or the amphibolous stage); (*b*) the periods in cases of recovery, including (1) the *perturbatio critica*, or the period of decided but insufficient diminution of temperature, (2) the period of restoration to the normal temperature, or defervescence, and (3) that of convalescence, when the temperature is normal or subnormal; and (*c*) the periods of the fatal turn, including (1) that preceding the death-struggle, (2) that of the *agonie* or death-struggle, and (3) the occurrence of death, and the *post-mortem* changes of temperature. We have not space to follow our author in his remarks upon these periods and their subdivisions, and proceed to analyse his division of febrile diseases, according to the duration and succession of their phenomena, into the five following main groups:—

1. The short febrile cases, as febricula, ephemera, etc., which last only a few days, and where the temperature rises to 40° (104° F.), and then rapidly sinks.

2. The febrile cases in which there is a continuous rise of temperature, beginning with a rapid initial period. During the height of the fever, which is usually reached within a week, the temperature ranges between 39° and 40° (102·2° and 104° F.). The most perfect representative of this group is primary croupous lobar pneumonia.

3. Fevers with a relapsing tendency, in which there is usually an evening exacerbation and a morning remission, and where the temperature ranges from 38·5° to 40·5° (101° to 105° F.). The duration of these fevers is more prolonged than that of the previous class, and may extend over several weeks. The most striking representative of this group is "abdominal typhus," by which our typhoid or enteric fever is clearly to be understood.

4. The intermittent and relapsing forms of fever present the common property that between the individual febrile paroxysms there is an interval during which the temperature is normal. In the intermittent form the febrile attacks are short (seldom extending over a whole day), and the temperature is higher (usually from 41° to 41·5°, or 105·8° to 106·5° F.) than in other diseases of comparatively little danger. Wunderlich gives malarial fever and febris recurrens as the types of these two forms.

5. The chronic and hectic forms of fever are of long continuance, and may extend even over years. They have for the most part a remittent type, with one, or sometimes two, daily exacerbations. As the best illustration of this form, Wunderlich mentions "those chronic inflammations of the lungs and bronchial tubes which we include under the name of phthisis."

He concludes these fundamental propositions with the remark that, in the cases of disease in which the temperature is abnormally depressed, the decreased temperature follows no regular course. An abnormally low temperature is common in many cases of inanition, chronic intoxication, and cancer; and less frequently in the remissions in remittent fever, after severe hæmorrhage or intestinal discharges, and occasionally in the death struggle.

While those who wish to know the results obtained by the greatest thermometric observers of every land will study Wunderlich's volume, ordinary readers will probably derive greater information from the memoir by Hirtz which stands at the head of this article. It is very clearly arranged in six parts, the *first* of which treats of the methods of measuring temperature, and describes not only the kinds of thermometer that should be applied, but the more delicate instruments invented by Walferden and Marey (the thermograph). The *second* part is devoted to the clinical study of morbid temperature. The progress of the morbid temperature, which is divided into the *ascending*, *stationary*, and *descending* periods, is first considered. The ascending period is the interval that elapses from the time when a morbid temperature appears to that at which it reaches its maximum. It seldom exceeds four or five days, and presents special difficulties to the observer, in consequence of advice being seldom sought for at that stage of disease. In acute inflammatory affections, as pneumonia and erysipelas, it lasts only from twelve to thirty hours; in malarial fevers this stage is condensed into two or three hours, and it is generally very short in all diseases beginning with a cold stage. In typhoid affections and diseases which are slow in coming to their height, the temperature does not reach 39° or 40° (102° or 104° F.) for morning, and similarly regarding the evening temperature. four or five days.

The stationary period varies in its duration with the nature of the disease. In acute inflammations (as pneumonia and pleurisy) it lasts only from five to seven days; sometimes it may last for several weeks, as in typhoid fever, some forms of erysipelas, and some forms of articular rheumatism. The temperature during this stage is only relatively stationary, there being a fall of temperature generally in the morning, with a rise in the evening, constituting a daily range varying from ½° to 2½° (1 to nearly 5° F.) The late researches of Thomas on pneumonia and other inflammatory diseases show that, starting from noon, the temperature continuously increases till the evening exacerbation, after which it as steadily falls till the morning remission. It is very seldom that the morning temperature exceeds that of the evening; and, according to Hirtz, this peculiarity has only been observed in acute phthisis. Smoler has observed that, if at the beginning of a disease this irregularity is present, it exists throughout the case. We mention this statement in order that future inquirers may confirm or overthrow it. The descending period, or period of defervescence, during which the temperature is returning to its normal standard, has already been sufficiently noticed; and in regard to that of convalescence, it must be borne in mind that when the febrile access has been severe and prolonged, and the period of defervescence has been very rapid, the temperature at this stage is often below the normal heat for some days. When the temperature during this stage rises to the extent of 1° (nearly 2° F.), a relapse or complication must be expected. Lastly, in the fatal stage, clinical experience shows us that for some days before death arising from acute diseases of short duration the temperature gradually advances, and rises in a very marked degree some hours before death. Thierfelder records a case in which, on the fatal day, the thermometer indicated a temperature of 43·2° (109·7° F.).

The progress of the temperature in different groups of diseases is next considered; but this subject has been already sufficiently noticed in our remarks on Wunderlich's book.

The third part treats of the relations that exist between the temperature and certain other elements of disease, such as the sensations of cold and heat, and the connexion between the temperature and the modifications of the pulse and respiratory movements, the perspiration and urine, certain eruptions, nervous disturbances, the state of the blood, organic lesions, etc.

The fourth part of the article treats of the diagnostic value of the temperature. Hirtz fixes the normal range of temperature more rigidly than Wunderlich. "Whenever," he observes, "the temperature of the body exceeds 38° (104·4° F.), we may affirm that there is fever, and whenever it falls below 36° (96·8° F.) we may affirm the existence of the algide state. The normal temperature is thus confined within little more than 2° C. In some of our most perplexing cases the thermometer can clear up all difficulties. It establishes an unmistakable distinction between a number of inflammatory diseases (as meningitis, pneumonia, enteritis, angina, and bronchitis) and typhoid fever; for if, during the first two days of the disease, the temperature has reached 39° to 40° (102° to 104° F.) the disease cannot be typhoid. In these pages the reader will learn how the thermometer serves to distinguish typhus from typhoid; pyæmia and blood-poisoning generally from typhoid, which they often resemble; granular meningitis from simple meningitis; subcontinuous malarial fever from typhoid; a pyæmic attack from the fever that supervenes on serous or purulent effusion; and acute latent tuberculosis from typhoid.

The thermometer, moreover, furnishes essential aid in establishing our prognosis. According to Wunderlich, a temperature exceeding 42·5° (108·5° F.) must be fatal, and a continuous temperature of 41° (105·8° F.) is a dangerous sign. In forty-five cases of "exanthematous typhus" he found the temperature to be 42° (107·6° F.) or more in five cases, all of which terminated fatally, and of twenty patients in whom the temperature was from 40° to 41°, nine died; and in these the temperature was higher than in the survivors. Dr. Hirtz, however, points out that there are exceptions to Wunderlich's rule, and states that he has recently seen two cases of erysipelas of the face re-

cover in which for some days the temperature was 42° (107·6° F.), and one case of mild intermittent fever in which the temperature reached 44° (111·2° F.). By a strange coincidence the same ward contained at the same time a patient dying from Bright's disease with a temperature of only 34° (93·2° F.).

According to Spielmann, if the temperature assumes a continuous type, the disease threatens to be severe, since inflammatory complications are indicated; a great difference between the morning and evening temperature, even if the latter is very high, is usually a favourable sign.

Of the last two parts of this memoir, which treat respectively of the "Nature and Origin of Morbid Heat" and the "Therapeutic Indications," we need say no more than that they contain satisfactory sketches of the subjects to which they are devoted.

Note.—The Centigrade scale is so universally adopted on the Continent that it must soon expel the Fahrenheit from our clinical wards, as it has already done, or nearly done, from our chemical laboratories. Although the reduction of one scale to the other is a simple arithmetical proceeding by the application of the formulæ, $F° = 32° + \frac{9}{5}C°$, or $C° = \frac{5}{9}F° - 32°$, it becomes a decided nuisance to be under the necessity of perpetually repeating it; and it is to be hoped that, by giving the temperatures according to both scales in this article, we may be initiating the general use of the Centigrade thermometer and scale in English Medical works.

GENERAL CORRESPONDENCE.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

*** The following correspondence has been sent us for publication:—

(*Copy.*)

33, Dean-street, Soho, London, W., Dec. 23rd, 1868.

Dear Sir,—I am requested by the Council of the Poor-law Medical Officers' Association, which now numbers nearly one thousand members, to propose to the Council of the Irish Medical Association a mutual interchange of good offices, in furtherance of the objects sought to be obtained by the respective associations.

We have recently taken steps to obtain Parliamentary influence, which have proved very successful; and we should be happy to use the influence so obtained to aid, to the best of our power, the Irish Medical Association in their endeavour to secure the object which they appear most to desiderate at the present time—viz., the grant of a superannuation allowance to the Medical officers of Ireland; and we should do so the more readily that we intend, in due time, to strive for the same boon for our own section of the service.

In return, we doubt not that the Council of the Irish Medical Association will be willing to enlist the sympathy and assistance of the Parliamentary representatives of Ireland in support of any measure that may be introduced with a view to the redress of the admitted grievances of the Poor-law Medical officers of England and Wales.

Will you be so kind as to place this communication before the Council of the Irish Medical Association at their next meeting, and to favour me with an early reply?

I am, dear Sir, yours faithfully,

J. Rogers, President of the Association.

To E. J. Quinan, Esq., Dublin.

Irish Medical Association:

Office, Royal College of Surgeons, Dublin, Dec. 27, 1868.

Dear Sir,—I delayed answering your favour of the 23rd inst. until I was able to bring our Council together to take your communication into consideration. The Christmas holidays have caused some delay, but we have had a very full meeting, at which your letter was read; and I have been directed to acknowledge it with thanks, to express the pleasure and gratification it gives our Council to receive the approval of the members of the Poor-law Medical Officers' Association of Great Britain, evinced by their desire that we should use our respective influences for our mutual benefit.

The Council of the Irish Medical Association will be happy to promote the good work your Association has so successfully commenced and so energetically carried on, and will only require to have pointed out to them how they may best carry out your wishes; and they have directed me to express their thanks for the kind offers of assistance conveyed in your communication, which they will be happy to avail themselves of when the progress of their Superannuation Bill requires the exercise of Parliamentary influence.

I remain, dear Sir, yours very faithfully,

E. J. Quinan, Hon. Sec.

To Dr. Rogers, London.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, December 15, 1868.

J. Simon, F.R.S., President, in the Chair.

Dr. Andrews read a report on Dr. Church's specimen of Cancer of the Thyroid.

Dr. Sanderson also read a report on Dr. Murchison's case of Deposit along the Intestines, Diaphragm, and Kidneys. The material consisted of spheroidal lymph-like corpuscles in a clear stroma. There was no appearance of degeneration. The liver resembled that encountered in leukæmia. The structure was a new one, but he would give it no new name.

Mr. Bruce reported on Dr. Beigel's case of Lepra Tuberosum, agreeing with the account given by that gentleman.

Dr. Thudichum exhibited and described the spectrum of a new colouring matter called Lutein. Its characters have been already described.

Dr. Powell exhibited certain specimens removed from a patient who had suffered from local empyema, with aneurism of the aorta and old aneurism of the popliteal artery. This was a specimen removed from a soldier who had suffered from popliteal aneurism two years ago, which was cured by compression of the artery above. A year afterwards he was admitted into the Brompton Hospital under Dr. Quain, suffering from an empyema which occupied the anterior part of the right pleura, and compressed the lung backwards. There was also a large aneurism of the aorta, from the rupture of which the patient died. The specimen showed perforation of the anterior wall of the trachea an inch and a half above its bifurcation, with erosion of its posterior wall. It was remarkable that with this lesion there was no paroxysmal dyspnœa during life, the patient only suffering from troublesome cough. There were many points of interest in the case, among others the anatomical peculiarity in the giving off of the right subclavian and common carotid trunks, which arose separately from the aorta.

Dr. Powell also exhibited specimens of splenic and suprarenal disease, removed from a case of phthisis. The spleen contained many large cheesy masses of degenerated fibro-nuclear structure, the true origin of which was doubtful; the suprarenal bodies contained nodules of a similar character. There was no bronzing of the skin, and the vomiting and adynamic symptoms present during life were, in Dr. Powell's opinion, well accounted for by the extensive and rapidly progressing general disease.

Dr. Moxon remarked that this last specimen probably came within the list of those affections termed by Dr. Wilks Hodgkin's disease. He would be glad to have it referred to the Morbid Growth Committee.

Mr. Jessop, of Leeds, showed certain specimens of diseased Suprarenal Capsules occurring in a lady aged 55. She had been ill for a year, and at first complained of slight wandering pains; there was a little bronzing of the skin. A fortnight before her death she suffered much from pain in the head and neck, latterly extending to the limbs and trunk. After death small abscesses were found under the pectoral muscles as well as in the lungs. The right suprarenal capsule was broken down, and had produced a kind of purulent infection.

Mr. Jessop also exhibited a Fibro-cellular Tumour removed from the Spermatic Cord of a man aged 49. Its growth had been extremely rapid, and the testicle was completely hidden by it. It was supposed at first to be encephaloid, as it had all grown in nine months.—Referred to Committee.

Mr. Mason showed a specimen of complete Necrosis of a portion of the Tibia occurring in a man aged 46. Twenty years ago the man had fallen and suffered compound fracture of his left leg, with a simple fracture of the right tibia. He remained well after this till 1867, when an abscess formed, and the bone was found destroyed. He was now quite well.

Mr. Curling asked if the continuity of the bone was completely destroyed.

Mr. Mason said the two extremities of the bone were quite

free, but the mobility was not very great owing to the presence of the fibula. The shortening of the limb had been the result of the former accident.

Mr. Legg showed a specimen of Aortic Aneurism, occurring in a man, aged 78, who was under the care of Mr. Erichsen. He had suffered from sinuses, as the result of necrosed radius, for seven years. Later he fell and injured himself much. Five years ago he experienced pain in his right shoulder, which gradually increased, and latterly gave rise to much pain. A tumour formed in the right axilla, and the arteries became rigid and tortuous. A systolic bruit might be heard near the heart. He suffered two syncopal attacks, and at last died in autumn. On cutting down on the tumour it was found that the aneurism was wedged in between the first three ribs. It had been ruptured in two places before death. The right subclavian was dilated, and the aorta was quite calcareous near the heart. The aneurism was situated above this. A second was situated in the descending aorta.

Dr. Cooper Rose exhibited a child with an Enormous Vascular Tumour in its Face, nearly the whole of which was included. It even involved the eyelids.

After some remarks on the introduction of therapeutics into the debates, which passed between Mr. Heath and the President, the former proceeded to show a specimen of Subclavian Aneurism on both sides of the body. On the left side it had been cured spontaneously; on the right side it was very large, involving chiefly the second portion of the vessel. The first portion of the artery was enlarged, and the third was partly involved in the tumour. The vertebral artery was pervious on this side, not on the other. In the aorta there were aneurisms both before and behind, and a third sprang from the back of the descending aorta. The patient died suddenly, having been pretty well in the afternoon. The ruptured vessel opened into the trachea. As the left vertebral artery was plugged, any attempt at tying the innominate must have proved fatal, or been very dangerous, there being only the left carotid to supply the brain with blood.

Mr. Heath, on behalf of Mr. Swaine, exhibited the results of Pirogoff's operation in an old man who died some little time ago. The os calcis was quite united to the tibia.

Mr. Maunder thought this specimen of interest, as showing what nature will do. Only three-fourths of the os calcis were in adaptation to the tibia. Too much had been preserved, and the union was not so perfect as it might have been had the bone been cut differently.

Mr. Bruce exhibited two patients presenting specimens of Keloid disease of two kinds. One occurred in a young man who had been scalded by steam. The burn healed pretty well, but in three months' time the patient returned with keloid. One portion had ulcerated and been healed again. The keloid affected various parts. The other patient was a man, aged 25, who suffered from acne all over his chest and back. At several spots there were scars both thickened and puckered. There were both acne and ecthyma present.

Mr. De Morgan asked what evidence there was as to the presence or absence of syphilis.

Mr. Bruce replied that there had been no specific eruption, no sore throat, and that the patient's children were healthy.

Mr. De Morgan thought it questionable if syphilis was not mixed up with some of these cases, especially in those which relapsed.

Mr. Bruce said that one case related by Addison also arose apparently from acne.

Mr. Wagstaff exhibited a specimen illustrating the union of bones after excision of the knee-joint. In the operation, which was performed by Mr. Simon, no complication was encountered except a small sinus in the tibia. There was complete union of the cancellous tissue of the two bones, but there was still the mark of the line of union.

Mr. Maunder exhibited a patient who had been operated on for an injury to the elbow. Primary excision of the elbow-joint had been performed. This operation had long been common at the London Hospital; he himself had performed it seven times. In this case the parts were removed two years ago. The patient had a wonderfully good joint.

Vaccination. — Birmingham. — Dr. Robinson, late Surgeon to the Birmingham Workhouse, has this day (December 30) been appointed Public Vaccinator for the parish of Birmingham.

OBITUARY.

ROBERT COLLINS, M.D., LATE OF DUBLIN.

One of the most valuable contributions to Medical science ever added to the storehouse of facts upon which true knowledge in Medicine must be based, was introduced in the year 1835 in the following words:—

"My object in the publication of the present volume is to give a minute and faithful detail of what *actually passed* under my observation in the Hospital during the seven years it was entrusted to my care, so as to enable the reader to form his *own conclusions*, and thus avoid the error, into which so many have been drawn, of remaining satisfied with assertions made by men no wiser than themselves, and whose opinions often rest on the same foundation."

The writer of these simple and truthful words was the subject of our brief memoir, Dr. Robert Collins, Master of the Dublin Lying-in Hospital; the occasion was the publication of his standard repertory of facts, containing the results of the 16,664 births occurring in the Hospital during his mastership.

If Medicine be a science of observation *par excellence*, then its professors can in no way so much serve its progress and earn the gratitude of their fellows and of mankind as by furnishing an honest detail of what they have observed. Such information pours a steady flood of light upon a science from its nature so involved in obscurity, and contrasts palpably with the transient flicker emitted by speculative writers that so frequently vanishes and leaves us steeped in greater darkness and uncertainty than before.

Collins was born near Cookstown in the County Tyrone, in the first year of this century. His father was a most respectable bleach-green proprietor, and his mother a sister of the distinguished Dr. Joseph Clarke. He was educated for the Medical Profession under his uncle's directions, and after the usual studies carried out at the schools of Edinburgh, Dublin, and Paris, took his degree in Medicine in Glasgow in the year 1822, and in June, 1824, underwent the examination of the King and Queen's College of Physicians in Ireland, and became a licentiate of that body. He subsequently, in the year 1839, had the honorary degree of Doctor of Medicine conferred upon him by the Dublin University, and was elected a Fellow of the College of Physicians in the same year.

In the year 1822 he had been appointed to the office of assistant to Dr. Pentland, the then Master of the Lying-in Hospital, and on the death of Pentland he was, in November, 1826, elected to the Mastership of that great institution. He consequently resided within its walls, as he himself states, "for a period of ten years, during which time 24,119 deliveries occurred, the result of which I almost in every instance witnessed."

Taught in a good school, with such sound guides and mentors as Joseph Clarke and Thomas Evory, Collins threw thus the force of his practical mind into availing himself of the magnificent opportunities placed at his hand. He instituted a system of tabulated records applicable to every variety of incident occurring, or likely to occur, in the seventeen thousand cases entrusted to him. He recorded the most minute facts—every variety of symptoms, every result of treatment—collated, compared, and digested, for the benefit of our common Profession, this mass of invaluable material, and at the expiration of his Mastership devoted still two years of uninterrupted study before arriving at the conclusions which accompany each section of his subjects. And after all this, he says, with his proverbial simplicity—"To arrange the cases, even in the hasty manner I have done, so as to enable me to state the general results in so great a number of deliveries, required *much perseverance;* yet it was trifling when compared with the time expended in abstracting the tables subjoined to each article." And he continues—"No tables in any way similar, so far as I know, have ever been published. I therefore hope the present attempt may have the effect of directing the attention of Physicians connected with extensive lying-in Hospitals to this subject—than which, in my opinion, there is no method better calculated to afford practical men satisfactory information."

And so it has, for Collins's plan and advice have been steadily acted upon by successive Hospital Physicians since his time, and with unspeakable advantage to our art.

We can well understand that the result of Collins's analytical system of investigation was calculated at once to correct many of the errors and influence the practice prevailing before his exact tests were applied to their elucidation; and such was markedly the case. Out of the many instances adducible we

shall give two examples, as a more enlarged discussion upon them would be out of place in this brief notice.

"Dr. Ramsbotham (vol. ii. p. 254) states that women with large families are equally or perhaps more liable to be assailed. I am much surprised to find so experienced a Practitioner make this statement. Of 19 cases recorded by Dr. Joseph Clarke 16 were first children; of 36 by Dr. Merriman 28 were first children; of 30 by myself 29 were first children. Thus, of the 85 cases 73 were first pregnancies."—Collins, "Midwifery," p. 199.

Again:—"It is stated by several writers on the subject of puerperal fever, that females who have suffered from tedious and fatiguing labours are particularly liable to this disease. This does not accord with my experience, as may be seen by the following table." And after giving the table he adds:—"Thus, of the 88 cases 71 were delivered within 12 hours; 8 were delivered within 24 hours; 1 was an arm presentation; the length of the labour in 3 cases was not noted."

Space would not permit our enlarging upon the examples of this kind with which his report teems; we must therefore pass to his highly important observations upon that opprobium to our art—puerperal fever, the prevention of which is such a desideratum in our large Hospitals.

Collins, like his predecessors and successors in the Mastership, suffered from the ravages of this scourge for the first three years, but for the last four not at all. He minutely details all the steps taken by him to purify and ventilate completely the wards (*op. cit.* p. 388), adding:—"The consequences were extremely satisfactory. Of 10,785 patients delivered in the Hospital subsequent to this period only 58 died, which is merely in the proportion of one in every 186;" and he continues:—"The facts here detailed are strongly calculated not only to lead us to suspect, but even to prove, that this fever derived its origin from some local cause, and not from anything noxious in the atmosphere. To this I should assent, had we not proof, equally well authenticated, of its prevalence and fatality in the houses of the affluent, as already stated."

Collins's difficulties as to the contagious and sporadic nature of this as well as of other zymotic diseases are reconcilable if investigation should confirm the following theory propounded by Dr. Evory Kennedy, whose experience upon puerperal fever is as great perhaps as that of any other living Physician. In an unpublished treatise on this subject placed at our disposal, Dr. Kennedy, in alluding to the passage last quoted from Dr. Collins, says:—"The latter paragraph contains the gist of the puerperal fever difficulty in a nutshell. Its local cause approaches more nearly to a constant quantity in the wards of a crowded Lying-in Hospital, whereas it is only an occasional quantity in the houses of the affluent, and the only influence exercised in its production by the atmosphere is that, in certain states of the atmosphere, the constant and occasional quantities become more operative or active in generating and propagating this dreadful malady—a malady zymotic in its type and origin, produced by a poison emanating from parturient women, more active in proportion to the concentration of their excretions or exhalations, and consequently in proportion to their number cohabiting in a given number of feet of atmospheric space, but not requiring more than one parturient female to generate it when the poison she herself has generated may, as in the case of blood-poisoning, be reabsorbed into her own system, and self-contamination then as certainly strike her down as if a crowded ill-ventilated lying-in ward were the generating medium."

It would be inexcusable, in however brief a memoir, to omit mention of Collins's extraordinary success in diminishing the equally fatal disease of infants' trismus by the attention he devoted to an improved system of ventilation and purification during especially the latter years of his Mastership of the Lying-in Hospital. Dr. Joseph Clarke published most valuable suggestions on this subject in the *Transactions* of the Royal Irish Academy in 1782, which, on being carried into effect, reduced the infant mortality in trismus from 17 to 6 per cent.; but Collins, by his system, reduced this further to one death by trismus in 666. The numerical calculation of lives saved by these two improvers in our art in the Lying-in Hospital of Dublin alone up to the year 1835 amounted to upwards of 11,000.

Space would not allow of our more than alluding to the various papers published by Dr. Collins whilst he continued in practice in Dublin; but those on "Trismus," in *Dub. Journ.* vol. ix.; "Periodicity of Births," vol. x.; "Artificial Dilatation of Os Uteri," vol. xi.; and his disquisition with Professor Hamilton, vols. xiii.-xv., as well as that with Professor Simpson, are in the recollection of many of our readers. At the highest eminence in his Profession, he was elected President of the King and Queen's College of Physicians for the years 1847 and 1848, and after four years he relinquished a full practice and retired to Ardsallagh Castle, a charming residence on the banks of the Boyne, in the County of Meath. He there devoted himself to agricultural pursuits, for which he always evinced a strong passion. His mind was too active, however, to remain there unoccupied, and from this period he threw in his force with the Agricultural Section of the Royal Dublin Society, using all his practical judgment in efforts to extend the knowledge of improvements on this important subject amongst the poorer classes of the community. He presided as Chairman of the Agricultural Committee of the Society for upwards of twenty-five years. Dr. Collins died in Dublin on December 11, 1868, aged 68.

NEW INVENTIONS.

GUYOT'S CONCENTRATED LIQUOR OF TAR.

(*Guyot*, 17, *Rue des Francs-Bourgeois, Paris; Savory and Moore, London.*)

Tar is a medicine largely employed by some Practitioners as an internal remedy for skin disease and catarrh of the pulmonary or urinary mucous membranes, as a lotion for phagedænic and other ill-conditioned ulcers and otorrhœa, as an injection for uterine and vesical discharges, and as an inhalation or fumigation. For each of these purposes we believe M. Guyot's concentrated solution to be a convenient and handy form. We have tried it in a case of ill-conditioned ulcer, and found it an agreeably smelling and efficacious application.

THE VENETIAN SPRING MATTRESS.

We have received a model of a highly ingenious and extremely simple mattress, one which possesses high elasticity, insures good ventilation, is capable of being readily taken to pieces, retains no dirt, and harbours no vermin, and withal is extremely cheap. These are high commendations, yet we think them fully justified. The mattress consists of a number of slips of wood, something like those constituting Venetian blinds — whence the name — which are suspended from a wooden framework at the top and bottom of the mattress, by means of india-rubber slings. These slings give the necessary elasticity. Each slip of wood is held in its place by a transverse band, so that movement in this direction, except to a very slight extent, is rendered impossible. This constitutes the elastic portion, and when on it a thin hair mattress is placed, a highly luxurious and at the same time an extremely cheap and economical bed is prepared. Such beds promise to be widely employed for hospitals, lunatic asylums, and suchlike institutions, where, in fact, they have already been used with marked success. Dr. Sheppard, of Colney-hatch Asylum, and Dr. Monro, Physician to St. Luke's Hospital, both speak highly of them. Mr. Sagar, of Leeds, also speaks of them in terms of approbation. The makers are Messrs. Fox Brothers and Refft, Silver-cross Works, Leeds, who are prepared to supply them in any quantity, the very largest sizes costing only 30s. The complete bedstead, with double mattress, Venetian and hair or wool, is also supplied by the same makers, who deserve, and doubtless will obtain, ample encouragement.

NEW BOOKS, WITH SHORT CRITIQUES.

A Treatise on the Diseases of the Eye. By J. Soelberg Wells, Professor of Ophthalmology in King's College, London, Ophthalmic Surgeon to King's College Hospital, etc. London: J. Churchill and Sons. Pp. 741.

*** It was but the other day we noticed a large number of books which had just been published, and which had for their subjects one or more of the diseased conditions of the eye; and now we have to usher in probably the most elaborate work on the subject of ophthalmology we have yet mentioned, certainly the largest since the publication of Mackenzie's well-known treatise. The only one which at all compares with it is Bader's work; but the utility of this otherwise excellent book is so greatly marred by its obscure and harsh diction that, were it on this ground alone, Mr. Soelberg Wells's treatise would be welcome. It is illustrated by copies of Liebreich's well-known ophthalmoscopic plates. Excellent as these are, we might have wished for something new in this yet unexhausted field.

On Chronic Bronchitis, especially as connected with Gout, Emphysema, and Diseases of the Heart. By E. Headlam Greenhow, M.D., F.R.C.P., Senior Assistant-Physician to the Middlesex Hospital. London: Longmans and Co. Pp. 236.

*** Some of these lectures have already appeared in the columns of a contemporary, and they were so good as to cause us, if not to ask, at least to wish, for more. Dr. Greenhow has done well to republish and extend these lectures.

Researches on the Nature and Treatment of Diabetes. By F. W. Pavy, M.D., F.R.S., F.R.C.P., Senior Assistant-Physician to, and Lecturer on Physiology at, Guy's Hospital. Second Edition. London: John Churchill and Sons. Pp. 297

*** Dr. Pavy's work, one which is highly esteemed both at home and abroad, has for some time been out of print, but now again makes its appearance, thoroughly revised in every way, more amply, if possible, deserving the favourable recognition it has received.

A System of Physical Education, Theoretical and Practical. By Archibald Maclaren, the Gymnasium, Oxford. Oxford: The Clarendon Press. Pp. 516.

*** Many works have recently been issued which deal more or less directly with the subject of physical education; still there is room for one by a man as well known as Mr. Maclaren. When we noticed his former work on training, we expressed our satisfaction with the views of the author as sound, rational, and founded on a proper scientific basis. We can fully confirm our previous good opinion, and endorse the present volume as likely to do as much good as the last.

Irritative Dyspepsia and its Important Connection with Irritative Congestion of the Windpipe, and with the Origin and Progress of Consumption. By C. B. Garrett, M.D. London: J. Churchill and Sons; and at the Libraries, Hastings and St. Leonard's. Pp. 112.

*** This work is apparently named on the *lucus a non lucendo* principle, for we have tried to find out some definition of this same irritative dyspepsia, and have failed—in fact, the book is mostly made up of disquisitions on food and the philosophy of digestion. As the book would seem from the title-page to be intended for the general public, we think ourselves all the more justified in pointing out some of the scientific beauties of this guide, philosopher, and friend, which would be at once apparent to any Medical man who took the trouble to read the book, if not to unscientific people. The author tells us that "starch now converted into grape sugar is chiefly absorbed in the mouth and gullet;" that "uncooked farina is perfectly indigestible by man;" that a large portion of the fat absorbed passes through the hepatic system. He leads us to believe that milky chyle gradually becomes nascent blood-corpuscles, apparently by an aggregation of its particles merely. He adopts the theory that the anorexia caused by mental anguish depends on the swallowing of tears and nasal mucus. He teaches that a pellet of mucus retained for any length of time in the air-passages is blackened by "*the passing carbonaceous air emitted in expiration!!*" In fact, he tells us that we exhale by the lungs nothing but carbonic acid and watery vapour, and we are called upon to admit the wonderful design displayed in the fact that "the carbonic acid gas creates vocal sound, whilst the vapour moderates and softens it." This is scientific instruction for the people. Notwithstanding all this farrago, there are a few grains of knowledge sound and good to be picked up, and some practical hints not to be despised, if one could only take the trouble to winnow them out; but the task to most people would be too burdensome.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, December 24, 1868.

Adams, William Prideaux, Canterbury.
Bowen, Josiah Archer, Bretherton, near Preston.
Brooks, Richard William Tomlinson, Fleet-street, E.C.
Case, Henry, Boxmoor, Herts.
Courtenay, Henry Bisshopp, Maidstone.
Ditton, John Kilshaw Kenyon, Warrington.
Lambert, Frederick William, Farsley, near Leeds.
Rouch, James Ryall, Clement's Inn, Strand.
Wallis, Frederic Michael, Bexhill, Hastings.
Wigin, George William, Methley, near Leeds.

The following gentlemen also, on the same day, passed their First Examination:—

Ekens, Joseph William, Guy's Hospital.
Joy, Frederick William, University College.
Shaw, Ollive Sims, Guy's Hospital.
Smith, Frederick, London Hospital.
Steele, Edward Harry, Guy's Hospital.
Tobin, George, St. Bartholomew's Hospital.
Wilkinson, Thomas Marshall, St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Mackenzie, Dr. Morell—Physician to the Royal Society of Musicians of Great Britain.

Millar, John, M.D. Edin., F.R.C.S.E., and M.R.C.P.E.—Extra Physician to the Royal Edinburgh Hospital for Sick Children, *vice* R. Peel Ritchie, M.D. Edin., F.R.C.P.E., resigned.

BIRTHS.

Adams.—On December 19, at St. James's-road, Croydon, the wife of T. Rutherford Adams, M.D., of a son.

Dox.—On November 18, at Prospect, Bermuda, the wife of W. G. Don, M.D., Royal Engineers, of a daughter.

Gordox.—On November 20, at Meerut, N.W. Provinces, Bengal, the wife of Dr. H. G. Gordon, Deputy Inspector-General of Hospitals, of a daughter.

Graves.—On December 24, at No. 1, Westbourne-terrace-villas, Hyde-park, the wife of F. G. Graves, M.D., of a son.

Halse.—On December 27, at 4, New Bridge-street, E.C., the wife of Charles S. Halse, M.D., of a son.

Harley.—On December 28, at 78, Upper Berkeley-street, Portman-square, W., the wife of Dr. John Harley, of a son.

Mackay.—On December 27, at 22, Clifton-road, St. John's-wood, the wife of Dr. A. E. Mackay, R.N., Deputy-Inspector General of Hospitals and Fleets, of a son.

Shea.—On December 24, at 16, Dorset-terrace, Clapham-road, the wife of John Shea, M.D., of a daughter.

Tanner.—On the 22nd inst., at Alfred House, Newington Causeway, the wife of John Tanner, M.D., of a daughter.

MARRIAGES.

Molony—Coates.—On December 19, at the British Embassy, Paris, Harry Molony, M.D., of Quin, County Clare, Ireland, to Charlotte Eliza, only daughter of the late J. Carver Coates, Esq., and granddaughter of the late Rev. John Lord, Mitchelstown, county Cork.

Stephen—Stuart.—On December 23, at St. Mary's Church, Woolwich, Andrew Stephen, M.D., of 44, Victoria-road, Kensington, W., to Eleanor Sophia, second daughter of William Stuart, M.D., Woolwich. No cards.

Warwick—Carter.—On December 22, at St. Michael's Church, Stockwell, John Arthur Warwick, to Florence Marion, youngest daughter of the late Francis Carter, M.D., R.N., of Harpole, Northamptonshire.

DEATHS.

Engelmann, Dr. Carl, at Kreuznach (Rhine, Prussia), in the early part of October, 1868, after a severe illness.

Metcalfe, Katherine Ada, only child of Assistant-Surgeon Fenwick Metcalfe, Bengal Army, at Dera Ismail Khan, Punjaub, India, on November 25, aged 10 months.

Morais, T. H., M.R.C.S., eldest son of Edwin Morris, M.D., M.R.C.S., at Spalding, on December 28, in his 27th year.

Phipps, Sarah Anne, wife of George Constantine Phipps, M.D., and youngest child of the late Captain Robert Phipps, late of H.M.'s 40th Regiment, at 196, Oxford-road, Manchester, on December 23. Also, on December 21, Sarah Mary, infant daughter of the above.

Vincent, Carruthers, M.D., of 22, Tavistock-street, Bedford-square, after a lingering illness, on Thursday, December 24, aged 50.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Farringdon General Dispensary and Lying-in Charity.—Accoucheur; must be M.R.C.P.L., F.R.C.P.L., or M.R.C.S.E. Send testimonials to Secretary, Mr. S. Green, St. Michael's-house, St. Michael's-alley, E.C., on or before January 4. The election at the Dispensary, Tuesday, January 12, at 4 o'clock.

Kent and Canterbury Hospital.—Assistant House-Surgeon and Dispenser (one office); must be M.R.C.S. or L.S.A. Applications to the Secretary at the Hospital. The election at the Hospital on January 29.

Kent and Canterbury Hospital.—Physician; must have been practising as a Physician for two years, and be registered as a regular Graduate in Medicine of some University of Great Britain or Ireland or M.R.C.P.L. Application to the Secretary at the Hospital. The election at the Hospital on Friday, January 29.

Nottingham Dispensary—Resident Surgeon and Assistant Resident Surgeon; must be M.R.C.S. or L.R.C.P. Send testimonials to Committee at the Dispensary on or before Monday, January 25. Election, February 8.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Holsworthy Union.—Mr. Cory has resigned the Fourth District; area 17,283; population 1841; salary £26 8s. per annum.

Newton Abbot Union.—Mr. Andrew Macgill has resigned the First District; area 21,809; population 4323; salary £60 per annum.

St. Pancras Parish.—Mr. E. T. Evans, Medical Officer for Females at the Workhouse, has resigned; salary £100 per annum.

APPOINTMENTS.

Toxteth Park Township.—John J. Bingham, M.R.C.S.E., L.S.A., L.R.C.P. Edin., as Assistant Medical Officer at the workhouse.

Alton Union.—George W. Harrison, M.R.C.S.E., L.S.A., to the First District.

Bodmin Union.—Thomas Mudge, M.R.C.S.E., L.S.A., to the Third District and the Workhouse.

Freebridge Lynn Union.—Edwin Woodward, L.R.C.P. Edin., M.R.C.S.E., to the North-Western District.

West Ward Union.—James D. Robertson, M.D. Edin., M.R.C.S. Edin., to the Eamont Bridge District and the Workhouse; John W. Martindale, M.R.C.S.E., L.S.A., to the Patterdale District.

The office of Physician and Accoucheur to the Farringdon General Dispensary and Lying-in Charity is vacant by the resignation of Dr. Palfrey.

Australian Meat.—A correspondent, who was present at the dinner given to prove the qualities of the meat furnished by the Australian Meat Agency, sends us the following report:—Boiled beef fair, salt; mutton pies very good; brawn very good; beef sausage very good; potted beef, at a shilling a pound, excellent. The curries, haricots, and one or two other dishes were not good. Mr. Morris, one of the speakers, said that he hoped before long to perfect a process for freezing meat by ammonia, which would enable the Australian meat importers to send it to England fresh.

A HARD CASE.—Mr. L. J. Summers was appointed by the Wolverhampton Board of Guardians to the office of Medical officer and public vaccinator of No. 3 district. He accepted the two posts in the belief that the guardians had the power of election. The vaccinatorship has now, however, been taken from him, by the Privy Council refusing to sanction the latter appointment. Mr. Summers is thus deprived of the only profitable part of the appointment, amounting to about £50 a year. He calculates that the average that he receives is 3d. per case per week, or one halfpenny per daily visit. For this he has also to supply medicines and surgical appliances and to attend midwifery cases. The appeal which the wretchedly paid officer makes to his Board for an increase of salary or some compensation ought to have its effect on even the most economically minded guardian. We never heard of a more wretched stipend.

POOR-LAW MEDICAL SERVICE. — *Clerkenwell.* — Dr. Griffith respectfully declined the appointment of Inspector of Vaccination; Messrs. Brown and Goddard accepted the Vaccinatorship. *St. Pancras.*—Dr. Saul, one of the District Medical Officers, sent in his resignation. He had seen from a local paper that the guardians intended to summon him before them in order to censure him severely. He considered that, after so many years of faithful service, he did not merit such treatment on the first complaint made. He tendered his resignation rather than submit to the indignity. Some sympathy was expressed for him, but the Chairman, Mr. Wyatt, overruled it, and the resignation was accepted. Mr. Evans having resigned, Mr. Hill was appointed to take charge both of the male and female departments of the workhouse, his salary to be raised from £100 to £150 a year. If this arrangement works satisfactorily, the appointment is to be made permanent.

THE ST. PANCRAS GUARDIANS AND THEIR MEDICAL OFFICERS.—The stringency of the St. Pancras guardians with their Medical officers has deprived them of the services of Dr. Saul, who has worked both in and out of the house for a great many years. The poor speak highly of his kindness. One complaint out of the thousands of cases which have come under his treatment did not merit such a severity as that he should be harshly summoned to appear before the board to receive a severe censure. Rather than submit to treatment which he considered he did not deserve, Dr. Saul sent in his resignation. The guardians may perhaps get in his place a more compliant officer, but will the poor on that account be any better cared for? The Chairman considered the letter tendering his resignation as most disrespectful. Is such great respect usual on such occasions? and did the writer receive it at the hands of the board? It would seem that the present board of guardians are determined to get rid of all the old officers, good, bad, or indifferent. In the appointment of new officers they are not so particular, and the Poor-law Board has been obliged to restrain their excess of zeal in appointing officers to buildings before the buildings were in existence.—*The Parochial Critic.*

MR. W. DESPREZ, of North Alabama, U.S., reports what looks like a successful method of treating rattlesnake bite. The patient, a girl aged 14, was bitten in the evening about 7 o'clock, the snake seizing the end of the right ring-finger. Mr. Desprez saw her about 3 o'clock in the morning, when he found the hand, forearm, arm, and shoulder much swollen, and a dark ecchymosed line running from the root of the finger almost to the shoulder-joint. The inside of the bitten finger was covered with several blisters full of dark fluid blood as far up as the second joint. Whisky had been freely given; capsicum and ammonia were also exhibited, but the condition of the patient did not improve, rather the contrary, for the inside of the arm and belly of the biceps became very black. At 4 o'clock next day—that is, nearly twenty-four hours after the bite—Bibron's antidote was given. This consists of corrosive sublimate, iodide of potassium, and bromide of potassium, in the proportion of two grains of the first, four grains of the second, and five drachms of the third, apparently in saturated solution. Of this twenty minims were given for a dose every twenty minutes. By 7 o'clock the swelling was reduced, and the patient gradually improved, until in about ten days she was quite well. Professor Gross says he knows of ten cases where this remedy succeeded, and we have on a previous occasion mentioned that it was well spoken of by a high Medical authority in charge of one of the United States exploring expeditions to the Rocky Mountains. It does not seem to be infallible any more than any other remedy; but enough has been seen of it to justify its careful trial in any case of snakebite, especially as these are too often hopeless when treated otherwise.

AN AUTO-REVIEWER.—M. Lasègue, the editor-in-chief of the *Archives Générales*, in the November number of that journal, resorts to the unusual course of furnishing an account of his own work, the *Traité des Angines* just published. He justifies the procedure in saying that, in a journal under his own direction, no one of his collaborateurs could reasonably be expected to write a critical account with unreserved impartiality, and even in giving a mere account of the objects of the book an amiable complaisance might be suspected. To avoid this he determined to state himself the objects which he had in view in writing the book, which is an exhaustive treatise on primary and secondary angina, in nowise a compilation, but based entirely on its author's practical experience.

MEDICAL PUNCTUALITY.—M. Béclard, in his *éloge* on Velpeau, observes that "he possessed, in a very high degree, a quality rarer and more precious than it is usually supposed to be. His punctuality never failed him on any occasion. M. Husson, the Director of the Hospital Administration, says:—'I may affirm, without fear of contradiction, that no one among those who devote themselves to the solace of their kind ever brought to the task a more sustained devotion, a more rigid punctuality, or a more complete abnegation. During nearly forty years he might be seen daily going from his own house to the Hospital without ever deviating from his route, and he would never listen to any of the demands made upon his attention until after this duty was accomplished.' All M. Velpeau's occupations were regulated in the same manner. It was unexampled that he should ever fail being present at the meeting of a society or a committee, and almost always he was the first who arrived. We have known but one man who could be compared with him in this respect, however much he may have differed in others. I recollect one day meeting Orfila in the courtyard of the Ecole de Médecine as he was about to leave it; a young man rushed up, out of breath, hat in hand, when Orfila, stopping short, drew out his watch, and observed, 'The appointment was for twelve, and it is now five minutes past: the time I had at my disposal has expired. I shall expect you to-morrow.' His carriage was at the door, and he at once drove off. The regularity of Velpeau's habits can alone explain how he could suffice to the daily demands of his Hospital service, clinical teaching, and a large practice, and yet find time to write extensive works, as well as a vast number of memoirs, notes, and discourses. All that he published, even at an advanced age, was prepared by himself, and written by his own hand. When any one spoke before him of a man being too much engaged in practice to write, an ironic smile would pass across his lips."

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN DECEMBER, 1868.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction .	22·77	0·130	0·174	0·002	15·8	4·1
West Middlesex .	20·97	0·027	0·156	0·003	14·6	3·3
Southwark & Vauxhall . . .	22·53	0·072	0·180	0·001	14·9	4·5
Chelsea . . .	26·13	0·400	0·165	0·004	16·1	6·4
Lambeth . . .	22·43	0·109	0·186	0·001	15·0	4·2
Other Companies.						
Kent . . .	27·67	0·018	0·264	0·004	18·6	5·6
New River . .	19·67	0·027	0·174	0·002	14·0	3·5
East London . .	21·07	0·056	0·135	0·003	14·7	3·2

All the samples, excepting that of the Chelsea Company, were clear when drawn from the companies' mains.

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

OIL OF TURPENTINE IN TRAUMATIC ERYSIPELAS. — Professor Lücke, of Bern, relates several cases in proof of the great utility attending the local application of oil of turpentine in traumatic erysipelas, the redness disappearing in two or three days, and the temperature falling in a remarkable manner. This effect was more rapidly produced by rubbing in the turpentine than by merely pencilling with it. The diminution of temperature was observed even in cases in which the erysipelas for a while continued to spread. No local irritation results from the application of the turpentine, the patient only complaining of a temporary feeling of burning.—*Berliner Klin. Wochenschr.*, November 9.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

W. W.—We are afraid the law of libel would be against any man who should presume to publish doubts of another's pecuniary responsibility.

The name of Mr. Jones, of St. George's Hospital, was, in our last report of the debate at the Royal Medical and Chirurgical Society, by mistake printed as Mr. Jolly.

Libel on the Profession.—It is stated in a Somersetshire newspaper, in allusion to the approaching execution of a man for the Wells murder, "that, in past times, Mr. Oakley, the governor of the gaol, has actually had applications from members of the Surgical Profession to act as executioners." We are sorry to add that a metropolitan paper is gullible enough to repeat this statement.

Non-combatant addresses us on the subject of our late article on "Married Soldiers." He approves of all that we therein said; and this is the more satisfactory to us, as he has evidently studied the subject. He argues from the fact of an extra ration being issued in times of epidemic cholera to men *married with leave* and living out of mess, that the authorities must be aware that instances occur of married soldiers being insufficiently nourished to enable them to withstand epidemic influences. If our correspondent's statement be correct that there are soldiers married with leave—that is, within the regulated proportion—who eat meat only once a week, we imagine that the *physique* of such men would be so much more obviously below that of their bachelor comrades as to have come more generally under notice. "Non-combatant's" idea that a soldier married with leave should, for the sake of the service, be insured enough to eat, would, if carried into practice, simply involve the issuing of rations to his wife and children, or giving him an increase of pay with each increase to his family. If this were done, the number of men married in anticipation of such favourable results would be much greater than it is even now, and the misery consequent upon imprudent marriages would be still more general. We, however, agree with "Non-combatant" that a soldier on the regulated strength of married men in his corps should be permitted, without restriction or disadvantage, to re-engage for a fresh term of service, provided he be in other respects eligible; but the justice of transferring him with similar privileges as a volunteer to another corps may well be questioned. The relation between the State and married soldiers is a question of extreme difficulty; its solution, under the present system of long-service enlistments, is impossible. When the army is reorganised on the short-service system, *plus* transfer to militia or reserve force, there ought to be no such thing as married soldiers; and that is really the only way that we see out of the difficulty.

Anecdote of Dr. Hunter.—In a manuscript note-book which belonged to the late Mr. Clift, so long the Conservator of the Hunterian Museum, and in his own writing, appears the following anecdote of Dr. William Hunter and Patrick Russel, so well known by his work on Indian serpents:—"Dr. Russel, in speaking to me of hobby-horses, said it was surprising how some men let theirs run away with them, and instantly Dr. Hunter, who, when in Paris in the early part of his life, passing by an old bookstall, met with a small volume of a Greek author, which he purchased for 3 francs, merely because it was a pretty little book. After he returned to London a friend called on him, and, seeing the book, took a fancy to it and begged it of Dr. H., as it was not in his way of reading. Dr. H. told him he had no use for it, and he was welcome to it. This book afterwards fell into the hands of Dr. Askew, who was celebrated as a collector of different editions of Greek authors. At his death and sale of his books, Hunter, who by this time had become a collector himself, and went a great way in purchasing rare editions, again became the owner of it. 'What do you suppose I gave for my own book?' said the Doctor; 'only twelve guineas.' Some of the company present advised him to write the anecdote and place it in the book as a singular circumstance. 'No,' said Dr. Russel; 'I would not advise you to do that; it will remain an everlasting monument of your own folly.' A neat edition of the same book might be purchased anywhere for five shillings."

Bibliopole.—The library of the College of Surgeons will be closed this day (Saturday).

Obstetrician.—Sir Richard Croft, Bart., M.D., was the accoucheur in attendance on the Princess Charlotte; he died in 1817, soon after his royal and much-lamented patient.

Dr. J. B.—The Hunterian Oration will be delivered on Monday, Feb. 15, by Mr. Quain, President of the Royal College of Surgeons.

L. I F.—You will find much interesting matter on the subject of your communication in a work just published by Mr. John Diprose, giving an account, past and present, of the parish of St. Clement Dane's.

Lex, Norwich.—Mr. Dalrymple is a member of Parliament; there is an excellent bust of his late brother in the Hall of the College of Surgeons. Mr. Alfred Smee, F.R.S., unsuccessfully contested Rochester. Messrs. Brady and Clement were re-elected.

Speaa *v.* Doidge.

The following additional subscription has been received:—Dr. W. Vawdrey Lush, 5s.

A New York Advertisement.

If you want a really pure and unsophisticated Family Pill, buy Dr. Rumbolt's Liver-encouraging, Kidney-persuading, silent perambulator.
27 in a box.

This pill is as mild as a pet lamb, and as searching as a small-tooth comb. It don't go fooling about, but attends strictly to business, and is as certain as an alarum clock!

The Editors of the "Quarterly Journal of Microscopical Science" and the Editor of "Scientific Opinion."

The Editors of the *Quarterly Journal of Microscopical Science* present their compliments to the Editor of the *Medical Times and Gazette*, and would feel obliged by his allowing them to refute in his pages a charge preferred by the editor of *Scientific Opinion* in No. 6 of that periodical. The latter gentleman declared the statement made by the editors of the *Q. J. M. S.*, to the effect that their journal will retain its present form—excepting the non-admission of papers read at the Microscopical Society of London, unless of real interest, when they are to be fully reported—to be utterly without foundation, and adds that the Fellows of the Society have always been the best contributors to the journal. He has refused to insert the following facts in reply to his attack, calculated, as it is, to injure the position of the *Q. J. M. S.*:—1. The last four volumes of the *Q. J. M. S.* contain 1676 pages and 75 plates, of which less than 250 pages and 20 plates have been contributed by the Microscopical Society itself, the rest having come through the editors and the late Dr. Greville. 2. Amongst these latter are papers by Professors Huxley, Rolleston, Gulliver, Wright, Cobbold, Messrs. Archer, Norman, Ransome, &c. The *Transactions* of the Society do not contain, in that period, five papers by men of equal eminence. That there will be no difficulty in the journal retaining its present form is obvious from the fact that the forthcoming number will contain papers by Professor Allman, F.R.S.; Professor Beale, F.R.S.; Mr. H. C. Sorby, F.R.S.; Mr. G. S. Brady, C.M.Z.S.; and Professor Cobbold, F.R.S.

Medical Men attached to Embassies.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Could you, or any of your correspondents, afford me information with regard to the appointment, pay, and duties of Medical men attached to H.M. Embassies, or to other foreign and colonial civil Medical appointments? I am, &c. M.D.

The Sanitary Act of 1866.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Can you inform me, or can any of your correspondents inform me, what boroughs or towns have taken advantage of the Sanitary Act of 1866 (29 and 30 Vict., cap. 90, clause 37), which gives power to the Town Council to erect and maintain a *fever* Hospital out of the borough rates? Any information on the subject will be esteemed a favour by Yours, &c.
December 26. Inquirer.

Corrigendum.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I find that I was in error in stating that Sir Charles Bell attributed the sense of taste to the glosso-pharyngeal nerve. The mistake arose from my having written hurriedly and from memory. This does not, however, affect the general argument that there is a disposition prevalent in this country among the members of the Medical Profession, either entirely to neglect the discoveries of Sir Charles Bell, or to attribute them to some other physiologist—as Magendie, Marshall Hall, etc. I am, &c.
53, Blenheim-crescent, W. J. Jones.

Dental Hæmorrhage.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In the *Medical Times and Gazette* for December 19 I observe a method of arresting hæmorrhage after the extraction of a tooth. This plan may be a good one for the dentist, but the Surgeon would often find the plaster of Paris wanting at the critical moment when it was required. The plan I have adopted for many years with invariable success is a ready and simple proceeding. I obtain a soft wine cork, and cut at one end an exact copy of the fang or fangs of the extracted tooth, leaving a projectiug shoulder on each side. The thick portion of the cork is cut just long enough to allow the jaws to close when it is *in situ*, and across the end a groove to receive the teeth. Having placed a small piece of lint across the cavity, the point of the cork is pressed firmly down into it, taking care that the edges come well over the sides of the cavity. The mouth is then closed and firmly tied with a handkerchief or bandage, and kept so until there is no longer any danger of hæmorrhage. There cannot well be any more certain and easy plan of operation than this, and the materials—a sharp knife and a soft cork—are always at hand.
I am, &c. A Surgeon.

On the Effects of Opium Smoking.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In the last number of the *Medical Times and Gazette* a report is given of a paper by M. Armand, which had been read at a meeting of the Académie de Médecine, on the "Therapeutical Employment of Opium Smoking." He strongly recommends the practice, not merely in chronic affections of the air-passages, but also in some affections of the heart, stomach, intestines, and other parts. The pipe is peculiar in its form, and the mode of using it is required to be by as deep and prolonged an inspiration as possible. "The smoking," he says, "is an agreeable operation, even on the first attempt, and if the inspiration has not been too forcible no coughing is produced." The journal in which the account appears is so recent and so accessible that further quotation is unnecessary.

Tobacco-smoking has unfortunately become so common that the pleasurable sensatiou in using opium and the relief of pain may possibly become attractive; and a few doses taken therapeutically may lead to its being resorted to as a luxury, and thus a most pernicious and inveterate habit be formed.

As a caution against this danger, I am anxious to place in the excellent journal in which M. Armand's statement appears a brief extract from the annual report for 1867 by Dr. Dudgeon, M.D., of the Peking Hospital. The Doctor says: "We have nothing new to add to what we have already written on opium-smoking. It still continues to be the barrier to all progress and happiness, spiritual as well as temporal. It is the greatest of all the difficulties to be overcome in the resurrection and renovation of China. If this stumbling-block were removed out of the way, it is impossible to predict what a glorious future lies before the country, to the missionary, the philanthropist, and the merchant; but until this is done

nothing is done to purpose. This is what all Christians and philanthropists have to strive against. In the long run it will prove detrimental to commerce and industry, and will prove a short-sighted, unwise, and suicidal policy."

Few habits more insidiously steal on mankind than tobacco-smoking, and none perhaps are more pernicious. Were opium-smoking to become superadded, health, and intellect, and life, I believe, would be additionally endangered.

On an occasion when a Chinese had dined with me, he suddenly retired from the table to the fireplace, and, for a few minutes, indulged in an opium smoke. I was informed he had only put into the pipe about a grain of opium. M. Armand suggests from one to ten grains. The larger dose and the deeper inspirations suggested by him would, it is probable, greatly increase the peril. I am, &c. WILLIAM COOKE.

39, Trinity-square, E.C., December 23.

NEW ELASTIC MATTRESS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I think, from the way you make mention of the elastic mattresses in your last number, proposed to be made of cut pieces of sponge moistened with glycerine, you are perhaps not aware of the one manufactured here by Messrs. Fox Brothers and Co. They are so constructed for economy, simplicity, and efficiency, that it would be a very difficult task to improve upon them. Speaking upon the first-named advantage, they do not cost more than the ordinary common straw mattress; and as regards simplicity any novice can take them in pieces, and with the same ease readjust them, for the purpose of cleaning; and as to their last recommendation, efficiency, they must excel all others in gaining perfect elasticity, for which they were intended. No part of their construction can get out of order. If one or more elastic rings should break, they can easily, and at a trifling cost, be replaced. Their last, not least, good property is that they entail the destruction of all insect life. I speak from my own personal experience, for I have had one in use for the last six months. Wherever ease, economy, and cleanliness are required, they combine all that could be wished for. The same principle may be carried out for chairs, sofas, carriage and driving-box seats. I am, &c.

Leeds, December 24. THOMAS FOSTER SAGAR.

COMMUNICATIONS have been received from—

Dr. C. A. HINGSTON; Dr. THOS. RADFORD; Dr. SUTTON; Dr. DAY; Dr. C. A. GORDON; Dr. WILKS; Mr. J. CHATTO; Dr. J. HUGHLINGS-JACKSON; Dr. B. W. RICHARDSON; Dr. LIONEL S. BEALE; Mr. THOMAS BAYANT; Mr. BRUCE; Dr. JAMES RUSSELL; M.D.; Dr. LOWE; Mr. C. R. THOMPSON; Dr. JOHN MILLAR; Dr. JOSEPH ROGERS; Mr. T. F. SAGAR; Mr. A. L. MACKAYE; Dr. BROADBENT; Dr. PALFREY; Dr. T. R. ADAMS; Dr. JOHN TANNER; Mr. ALEXANDER BRUCE; Dr. W. COOKE; Messrs. Fox and Reffitt; INQUIRER; Mr. F. J. GANT; Dr. MORELL MACKENZIE; Mr. J. WALKER; Dr. D. E. BEENARO; Mr. T. S. TUCKER; Dr. W. V. LUSH; Mr. J. B. CURGENVEN.

BOOKS RECEIVED—

Half-yearly Abstract, vol. xlviii.—Young England's Almanac, 1869—Tweedie's Temperance Year-book of Facts and History—Report of the Metropolitan Board of Works, 1867-68—Erichsen's Science and Art of Surgery—Fourth Report of the Committee appointed to inquire into the Effect on the Health of the Present System of carrying the Accoutrements, Ammunition, and Kit of Infantry Soldiers, and Drill, etc., of Recruits—New Orleans Journal of Medicine, October, 1868—A Letter to Sir Dominic Corrigan, Bart.—Journal of Cutaneous Medicine, January, 1869—Gore on African "Lethargus"—Bible Animals, part 13.

NEWSPAPERS RECEIVED—

Scotsman—California Medical Gazette—The Dominion Medical Journal, December, 1868—Parochial Critic.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 26, 1868.

BIRTHS.

Births of Boys, 808; Girls, 856; Total, 1664.
Average of 10 corresponding weeks, 1858-67, 1720·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	619	643	1262
Average of the ten years 1858-67	725·9	721·0	1449·9
Average corrected to increased population	...	...	1595
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	1	1	12	3	1	4	...	...
North	618210	1	8	11	1	11	13	4	...
Central	378058	...	1	12		5	6	1	...
East	571158	1	2	17	4	8	16	1	...
South	773175	3	5	15		8	15	4	...
Total	2804989	6	17	67	8	33	54	10	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·133 in.
Mean temperature	44·2
Highest point of thermometer	54·3
Lowest point of thermometer	35·1
Mean dew-point temperature	41·3
General direction of wind	S.W. & W.S.W.
Whole amount of rain in the week	1·57

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 26, 1868, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Dec. 26.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Dec. 26.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London Metropolis	3126635	40·1	1664	1441	1262	54·3	35·1	44·2	1·57	159
Bristol (City)	167487	35·7	121	75	*62	...	...	...	...	...
Birmingham (Boro')	352296	45·0	204	171	122	56·3	35·2	44·4	1·36	137
Liverpool (Boro")	500676	98·0	309	290	248	55·7	37·0	43·3	2·12	214
Manchester (City)	366835	81·8	254	208	*211	50·6	35·0	41·9	2·75	278
Salford (Borough)	117162	22·7	76	59	71	54·7	34·0	42·6	2·24	226
Sheffield (Borough)	232362	10·2	145	122	109	..	...	..	..	...
Bradford (Borough)	124000	20·3	79	55	55	..	...	..	..	...
Leeds (Borough)	246851	11·4	131	120	157	56·0	36·0	43·1	1·58	160
Hull (Borough)	122628	34·4	64	50	62	..	...	..	..	...
Newcastl-on-Tyne, do.	127701	23·9	93	68	80	48·0	32·0	39·8	1·56	158
Edinburgh (City)	177039	40·0	110	85	97	48·7	32·0	39·8	1·10	111
Glasgow (City)	449868	88·9	286	262	294	49·2	30·6	40·1	2·07	209
Dublin (City and some suburbs)	319985	32·8	144	157	140	...	...	..	..	...
Total of 14 large Towns	6441525	34·9	3680	3163	2970	56·3	30·6	42·2	1·82	184
					Week ending Dec. 19.	Week ending Dec. 19.				
Vienna (City)	1863) 560000	...	...	...	289	...	...	35·4	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·133 in. The barometrical reading decreased from 29·62 in. on Sunday, Dec. 20, to 28·53 in. by 2 p.m. on Thursday, Dec. 24. The general direction of the wind was S.W. and W.S.W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

January 2. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Odling, "On Carbon" (Juvenile Lecture).

4. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Mr. Henry Hancock, F.R.C.S., "On Perforating Ulcer of the Foot."

5. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

ANTHROPOLOGICAL SOCIETY, 8 p.m. Rev. J. G. Wood, "The Weapon-Poisons of Africans, Malays, and Americans." Rev. J. C. Atkinson, "Cleveland Gravehills." Mr. Edward Peacock, F.S.A., "Barrows at Cleatham." Dr. Charnock and Mr. Lewis, "Locmariakee."

ROYAL INSTITUTION, 3 p.m. Prof. Odling, "On Carbon" (Juvenile Lecture).

PATHOLOGICAL SOCIETY, 8 p.m. Annual Meeting and Election of Officers.

6. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH, 4 p.m. Meeting.

OBSTETRICAL SOCIETY. 8 p.m.: Election of Officers and Annual Meeting. Dr. Greenhalgh, "On a Case of Rupture of the Uterus;" and other Papers." 9 p.m.: President's Address.

7. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

HARVEIAN SOCIETY, 8 p.m. Anniversary: Conversazione, President's Address, and Election of Officers.

ROYAL INSTITUTION, 3 p.m. Prof. Odling, "On Ca[illegible]" (Juvenile Lecture).

8. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

CLINICAL SOCIETY, 8½ p.m. First Annual Meeting: Election of Officers. Mr. Moore, "Acupressure for Acute Suppuration." Mr. Thomas Smith, "Distended Bowel; Puncture of Intestine." Mr. Holmes, "Case of Lithotomy, in which the Stone was not found." Dr. Greenhow, "Bromide of Potassium in Chorea."

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ORIGINAL LECTURES.

LECTURE ON THE

EXPOSURE OF ANIMAL SUBSTANCES TO WATER GAS AT A HIGH TEMPERATURE—340° FAHRENHEIT.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

I WOKE one day not long since from sleep with a dream before me in wonderful reality. I thought I had been at work in the laboratory subjecting animal structures to the same process as that to which the Dentist subjects vulcanised india-rubber when he is making vulcanite base. The dream, childish as it was, as coming from no traceable line of connected thought, seemed to me to be worth accepting as a hint to positive work, and so I followed up the ideal by the real with results which I propose to describe to-day as simply as I have read them.

We take for our purpose the common vulcanising apparatus used by the Dentist, and depicted in the diagram (Fig. 1). It is a very strong chamber of iron enclosed in an iron case or stove, with a series of gas-burners at the lower part of the stove. The iron chamber, which receives the substances to be operated upon, is heated by the burners. It is furnished with a heavy iron lid with binding-screws, a safety-valve, and a tube for holding mercury, in which a thermometer is inserted. When we are about to use the apparatus, we place our specimen in the chamber with a little water. The apparatus I have used, and which has been kindly lent me by my good friend and neighbour, Mr. Ballard, has a chamber ten inches deep and five inches in diameter. Six or eight fluid ounces of water in the chamber answer very well for one series of experiments, but the quantity may be varied, by which different results may be obtained. Having, then, placed our specimens and the water in the iron chamber, we screw on the lid firmly, interposing what may be called a washer of brown paper between the lid and the chamber at the part where they touch; we screw down the safety-valve, interposing between it and the small opening it covers also a layer of brown paper; we put the thermometer into the mercury, light the gas, and watch the rise in the thermometer up to the point of heat required. The necessary degree of heat obtained, the gas is turned a little down and moderated until the mercury remains steadily at one point, and the experiment is continued for whatever length of time may be desired.

Fig. 1.

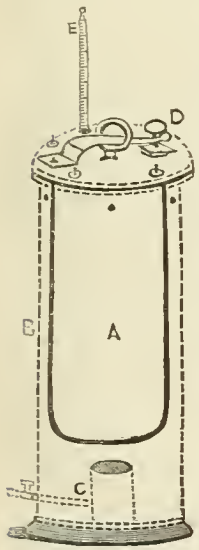

Fig. 1.—A, iron cylinder; B, stove; C, gas burner; D, lid with safety-valve; E, thermometer.

The specimens of animal structures to be experimented on may be introduced into the chamber in different ways. In some cases we place the specimen directly in the chamber in or above the water; in other cases we put it in an iron flask filled with wet plaster of Paris, lime, carbonate of lime, powdered carbon, clay, powdered Portland stone, or other substance, and subject the whole to pressure by compressing screws. I have constructed a very convenient iron flask for this purpose. It consists of a framework of iron, with two plates of iron to make a false top and bottom. The frame laid on the lower plate forms a flask, and into it the plaster of Paris, or clay, or sand, or carbon, moistened with water, is placed, with the specimen embedded. Then the upper plate of iron is dropped on, an encircling band of iron is passed over the whole length ways, two screws in this band are brought forcibly down on the upper plate of the box, and thus the specimen, with the substance in which it is buried, is firmly encased. The iron flask in this way arranged, is now ready to be placed in the chamber. The advantage of this flask is that when the exposure to heat is completed, and the metal is cooled down, on setting free the iron band the false top and bottom can be removed, and the specimen can be cut out with a small keyhole saw from its iron framework. The flask is depicted in the diagrams (Fig. 2) in parts.

Fig. 2.

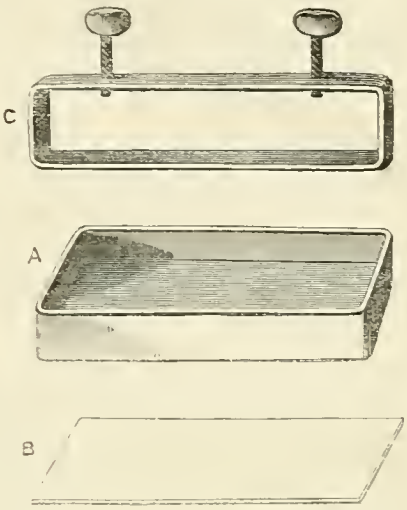

Fig. 2.—A, flask ready for filling; B, loose lid; C, encircling band, with compressing screws.

Having stated these preliminaries, I pass to describe some of the results which up to this time have been obtained.

BLOOD.

Into the chamber of the apparatus a portion of blood-clot, from the blood of an ox, was placed on a shelf with eight ounces of water beneath. The lid of the chamber was firmly adjusted, the heat was raised to 340° Fahr., and was sustained at that degree for one hour and a half. The heat was then withdrawn, and some hours were allowed for cooling. On opening the iron chamber the blood was found almost unaltered in shape, but altogether changed in consistence and structure. It felt like simple caoutchouc, but broke with a bright surface like Spanish liquorice. The natural characteristics of the blood were lost, and on gentle drying the mass became brittle, closely resembling jet. A specimen of blood thus treated has been examined by my friend Dr. Sedgwick, who reports upon it that it "was a bright black, friable, jet-like material. Gently rubbed down with a little distilled water, it formed a reddish-brown fluid, which under the microscope was seen to consist of a coloured liquid, and reddish granular masses of various sizes. Very many were about one-sixth the size of a blood-corpuscle, reddish-brown, and very irregular in shape. As the solution dried one or two irregularly hexagonal crystals made their appearance. The substance, after twenty-four hours' soaking, was partially soluble in strong solution of ammonia, very slightly in distilled water, and hardly at all in dilute hydrochloric acid, and in methylic alcohol; it was untouched in ethylic ether and in chloroform.

Into the iron box or flask plaster of Paris was poured in the fluid state, and a clot of fresh blood was immersed in the plaster. The lid was placed on the box, and when the plaster had set firmly, the whole was placed in the chamber with six ounces of water. The temperature was raised to 340°, and sustained for an hour and a half. On breaking up the plaster, after cooling, the blood was found in the same state as that named in the experiment described above.

ALBUMEN.

An egg was placed in the iron flask and surrounded with plaster of Paris in the fluid condition. When the plaster was entirely set the flask was put into the chamber with six ounces of water, the temperature was raised to 340°, and was sustained for an hour and a half. After cooling, which was very rapidly effected by immersing the flask in cold water, I found, on removing the egg, that the shell was nearly full of a beautiful transparent golden or amber-coloured fluid, very thin, and running like dissolved gelatine. In the course of a few hours

this fluid was slightly gelatinised. The membrane lining the shell was detached, but not destroyed; the shell was dry, brittle, and firmly attached to the surrounding plaster. The experiment was repeated with another egg, but was modified by allowing the apparatus to cool very slowly in the air at 60°. On breaking the plaster and cutting through the egg, no fluid was found, but in the centre a soft yellow substance (probably the yolk), about the size of a hazel nut, and slightly glistening on the surface. On gently drying this substance, it became firm, retaining its colour, and looking like amber, but not so hard.

THE BODY OF A TOAD IN CARBON.

The iron flask was partly filled with fluid plaster of Paris. On this layer a bed of vegetable carbon, in fine powder, was laid, and the body of a toad recently dead was buried in it. The carbon mound was next enclosed in plaster; the flask was closed, and half an hour later it was placed in the iron chamber with ten ounces of water. The temperature was first raised to 350° Fahr., but was brought down to 340°, and was retained at this degree for an hour and forty minutes. The gas was then turned off, and the apparatus was allowed to cool slowly. On opening the flask the body of the animal was found to be altogether destroyed, and so mixed with the carbon that no part of it could be defined.

THE BODY OF A FROG IN SAND.

The body of a frog recently dead was buried within the iron flask, in moist fine sand compressed with moderate firmness. The flask was then put into the iron chamber, with six ounces of water, and the temperature was raised to 340° Fahr., and sustained for an hour and a half. The flask was opened twelve hours afterwards, and the results of the experiment were found to be nearly the same as when carbon was employed. The animal was destroyed, and no distinct organ or structure could be distinguished.

BODY OF A FROG IN PLASTER OF PARIS.

Fluid plaster of Paris was poured into the iron flask until the flask was half full. The body of a frog recently dead was now laid on the plaster, and allowed to mould itself to it. When the plaster had become rather firm, another quantity of fluid plaster was poured in, so as to bury the frog completely and fill the flask. An hour later the flask, which had been closed, with pressure, was placed in the iron chamber. The temperature was raised to 340° Fahr., and sustained for two hours. Twelve hours later the flask was opened, and a mould of the frog was found, the organic soft parts of the body having been destroyed. At the lower part, in the centre, was a black spot; the spot consisted of blood which had gravitated to the lowest part. Besides this, there was a little *débris* of earthy part of bone within the mould. The impression of the body was beautifully marked in the plaster.

BODY OF A FISH IN PLASTER AND ALUM.

Some plaster of Paris, made into a fluid with water containing alum in solution, was poured into an iron flask until the flask was half filled. The body of a dead fish, a common sprat, was cut in half transversely, the two halves were laid upon the plaster, and the flask was filled up with fluid plaster and closed. When the plaster was firm the flask was placed in the iron chamber, with four ounces of water, and the temperature was raised to 340°, and was sustained at that degree for an hour. Twelve hours afterwards the flask was laid open, and the plaster cut in half, when two moulds were found, one of the upper, the other of the lower half of the fish. The markings of the body of the fish were delineated on the mould; a small portion of bone (spinal) was left; a dark-coloured fine spot, surrounded by a shiny scaly substance, indicated the position of the eyeball; a little filamentous *débris* remained, consisting probably of the scaly covering of the animal.

(To be continued.)

THE MEDICAL SOCIETY OF LONDON.—The Lettsomian Lectures will be delivered by William Adams, Esq., F.R.C.S., Surgeon to the Royal Orthopædic and Great Northern Hospitals, at half-past eight o'clock p.m. Lecture 1, Monday, January 11—Acute Rheumatic Affections of the Joints; their Pathology and Treatment. Lecture 2, Monday, January 25—Subacute and Chronic Rheumatic Affections of the Joints; their Pathology and Treatment. Lecture 3, Monday, February 8—Strumous Diseases of the Joints; their Pathology and Treatment. Also, the Treatment for the Restoration of Motion in cases of Stiff-Joint, or partial Anchylosis.

ORIGINAL COMMUNICATIONS.

CRANIOTOMY AND CÆSARIAN SECTION.

DR. BARNES IN REPLY TO DR. RADFORD.

WHEN I find my conclusions upon a question in obstetric practice at variance with those of Dr. Radford, I am sensible that they require to be supported by ample experience and solid reasoning. Before enunciating the conclusions as to the relative merits of craniotomy and the Cæsarian section set forth in my lectures, I had carefully studied and weighed Dr. Radford's writings. It was not without hesitation and regret that I found myself obliged to dissent from him.

Dr. Radford, in his paper in last week's *Medical Times and Gazette*, seems to imply that I am "sentimental" in my preference for the mother's life over that of her child. I trust that whatever of "sentimentalism" there may be in my constitution is controlled by reason and by deference to the Paramount Law. If, in this case between the Cæsarian section and craniotomy, I adhere to the principle that the mother's life must be preferred to that of her unborn offspring, I do so out of no sentimentalism, but because I think that preference is dictated alike by science and by conscience. There is no conflict between them. Perhaps the grandest thing ever said or done by Napoleon was the dictum ascribed to him when he was asked to decide in the case of his wife:—"Save the mother: it is her right!" It is not always that Conscience triumphs over Ambition.

Dr. Radford quotes the following passage from my lecture:—"Shall we dare to put a mere vegetative life—that of an unborn child—into the scale against that of a being accountable like ourselves to the Almighty?" and he objects that I underrate the respect due to the child's life. Take that passage with its context, and also with what I have written concerning craniotomy in preceding lectures, and I trust that no one will be of opinion that I think lightly of the infant's life. I have devoted argument after argument—even until I feared to weaken my advocacy by tediousness—to show that, by a great extension of the applications of the forceps and of turning, we might, and ought to, restrict within the narrowest limits the resort to craniotomy. I have pushed the argument against craniotomy so closely, that the ruling indication recognised is to save the mother's life. Does Dr. Radford, or any other "Cæsarianist," dispute that craniotomy may not be resorted to for that purpose? If he does dispute it, it would be well to say so plainly; for then, as we should be reasoning from a different moral basis, all contention would be superfluous. If he does not dispute it, then what becomes of craniotomy as a recognised operation under any circumstances? Why, I repeat, do we perform craniotomy with a conjugate diameter of three inches if it be not to save the mother? And why are we not equally bound to perform craniotomy with a conjugate of two inches or less, if we believe that by it we can save the mother?

It appears to me that there is no escape from the conclusion that we are so bound; and thus far, no doubt, Dr. Radford acquiesces. He differs from me as to the point at which craniotomy must yield to the Cæsarian section as a means of rescue to the mother. Relying upon an experience which I respect, he denies—1st, that craniotomy with a conjugate of two inches or less offers an equal chance for the mother with the Cæsarian section; 2ndly, that we can diagnose with accuracy the degree of contraction of the pelvis before operating. To concede the latter point is to concede what would be as conclusive against the Cæsarian section as against craniotomy. For, if we cannot determine in a given case that a pelvis is under two inches, how are we justified, upon a mere conjecture, in subjecting the woman to so terrible an operation, when probably she might be saved by craniotomy? But I believe that we can, with sufficient accuracy, determine the pelvic space available, by introducing the hand into the pelvis, and deliberately exploring it in all its dimensions.

If the hand will pass through the brim, the cephalotribe can be applied. The hand—I speak of my own—will without difficulty pass through a brim reduced to a little below two inches. I have quite recently used the cephalotribe in such a case, and so completely crushed down the head that it was delivered with comparative ease.

I observe with satisfaction that Dr. Radford no longer insists upon statistical arguments in favour of Cæsarian section. He agrees with me that we want observations where the contending operations were performed under simple conditions—

that is, not complicated with the prostration and other injuries attendant upon protracted labour. On behalf of craniotomy, I still call for something more. I ask not for fatal cases in which the operation was conducted with imperfect instruments, guided by an imperfect appreciation of the mechanism of the proceeding, but for cases conducted with a full appreciation of what can be done by removing the calvarium, by crushing down the base of the skull, and by bringing it through edgewise, with the aid of modern instruments of the best models. Twenty years ago—even ten years ago—these instruments did not exist.

In this discussion it must not be forgotten that women sometimes recover from even severe laceration or perforation occurring during craniotomy, and that these recoveries must be set against the recoveries from the Cæsarian section.

Dr. Radford says my experience of osteomalacia differs from his own if I have seen recovery from it. It does so differ. I have published one case of complete recovery (*Medico-Chir. Trans.* 1862). Another woman, delivered by me by craniotomy more than two years ago, is, I am informed by Mr. W. R. F. Lane, whose patient she is, still in fair health. It would not be difficult to collect many cases from various Continental authors.

I recognise the obligation of supporting the conclusions I have arrived at by submitting the clinical experience upon which they are based. I could not encumber a course of didactic lectures with this. My time and thoughts are at present engrossed with other work. But I trust before long to lay before the Profession a mass of clinical observations bearing upon this question which, I believe, Dr. Radford will be the first to acknowledge to be not unworthy to stand beside his own.

ON EXCISION OF THE KNEE-JOINT.

WHEN ARE WE TO EXCISE?

By THOMAS BRYANT, F.R.C.S.,
Assistant-Surgeon to Guy's Hospital.

(*Continued from page* 6.)

It is true, the advocates of early excision have not much difficulty in settling this question. They say, as soon as evidence exists that a useful limb is not to be secured by the expectant treatment within a reasonable time, resection should be performed; and they point to their successes and their number of cases as strong arguments in their favour. It must be admitted that to a degree these facts and arguments are of value; but they hardly settle the point now under consideration. The cases clearly prove that knee-joints may be excised, even when not thoroughly disorganised, in patients who have not been reduced to a feeble condition, and that a good limb may be obtained. But yet, looking at the preparations which have been presented to the public with the eye of a pathologist, I must admit that I have seen specimens of disease of the articular extremities of the bones which exhibited so few traces of disease—which in a pathological point of view were so capable of a natural repair—which were so little affected, that it would have been a source of everlasting regret to my own mind had I been induced to excise them. Indeed, I fear that some of the advocates for early excision have been led to operate in cases which were capable of a sound and complete cure by natural processes at no very remote period; that, through the strong faith they hold in favour of early operation, they have resected joints which had better been left alone. Such a feeling may be due, however, to the prejudices of my education and my surroundings; nevertheless, it exists.

On the other hand, I am ready to admit that the opponents of early excision have too often wasted valuable time in attempting to save knee-joints, in hoping to obtain a cure by natural processes, although by anchylosis, and that they have put off operative measures until the question of excision was out of court, and that of amputation alone could be entertained; for when an operation is demanded to save life, I take it that excision is rarely applicable, for facts tell us that operations of resection, when undertaken at so late a period of disease, are far from successful.

The true period for resection of the knee lies probably between the two extremes to which I have just alluded; it includes a broad interval for choice as to the time of operation, too broad for practice, and it will be well, if possible, to come to some better and more definite understanding on the point. I propose, then, by a process of exclusion, to approach the subject.

First of all, it is quite certain that no Surgeon would think of operating on a joint in which a cure by natural process is is clearly to be anticipated with a movable articulation; and it may be added that the points of a case in which such a hope may fairly be anticipated are not difficult to make out. All cases of ordinary synovitis are included in this group, and many others of early examples of the pulpy or gelatiniform synovial disease, and inflammatory expansion of the epiphyses.

Secondly, excision is not to be thought of in chronic cases of joint disease, of whatever standing, in which the patient can get about and follow his or her occupation without much discomfort, whether with or without a joint kept stiff by mechanical appliances, and in which the general health of the patient is not undergoing deterioration by the disease.

Thirdly, that it is inapplicable to cases of joint disease associated with extensive mischief to the tibia or femur.

Fourthly, excision is rarely applicable to cases of acute disease, or of sub-acute, attended with much surgical fever.

But with these large classes of cases, I fear points of agreement between the two schools almost cease; for, if we are to accept the dicta and the practice of those who advocate early excision, all other cases should be operated upon, for these gentlemen seem to look upon the prospects of securing a sound anchylosis of a knee-joint as very uncertain and very remote. They do not deem it expedient as a rule in practice to make the attempt. They believe a better limb is to be given to the patient by resection, and that it will be secured at an earlier period.

In some cases this opinion is doubtless true. In those chronic cases which do well for a time under treatment, and relapse under neglect—which raise hopes of recovery at one period of their existence, and despair of success at another—in these it is probable resection should be performed; but it is to be remembered that in such other treatment has been tried and has proved futile.

But there are cases of semi-acute joint disease in which no evidence of suppuration exists, in which anchylosis may fairly be looked for by natural processes at no very remote period through maintaining complete immobility of the affected limb by means of mechanical appliances; and these cases are not rare. In such, surely excision is not called for, nor would it, I believe, be justifiable.

Again, there are cases of disease of a joint attended with suppuration, in which the treatment by free incisions is of the greatest value. I believe such a treatment of diseased or disorganised joints has not met with the support it deserves, for the success of such a practice is very great. Would excision be preferable to such a mode of practice? Ought it to be applied till such has failed?

In a future paper I hope to illustrate this practice more fully, for it is important.

How long, it may then be asked, should treatment by mechanical appliances be employed before resection is resorted to, whether the joint mischief be attended or not with suppuration? It has been already stated that as long as the patient can get about and follow his or her usual occupation without suffering in the general health, resection should not be entertained, for a Surgeon is surely not justified in performing so serious an operation as excision of a joint—particularly of the knee—and thus risking life, before a strong necessity exists; and as long as the patient can get about no such necessity can be said to press. But when the local disease has so increased as to forbid movement—when it is clear that complete giving up of daily occupation is a necessity, and the necessity for work strongly presses—then, I take it, the question of excision comes before the Surgeon, with the view of its settlement; and, under such circumstances, is it more expedient to excise the joint than to attempt to obtain a cure by mechanical appliances and natural processes? Assuming that the treatment by free incisions into the joint is out of all question—a point of practice which demands a thought—is the case before us to be treated by splints, rest, counter-irritants, and tonics, or by resection? If the former, for how long a time is the trial to be made—three months, six months, a year, or more? On the argument of expediency, a year is too long, and indeed, upon the same ground, six months' treatment means the same thing. Yet the treatment by excision necessitates at least six months' rest, it may be less or it may be more—in the average of cases it is eight months—but up to that point at least both forms of treatment are much alike. It would seem, therefore, expedient and right upon this argument to give the mechanical treatment an honest trial, and, if six months give a fair prospect of a good result, to follow it up; and if not, let the question of excision be entertained.

And here it will be well to stop to consider, although very briefly, the risks attending excision, and to compare it with the results of amputation undertaken for the same class of cases at different periods of life, for it has been too much the habit for Surgeons to assume that they are much the same in both operations, or that the advantage lies on the side of the excisions. Facts, however, clearly tell us that such is not the case; and when we come to compare the results of amputation of the thigh for disease at different ages with those of excisions calculated in the same way, the greater mortality of excision over amputation becomes most marked.

And now to the proof.

I have before me four tables which I have carefully compiled from my own notebook, and the statistical tables which have been published by others, in which the results of the operations—amputation and excision—are shown at different periods of life, and from this I find that, taking the figures as a whole—(Table I.) of 1168 amputations 21·7 per cent. died; (Table II.) of 506 amputations of the thigh for disease, 17·7 per cent. died; (Table IV.) of 178 excisions of the knee for disease, 39 per cent. died.

From these facts alone the greater mortality of excision of the knee over amputation is very clearly shown—indeed, it is at least twice as great.

Table I., showing the Influence of Age on the Results of Amputation, taken as a whole.

	Amputations on patients 20 years and under.			Amputations on patients between 21 and 40 years of age.			Amputations on patients over 40 years.		
	Cases.	Total.	Mortality per cent.	Cases.	Total.	Mortality per cent.	Cases.	Total.	Mortality per cent.
Dr. Norris (a)	118	10	—	220	59	—	83	27	—
Dr. Laurie (b)	63	9	—	63	18	—	40	15	—
Mr. Potter (c)	22	3	—	27	5	—	17	2	—
Mr. Callender(e)	61	3	—	92	20	—	74	30	—
Mr. Bryant (d)	103	10	—	111	21	—	74	22	—
Total	367	35	9·5	513	123	23·9	288	96	33·3

Grand total, 1168 cases; 254 died, or 21·7 per cent.

Table II., showing the Results of Amputation of the Thigh for Chronic Disease.

Bryant	89 cases.	13 died.	
Callender	99	28	,,
James (c)	62	2	,,
Hussey (f)	57	6	,,
Cooper and Holmes (g)	51	13	,,
Teale (h)	33	6	,,
Laurie	92	19	,,
Fenwick (i)	23	3	,,
Total	506 cases.	90 died, or 17·7 per cent.	

Table III., showing the Results of Amputation of the Thigh for Chronic Disease of Knee-joint.

	Under 20 years of age.			Over 20 years of age.		
	Cases.	Total.	Mortality per cent.	Cases.	Total.	Mortality per cent.
Callender	27	1	—	72	27	—
Bryant	42	2	—	47	11	—
Total	69	3	4·3	119	38	32

Grand total, 188 cases; 41 died, or 21·8 per cent.

Table IV., showing the Influence of Age on the Results of Excision of the Knee-joint, calculated from Hodge's Work.

On subjects 20 years and under,	97 cases,	27 died,	27·8 p. cent.	
,, between 21 ,, and 40 .	74 ,,	30 ,,	52·7 ,,	
,, over 40 ,, ...	7 ,,	4 ,,	55·5 ,,	
Total	178 ,,	70	39·3 ,,	

(a) *American Journal*, April, 1865.
(b) *Med. Gazette*, 1840-41.
(c) *Med. Chir. Trans.* vol. xlvii.
(d) *Med. Chir. Trans.* vol. xlii.
(e) *Trans. Prov. Assoc.* vol. xviii.
(f) *Med. Chir. Trans.* 1858.
(g) *Med. Times and Gaz.* April, 1851.
(h) *Ibid.* July, 1861.
(i) *Ibid.* 1857.

Table V.—Summary of the Tables showing the Influence of Age on the Results of Amputation and Excision.

Ages of patients operated on.	Amputations as a whole.			Amputations of thigh for disease.			Amputations of thigh for chronic disease of joints.			Excisions.		
	Cases.	Fatal.	Per cent. fatal.	Cases.	Died.	Per cent. fatal.	Cases.	Died.	Per cent. fatal.	Cases.	Died.	Per cent. fatal.
20 years and under	367	35	9·5	—	—	—	69	3	4·3	97	27	27·8
Between 21 and 40	513	123	23·9	—	—	—	119	38	32·0	74	39	52·7
Over 40 years ...	288	96	33·3	—	—	—	—	—	—	7	4	55·5
Total	1168	254	21·7	506	90	17·7	188	41	21·8	178	70	39·3

From this table it will be seen that in patients operated upon under 20 years of age, of 367 cases of amputation taken as a whole, 9·5 per cent. died; of 69 cases of amputation for chronic disease of knee-joint, 4·3 per cent. died; of 97 cases of excision for chronic disease of knee-joint, 27·8 per cent. died—the mortality of excision of the knee in patients under 20 years of age being three times that of amputation taken as a whole, and nearly seven times that of amputation for the same class of cases.

When we compare the results of the two operations as performed on patients over 20 years of age, it will be seen that of 119 cases of amputation for chronic disease of the knee-joint, 32 per cent. died; of 74 cases of excision for chronic disease of the knee-joint, 52 per cent. died—the difference between the two being against excision of 20 per cent.

With these facts before us, what inference is to be drawn with respect to excision of the knee-joint?

That the operation is a dangerous one has been clearly proved, for the figures I have already quoted show it to be far more fatal than amputation of the thigh under every condition, and in young subjects under 20 years of age nearly seven times as fatal when undertaken for the same class of cases—chronic disease of the knee-joint—and yet the operation must be looked upon as a good one, for when successful the results are very good. But are these results so satisfactory in the majority of cases as to warrant, or rather justify, the Surgeon in performing excision of the knee-joint as a rule in practice in cases of disorganisation of the articulation? Is it to be preferred as a point of practice to the expectant treatment in the majority of cases; to free incisions into the articulation; or to amputation when operation is demanded to save life?

I have no hesitation in stating that, as an operation for the treatment of a disorganised joint, with our present information, excision is only applicable in exceptional cases; that it should never be practised till other treatment has been tried, and has been proved futile; that it should only be preferred to amputation when the general health of the patient is good, and the reparative powers are in a sound condition.

In young subjects these conclusions seem to be particularly applicable, for experience has taught us that by the expectant treatment in joint disease good results are to be secured in the majority of cases, and that where it has failed free incision into the articulation has hastened recovery. The figures I have already given have also clearly demonstrated the great risk of excision, and the great safety of amputation for chronic disease.

In young life, therefore, the operation should clearly be exceptional, and should only be entertained when other measures have been tried and have failed; for excision of the knee-joint in the young is, without doubt, the most dangerous form of practice that can be employed for chronic joint disease. In adult age the same conclusions seem fairly deducible, although perhaps not with quite equal force; and as an extra advantage may be gained by excision, the question might fairly be placed before the patient for his decision. He might be told that he may probably recover from his disease with a stiff knee after months, perhaps years, of repose and mechanical or other treatment, but that such treatment may in the end fail, and some operative measure be imperatively demanded. He ought to be informed that after the operation of excision, if all goes well, he may expect a useful limb in about eight months or a year—a limb that he will be able to use freely for ordinary purposes, and that will be as good as the one he may obtain by the expectant treatment—but to obtain this he runs certain risks, and that these risks are far greater than for amputation of the thigh for the same class of cases. He may also be informed that, should excision fail, he will have a fair chance of recovery by amputation.

In other words, will the patient be treated on the expectant principle for an unlimited period, with the hope and probability of gaining a good limb by anchylosis; or will he run the immediate risks of resection, with the prospect of acquiring the same end within a year?—the possibility of amputation in either case looming in the distance to save life, or of resection or second operation to save a limb, should these forms of treatment fail.

The successes of the advocates of early excision, and their arguments for the practice, are certainly enough to prove that as an operation it is a good one, and that it is applicable under certain conditions. The facts I have, however, adduced are certainly strong enough to show that the operation is one of extreme danger, and that it is only justifiable in exceptional cases.

That the operation should not be employed too early—that is, before other treatment has been tried and has failed—is certainly indicated by its dangerous nature; and that it should not be put off till life is threatened by the disease is equally proved by the same data. That it is applicable only in exceptional cases, under special circumstances, I believe to be the case, and it has yet to be determined under what peculiar conditions it is the most applicable or justifiable.

The early excisors suggested it for joint disease the result of bone affection, and condemned it for synovial disease. The more recent, as represented by Mr. Humphry, have practised it for synovial disease with a good result.

It has yet to be determined in what class of cases, and under what circumstances, it is really applicable; for I think I have proved that it is only justifiable in exceptional cases. The cases in which it is not applicable have been briefly alluded to, and the small class in which it should be practised has been indicated. When I sat down to write this paper, I believed this class to be a larger one than I do now; for the facts which have been deduced from the figures I have given proved somewhat startling when placed together and compared, and could not fail to influence my opinion, as I believe they are calculated to influence all who are still open to the reasonable deductions of collected experience.

SPECULATIONS CONCERNING HERPES ZOSTER.

By W. H. BROADBENT, M.D.,
Senior Assistant-Physician, St. Mary's Hospital.

The following questions respecting herpes zoster have occupied my attention at intervals for some time; the immediate occasion for propounding them to others at this moment is furnished by Mr. J. Hutchinson's facts in the *Medical Times and Gazette* of December 26, 1868:—

1. Is the occurrence of herpes zoster once only, as a rule, in the life of an individual, a fact of sufficient importance in the history of the affection to be accounted an essential feature of it, and one always to be taken into consideration in any endeavour to ascertain its nature? I think not. Herpes zoster is not a common affection. Suppose one person out of 200 has it in the course of his life, then, if a first attack neither confers immunity nor constitutes a predisposition, a second attack ought to occur to one only out of 200 who have already suffered once; or rather, since the first attack often occurs late in life, to one out of 300. Without pretending that the proportion assumed in this illustration is even approximate, it will show that recurrence in the same patient ought to be very rare; and though rare, examples are on record. In my opinion non-recurrence must be disallowed as evidence of an alliance between herpes zoster and the exanthemata.

2. Is the observance of stages by herpes zoster, or its definite duration, evidence, as Mr. Hutchinson considers it, of such an alliance? I think not. It appears to me that the definite progress and duration are attributable to the definite character of the injury done by or through the nerve to the structures to which it is distributed. Trusting to general impressions, I should say that the duration varied with the severity of the attack, and certainly in two or three cases I have seen, in which the eruption did not pass beyond the papular stage, the duration was very brief. As to the way in which the nerve deranges the nutritive processes and excites the vesiculation, I give no opinion.

3. What part of the nerve is the seat of the irritation, as it is called? It has been assumed that it is the root, and, for my own part, I have accepted this view without question till very recently. The following facts, however, seem inconsistent with it. We have, on the one hand, cases such as the first related by Mr. Hutchinson, in which the entire area of distribution of the superficial cervical plexus is affected. I have recently seen two examples of cervical herpes, one very severe in a man aged about 30, in which every twig of nerve seemed to have its group of vesicles, another in which a few only of the patches ran on to vesiculation, most remaining papular, the whole region being, however, more or less occupied. On the other hand, we may have a single branch of a nerve affected, as in a case recently under my care in which groups of vesicles followed the line of the outer division only of the supra-orbital; and individual branches may be spared while the greater part of the nerve is involved, as in the cases, to which attention has been drawn by Mr. Hutchinson in previous papers, of herpes frontalis, without the nasal division being implicated. Again, in herpes of the upper extremity, the distribution corresponds pretty closely with that of one of the branches of the brachial plexus. Considering now what these facts imply on the hypothesis that the "irritation" is of the root of the nerve, we find it necessary to assume that in cervical herpes we have, as a rule, three or four nerve-roots affected, in intercostal one only, in brachial herpes a certain number of filaments in each of the five roots which go to form the plexus (since the main branches contain fibres derived from all the roots), in frontal herpes a varying number of the filaments of the trifacial root. It seems to me impossible to understand or to accept such a conclusion. Let it be supposed that the "irritation" is in the branches of distribution of the nerve extending from various points in different cases to the periphery, and the apparent anomalies disappear. The continuity caused by the plexiform arrangement of the cervical nerves explains the diffused character of the herpes in this region; the isolation of the intercostals, the definite arrangement of the patches in the common form of zoster; the individuality of the branches of the fifth and of the brachial plexus, the distribution and limitation of frontal and brachial herpes.

Other facts also are explained on this hypothesis—for example, the usual absence of herpetic groups corresponding with the posterior branch of the intercostal nerves. Again, we sometimes see herpes follow one intercostal space, and then cross over to another; a branch of communication between the two nerves would explain this, by the establishment of a continuity between them, without the necessity for assuming an abnormal course of a nerve.

The provisional hypothesis, then, at which I have arrived as to the proximate cause of herpes, is, that it is some undefined condition of a nerve trunk—whether inflammatory, or anæmic, or other, I am not prepared to say, or how induced. The particular part of the nerve affected is certainly not the root. The relation between the distribution of the herpetic patches and the mode of arrangement of the superficial nerves, the eruption diffuse when they communicate freely with each other, defined when they are isolated, seems to indicate that a considerable length of the nerve is affected; the occasional implication of a single branch of a large nerve, either that the starting-point is the periphery, or that the branch has been subjected to the morbific influence after being given off.

4. Mr. Hutchinson's cases of herpes occurring during the administration of arsenic are too numerous to be referred to mere coincidence. The considerations which lead to the rejection of infrequent recurrence as an important fact in the history of herpes have precisely the opposite bearing here, and make these cases worthy of serious attention. It would, however, be premature to build conclusions upon them at present; but were the influence of arsenic in causing herpes established, it would, I think, be capable of another explanation than that given by Mr. Hutchinson.

Medical Benevolent Fund.—At the monthly meeting of the Committee of this fund, held on December 29, 1868, the amount distributed was £70, the number of recipients being ten. On Tuesday, January 12, the annual meeting of subscribers will be held, after which the report will be issued, and an appeal made to the Profession for renewed support. The following donations are thankfully acknowledged:—Jas. Paget, Esq., F.R.S., D.C.L., £25; Mr. Stocker (by Dr. J. S. Stocker), 2, Montague-square, £5 5s.

Medical Students in Berlin.—The Faculty of Medicine at Berlin has registered 425 students, of which number 361 belonged to Prussia, and 64 to other countries, being a decrease of 24 of the previous session.

LOOSE CARTILAGE IN THE KNEE-JOINT. EXTRACTION BY THE DIRECT METHOD. RECOVERY.

By ALFRED POLAND, F.R.C.S.
(From notes by Mr. W. Yates.)

John F., aged 58, admitted into Guy's Hospital on July 4, 1868, under the care of Mr. Poland, a farm labourer living in Sussex; is a strong healthy-looking man, and has always enjoyed good health; he has never suffered from rheumatism or syphilis. Has complained of weakness and pain in the right knee-joint during the last twelve or fourteen years, and he has never received any blow or accident of any kind to that joint. About eight years ago, when he was starting to run a race, he felt something in the joint suddenly give way, and he was unable afterwards either to run or walk. He was laid up for some time, and had liniments and bandages applied. He was able to get about again; but the joint was much weakened, at times requiring him to leave off work and rest the limb. About four years ago he first noticed a small hard body, situated on the outer side of the knee-joint, which had been increasing in size, and which, he states, moved about occasionally from one side of the joint to the other, at times getting between the bones and producing great pain, and he had several times suddenly stumbled in consequence. He has endeavoured to fix the body by all kinds of contrivances, and has not been able to succeed; whilst at work and when walking he tied a handkerchief tight round the knee to keep the little body up in the outer and upper angle of the joint, but this only partially answered. He was constantly being laid up and prevented from doing any laborious work. He was anxious to get rid of it, and therefore came up to Guy's Hospital to have it removed by the advice of Mr. Ticehurst, of Hastings.

On admission the right knee-joint was somewhat larger than the left, but there was no pain or tenderness either on pressure or movements of the joint; the patella was freely movable, and the joint likewise. There was no abnormal appearance about the joint, and no deformity or protuberance; the integuments were perfectly natural. There was some little fluid in the joint, accounting for the slight increase in size. On careful examination a hard rough elastic substance was situated on the outer side of the right knee-joint, opposite the external condyle of the femur, and in a line with the upper part of the patella. It seemed to be embedded deeply in the tissues, and cannot be felt without a good deal of pressure; it is perfectly movable, and slips about from one side of the knee to the other behind the patella, and it imparts a sort of crepitant sensation to the hand on manipulation. There is great difficulty in fixing it in its ordinary position at the upper and outer angle of the joint, in consequence of the thickness of the surrounding tissues, which contained abundance of fat. Various means were devised, and Mr. Millikin made a kind of forked clamp which certainly held the loose cartilage in its position, but the pressure required was so great that the skin suffered, and the man was unable to endure it. The man repeatedly urged the extraction thereof, and would run all the risks attending the operation so that he could get rid of it, as with it in the joint he could not gain his living. He could not afford to be constantly laying up, nor could he work with knee rendered motionless by mechanical contrivance to prevent the body slipping about. However, having signally failed in attaining the object of fixation, Mr. Poland determined to comply with the man's urgent wishes. Before proceeding to operate, the limb was placed upon a back splint, extending from the buttock to the foot, and kept in that position at perfect rest for a fortnight; and for three days before the operation an ice-bag was kept constantly applied over the knee-joint, so that on August 17, 1868, the loose cartilage was removed under chloroform in the following manner:—

The loose body being shifted to the upper and outer angle or pouch over the external condyle, the integuments were carefully drawn over it and pressed down deeply below the body into the joint, and there maintained, fixing and thus preventing the escape of it into the joint during the attempts at extraction. This important preliminary proceeding was ably performed by the dresser, Mr. Lovell, by means of the four fingers of the right hand, and his instructions were solely and wholly to attend to this pressure, and to keep it up even after the removal of the body, and until the external wound was finally closed up. A semilunar incision about two inches in length was made directly over the body, extending from the tendon of the biceps to near the patella; and after cutting the tissues to some considerable depth, the white glistening foreign body was visible. The knife divided the synovial capsule freely along the whole upper surface of the cartilage, and then a scoop-like instrument, made somewhat after the fashion of that used in lithotomy, was carefully insinuated behind the body before any attempt at extraction was made. The movement of its introduction gave rise to a peculiar sensation of a sudden giving way, as if a vacuum had been suddenly replaced by rushing in of air, a kind of suction-like process. The body was now tilted forwards, and after some little manipulation, in consequence of the tuberculated character of the structure, which prevented its ready egress, the loose cartilage was extracted. There was no bleeding whatsoever, and the wound was sewed up with a common darning needle by the overhand uninterrupted stitch. A compress was placed over the wound, and the assistant now, for the first time, relieved from his tedious job of compression, having perfectly succeeded in his object. The limb had never been moved during the whole operation, and was still on the back splint. A bag of ice was now kept assiduously applied. The stitches were removed on the fourth day, and the wound healed by first intention. There was some little tenderness in the joint on the third day, and this was due to some rough handling, which had been unadvisedly used. The splint was removed at the end of the tenth day, and slight motion allowed. On the fourteenth day he was about the wards, and gradually regaining the free use of the knee. He left the Hospital perfectly cured on September 2, 1868.

The loose cartilage removed was of the size of a walnut; it was plano-convex, and the convexity formed into prominent round tubercles, just like a well-marked mulberry calculus. Its structure was of the usual kind of loose cartilage—namely, being composed of cartilaginous and osseous tissues.

Remarks.—The case is here recorded for the purpose of confirming the opinion of many excellent Surgeons, that the removal of these bodies may be effected with comparatively little danger, provided that all due caution be adopted both before, during, and after the operation; and, again, the case proves that the direct operation is still advantageously employed. The whole subject of the propriety of performing the operation, and the mode of performing it when necessary, involve much consideration, and would occupy too much space. I have collected over three hundred cases of removal of loose cartilages from the knee-joint, and purpose shortly offering an analysis of them, and shall probably be able to show the superiority of the direct operation over the indirect or subcutaneous one. It is extraordinary that a Surgeon should have had an action brought against him for removing a loose cartilage by the direct incision, it being maintained by the Medical opinions set against him that the operation was obsolete, and that the only safe and proper method was the subcutaneous one. Some of our best Surgeons have failed with the subcutaneous method, and I feel assured this operation would have been unsuccessful in the above case.

EXTRA-UTERINE FŒTATION.—RUPTURE OF CYST—DEATH.

By ALFRED WRIGHT, M.R.C.S., etc.

Mrs. P., aged 36, with two children, ceased to menstruate in the beginning of April, 1868. On May 19, she sought advice, having been suffering for two or three weeks from abdominal pain, tenderness, constipation, and vomiting. There was, at this time, very slight enlargement in the hypogastric region, and commencing fulness of the breast, with well-developed papillæ, but the cervix uteri was unaltered. The case was treated as one of peritonitis, by opium and hot stupes, and the woman got about again in three weeks. From the time, however, she left off treatment, she suffered occasional attacks of severe abdominal pain, until July 18, when, after taking a purge, the pain became much more severe and the tenderness greater, whilst there was an excessively painful sensation of "bearing down," with the escape of two or three thick mucous-looking clots from the uterus. The cervix was unaltered, nor did the uterus present any apparent morbid sign, but the abdominal and mammary signs of pregnancy had increased. Relief was afforded by opium, and the patient passed a good night till 4 a.m., when, on attempting to relieve the bowels, she was seized with sudden pain and vomiting. When seen two hours afterwards, she was in intense suffering and much collapsed. She continued to get worse, and died at 6 p.m.

Autopsy twenty-four hours after Death.—Rigor mortis slight; peritoneal cavity full of coagulated blood, and signs of old and recent peritonitis everywhere. The omentum was injected with blood and matted with lymph, and the intestines adherent to the side of the abdomen and to each other. Altogether the plastic effusion was so general and excessive that the several parts could be made out only with difficulty. Above the uterus, and lying in the divergence of the two psoas muscles, was a tumour as large as a fully developed fœtal head, and coherent with the small intestine. This tumour was connected with the right broad ligament, and appeared to be a transformation of the ovary; its walls half an inch thick and fleshy, and its cavity contained a male fœtus apparently about three months advanced in development, the umbilical cord of which proceeded by branching vessels from the wall of the cyst, without the intervention of a placenta. At the upper portion of the cyst was a rent, an inch and a half long, through which the blood had escaped. The uterus was natural as when unimpregnated.

Romford, Essex.

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Medical Times and Gazette.

SATURDAY, JANUARY 9, 1869.

PROFESSOR OWEN'S CONCLUSIONS ON THE ORIGIN OF SPECIES AND NATURE OF LIFE.

We showed in a former article that Professor Owen is no votary of the Divinity of Chance. On the contrary, he believes that as every individual animal passes through a succession of forms—embryonic, infantine, adult, and aged—so each group of similar animals descended from common parents, which we call "species," has an innate and fore-ordained tendency to deviate from the parental type, and to produce new forms of a more specialised character. "A purposive route of development and change, of correlation and interdependence, manifesting intelligent Will, is as determinable in the succession of races as in the development and organisation of the individual. Generations do not vary accidentally in any and every direction, but in preordained, definite, and correlated courses."(a)

And as with the coming in of new species, so with the extinction of old ones; if the one cannot be believed to be due to fresh acts of miraculous creation, so must the other not be considered due to occasional cataclysm or convulsion, but to the steady operation of law. One cause of extinction recognised by Professor Owen is defeat in the struggle for existence. In 1850 he had shown this, when he said that, in a dry season, the large mammal will suffer from the drought sooner than the small one; if food be scanty, the large one will perish before the small one; if new enemies be introduced, the larger and more conspicuous will be the earlier victims; and smaller animals are, as a rule, more prolific than large ones.

This view of the rule of extinction, he says, "has received a large and most instructive accession of illustrations from the extensive knowledge and devoted labours of Charles Darwin." It is, in fact, so far as we can see, the same rule which Mr. Darwin subsequently propounded on the same subject. But it must not be for a moment imagined that Professor Owen is an adherent of the "Darwinian theory." What he claims is, that he enounced before Darwin the doctrine of extinction by law, which is all that he thinks sound in the Darwinian theory; whilst he utterly repudiates Darwin's endeavour to explain the "origin of species" by "natural selection." Owen shows how easy of refutation and ridicule were parts of Lamarck's theory and his illustrations thereof; but with ineffable sarcasm he rebukes those who have ridiculed Lamarck—"the great and philosophic naturalist, bearing calmly and nobly an old age of blindness and poverty"—without giving him the credit of having truly set forth "the stable grounds of a derivative origin of species, unity of plan, geological epochs, successive species therein"—whilst nothing of Lamarck's seems more extravagant than Darwin's notion of the black bear swimming about in the water catching insects in his enormous gaping mouth, and so in time becoming "a creature as monstrous as a whale."

As a test of the theories which account for the origin of species, Professor Owen brings forward the coral. The species of existing *anthozoa* cannot be traced very far back: those with a flexible or with a branched calcareous axis begin only at the tertiary period, and of the genera of eocene lamellate or stony corals all the species are extinct, and have been superseded in their grand and useful operations by those now forming reefs and atolls. As we extend our researches back in time, we find generic and family types of coral polypes passing away; and that the prevalent pattern of stellate cups of rays of *six* or its multiples has superseded a simpler pattern of *four* or its multiples.

Now, taking these facts, Professor Owen asks whether a direct act of miraculous creation must be invoked to account for each successive species of coral. Such an idea he dismisses as contrary to the worthy conception of an all-seeing, all-provident Omnipotence. It is not, he says, above, but against reason.

Let us, then, assume that the modern are the direct descendants of the ancient corals, and with Professor Owen "test the propounded explanations of their origin by secondary law." That of appetency is untenable, because a coral polype cannot exercise volition. Lamarck's creative machinery can only be applicable to creatures high enough to "want to do something." Is there any difference in the "ambient medium"? We have no knowledge that the polypes of the Devonshire or Cambrian hills worked in an ocean different from the present, or that, if different, it could change a quadripartite into a sexpartite disposition of the coral cells. The "personifying the fact of such transmutations by the term 'Natural Selection' gives no more insight into the manner of the operations than we learn of that of the budding out of a new leg in a maimed newt by being told that it was done by the "nisus formativus," or by "pangenesis"!

Professor Owen sums up the contrast between his own theory of "Derivation" and Darwin's theory of "Natural Selection" in few words, which we thus venture to abridge. "Derivation" holds that each species changes in time by virtue of inherent tendencies. "Natural Selection" holds that this is effected by altered external circumstances. "Derivation" sees the purpose of the Creator in the variety and beauty of creation, and the adaptation of each member of it to others, and especially man, a being capable of appreciating beauty. "Natural Selection" feels that "if ornament or beauty in itself should be a purpose in creation, it would be absolutely fatal to it as an

(a) In other words, new species are "preordained departures from parental type, probably sudden and seemingly monstrous, but adapting the progeny inheriting such modifications to higher purposes."

hypothesis." "Natural Selection" leaves the origin and succession of species to the fortuitous concurrence of outward conditions. "Derivation" recognises purpose.

Professor Owen next comes to the consideration of the origin of life itself, and discusses first the doctrine of *evolution*, according to which the embryo exists ready formed, though in a state of inconceivable minuteness, in the body of its parent, and it is by a series of expansions and disencasings that it grows to the adult form.

Secondly comes the doctrine which affirms *omne vivum ex ovo* or *omnis cellula e cellulâ*, and which supposes that life was at first once for all miraculously breathed into certain organic forms, and that every subsequent offspring is the result of the self-division or proliferation of living elements, which, "when properly nourished, again multiply by self-division, and grow to the likeness of the parent cells."

Doctrines such as these Owen treats as ancient phantoms which still haunt some chambers of the physiological mansion, while they afford him the opportunity of setting his heel upon the latest aspects of Darwinism; and if we may formulise his valuation of this now popular theory, it is to the effect that all that is sound in Darwinism was Owen's, and all that was not Owen's is worthless. "Those," he says, "who still hold by the rag of the 'pre-existence of germs' call all organic corpuscles or granules 'cell gemmules,' and maintain that they are transmitted, sometimes becoming developed, sometimes lying dormant from generation to generation, independent, autonomous, pre-existing from their primæval miraculous creation, as descendants, like all higher forms of life of that one form of 'Natural Selection' into which life was first breathed. Darwin grafts upon this modification of the old evolutional dogma his provisional hypothesis of 'Pangenesis.'"

It follows from the above that Professor Owen, dismissing the old doctrines as absurd, and Darwin's pangenesis as absurder, believes to the full in what has been called "spontaneous generation," or the incessant new development of living beings out of non-living material. He sides with Pouchet and Child against Pasteur. He does not believe in "panspermism," or the doctrine that all the forms of life produced in decaying organic matter come from germs dispersed through the air. He prefers believing that, when the requisite material and conditions are present, other forces are resolved into vital force; and sees "the grandeur of creative power," not in the exceptional miracle of one or few original forms of life, but in the "daily and hourly calling into life many forms by conversion of chemical and physical into vital modes of force." The "Cause which has endowed His world with power convertible into magnetic, electric, thermotic, and other forms or modes of force, has also added the conditions of conversion into the vital mode." "Change of force forms part of the constitution of the Kosmos."

We will not follow Professor Owen minutely in the comparison which he draws between life and magnetism, and between all the actions of living beings, from the attraction of the amœba by a bit of meat to the highest phenomena of consciousness in man; of which his conclusion is that from the magnet which chooses between steel and zinc to the philosopher who chooses between good and evil the difference is one of degree, not of kind, and that there is no need to assume a special miracle to account for mental phenomena.

We find Professor Owen's conclusions on some of the higher relations of life to be contrary to the doctrines instilled with most religious teaching, though he urges that if he unsettles any man's faith, "he knows that what he has to impart lends better and truer support both to the faith and the hope." Of course he rejects the notion of a vital principle as a distinct certainty. The "soul" is the personified sum of psychological manifestations; it is no more independent of the brain than the spark is of the galvanic battery. "If," he says, "the physiologist rejects the theological sense of the term 'life,' without giving rise to the charge of unsoundness in religious principles, does he lay himself more open to the charge by rejecting also the theologian's meaning of the term 'spirit,' of the term 'soul,' of the term 'mind,' and, we might add, of 'sin' or 'death'?" If we read him aright, "soul" is absolutely non-existent, except as an abstract conception; and it were as rational to treat of a "soul" as a real being, as of the Performance of a watch, as though it were something existing apart from a watch.

Although these ideas must fairly be called materialistic, and openly oppose the notion of an "immaterial indestructible soul," yet nothing can be further from Professor Owen's doctrines than the *low* materialism which sees law without a lawgiver, force without an author, and no God apart from matter. It must be remembered in the first place that Professor Owen's ideas of life necessitate the belief in the perpetual presence and working of a personal God, the Lord and Giver of life; that he believes in a future life and resurrection and judgment of the dead, "on the ground of their being parts of a Divine revelation;" and that he shows (and quotes the history of the Witch of Endor and of the doubting Apostle Thomas to exemplify it) that we really are in no condition to say what is material and what immaterial. We only know of force and its effects, but (as Faraday said) as for what causes these effects we get nothing by defining them as material or immaterial. For our own parts, we must not wander into the ground of dogmatic faith, but, as regards reasonable opinion, we must say that Professor Owen's own doctrines tell quite as much for the existence of an immortal soul as not; that the results of force must be as indestructible as matter, save by the will of God, and soul is one mode of force; and, if the matter be doubtful, we ourselves are not ashamed to be biassed by the spiritual instincts of universal man, and to say, with the pagan philosopher, "Si in hoc erro, quod animos hominum immortales esse credam, lubenter erro, nec mihi hunc errorem quo delector dum vivo extorqueri volo."

THE REPORT OF THE METROPOLITAN BOARD OF WORKS.

The Metropolitan Board of Works has issued its report for the year 1867-8. Here and there it is apologetic in its tone, but this is chiefly in respect of matters with which we, as Medical journalists, have little to do. The great sanitary works which the Board was principally constituted to accomplish are, and have been during the year, going on satisfactorily. The great system of intercepting sewers is all but completed, and there is a prospect of the early completion of what yet remains imperfect. And it has not been without good results, inasmuch as, during the exceptionally hot and dry summer that we have recently passed through, there has been observed none of that offensiveness of the Thames which a few years ago spread alarm through the metropolis, while the presence of fish in the river within the metropolitan limits has testified to the greater purity of the stream. With regard to the efforts made for the utilisation of the sewage, the Board reports both favourably and unfavourably—favourably as to the value of the sewage, testified by the character and abundance of crops of wheat and grass raised by its aid at Barking, but unfavourably as to the check in the operations of the Company which had undertaken to convey the sewage to the Maplin Sands. The works of the Company have been some time in abeyance. Propositions have been received from various parties for a concession of the sewage of the South of London for agricultural purposes, and the Board is not without hope that the delays which have occurred will ultimately afford the means of obtaining experience as to the most profitable mode of utilising the sewage. Should it so happen at last that all the sewage of London is applied to the fertilisation of the soil, the Board will have placed the capital upon the column which they have raised to their own honour and to modern civilisation. The fertilising power of the sewage has been

placed beyond question. The sample of wheat sent from Barking to the Board was grown on land which bore a wheat crop last season, and the oats were produced by means of the unexhausted manure remaining on the land after 4000 tons of sewage per acre had been applied to it last year, the same land having produced seventy-one tons of grass per acre last season. The amount of the crops is stated to be quite unprecedented. In addition to the intercepting sewer works, much has been done in covering and improving main sewers vested in the Board. Nor have the local vestries and district boards been unmindful of the advantages offered them in the construction of the main drainage works. Since January, 1859, the Board has approved the construction of about 435 miles of local sewers, and has sanctioned the borrowing of an aggregate sum of £694,318 for carrying out sewerage works.

The disagreement between the Board and the Metropolitan District Railway Company being now at an end, we may look for a speedy completion of the northern embankment of the river, and then, the stream itself being purified, the Thames will be in progress of becoming what the Seine is to Paris, one of the lungs of the metropolis. The removal of street obstructions, such as Middle-row, Holborn, and the opening of new streets, not only afford greater conveniences for traffic, but are calculated to improve the sanitary condition of London by the removals they necessitate, and the better ventilation they bring about by affording free access to the winds of heaven. The construction of new streets in a crowded city is, in a sanitary point of view, a proceeding like that of driving roads through the territory of a barbarous enemy. Ancient and modern generals have equally testified to this as the most effectual means of subduing a foe whose strength lies in his facilities for concealment.

The Finsbury and Southwark Parks, after long delays, are at last in course of plantation; but while the Board congratulates itself and the inhabitants of the adjoining suburbs of London upon the fact, it very shrewdly abstains from alluding to its own delinquencies as respects the former of these parks. In the Act for the construction of the park the Board took powers to purchase 250 acres, and to resell land to the extent of 20 acres if not wanted for the park. In consequence of the delays of the Board in carrying out the Act, the originally proposed site was lost, and it has had to content itself with a purchase of a less eligible site comprising only 120 acres. Out of these the Board is now actually providing to dispose of 20 acres for building purposes, being the best frontages in the main road which skirts the park. We sincerely hope that Parliament will not permit its intention to be frustrated by the miserable attempt of the Board to reconp itself thus for the construction of this place of recreation. It is to be regretted that a Board which, in other respects, has earned the gratitude of the community, should have committed itself to so petty a spoliation. The proceedings which have been taken to retain other open spaces used for the recreation of Londoners, such as Hampstead Heath, Wandsworth Common, London Fields, Hackney, and Tooting Bec Common, are detailed in the report.

The duties of the Board in respect of the cattle plague were comparatively light; only a few quite localised outbreaks of the disease are recorded, each of which was checked from spreading by the slaughter of the herds and the use of disinfecting processes. The various local committees were discontinued at the commencement of 1868. When we consider that the Metropolitan Board of Works is the executive body for carrying out no less than forty-eight Acts of Parliament, of which some do not dovetail very precisely into others, and of which the provisions are not always very obvious in meaning—when we consider the range of matters over which they extend—when we consider the revenue of the Board, amounting to above two millions and a half sterling, which it is its province to expend judiciously for the advantage of the metropolis, and the comparatively small amount of serious adverse criticism to which it has been subjected—we must not be backward in granting the full meed of praise due to the exertions of Sir John Thwaites and his coadjutors. It is satisfactory, too, to observe, from the last sentences of the report, that the Board is not unmindful of the amount of local taxation which all these works have involved; and that it considers that the time has arrived at which the requisite revenue for further necessary works shall not continue to be drawn exclusively from the already overtaxed occupiers of premises in London.

THE WORKSHOPS' REGULATION ACT.

THERE is no doubt at all that there exists everywhere in the kingdom an abundance of small establishments, in which manual labour of one kind or another is carried on, where the arrangements, as to duration of labour and the sanitary condition of the workshops, are quite as bad as ever they were in the monster establishments which were some years ago brought under regulation by the passing of the Factory Acts. There is, however, in our mind a great deal of doubt as to the new statute known as the "Workshops' Regulation Act, 1867" being such as will bring about in the smaller a similar revolution to that accomplished in the case of the larger factories. None but those who have had the task imposed upon them of trying to make a Sanitary Act of Parliament do the work that it is popularly believed it was the intention of our legislature that it should do, can form a competent idea of its difficulties. We are sometimes almost tempted to call in question the accuracy of the wise man in the opinion he expressed as to the multitude of counsellors, and to wish that when any such statute had passed through the two Houses of Lords and Commons, and before it received the royal assent, some man of good ordinary common sense could be entrusted with it whose business it should be to fit one section into another, and to rectify the muddles introduced by the attempt to make what must necessarily be disagreeable to some palatable to all.

Now, what is true of Sanitary Acts in general is true also of this Workshop Regulation Act in particular. We are told that it is the duty of the local authority to enforce within their jurisdiction the provisions of this Act—an Act which, we are also particularly informed, is not to apply to any factory or place subject to the jurisdiction of the Inspectors of Factories. And yet, after this, the only person whom the Act empowers to enter workshops and to make inquiry therein, without a magistrate's order, is the Inspector of Factories. The local authority cannot, by its officers, demand admission as a right, but can only do so when armed, for some special case, with the order of a magistrate, who must first be satisfied that there is reasonable cause for believing that the provisions of the Act, in the instance of that particular workshop, have been infringed. An Act of Parliament thus framed was very likely to be misconstrued. It was supposed that the working of the Act was entrusted to the local authority. Never was there a greater mistake. If the Act is to be worked at all, as it now stands, the local authority can only be the executive in those rare instances in which a credible report of infringement of its provisions comes to its ears. The systematic regulation of the smaller factories, of the hours of work, and of the schooling of the children employed, is laid not upon them, but upon the Factory Inspectors. If an employer chooses to refuse admission to a Medical Officer of Health, or Inspector of Nuisances, he is free to do so; and hence our advice to such officers is to leave the Factory Inspector to do his own work, and to avoid the unpleasantness which is sure to arise from attempting more than is distinctly laid upon him by the statute. We are induced to make this explanation by learning that one parish in the South of London has proposed a form for general adoption, in which it suggests that observations as to the condition of workrooms, the names and ages of employed children, their schooling, and so on, shall be fully registered.

But, if we mistake not, even the Factory Inspector will find it no easy matter to carry out the new Act so far as it relates to children and young persons, who may be of any age that they or their employers think it their interest to adopt. The Act, again, requires that no young person or woman shall be employed for more than twelve hours during the twenty-four, "with intervening periods for taking meals and rest, amounting in the whole to not less than one hour and a half." What is the interpretation of this? Does it mean that they shall have an hour and a half's rest out of the twelve hours' labour, or that they shall labour for twelve hours independently of the meal and rest time? Taking the section by itself, the one interpretation is quite as good as the other; and it is only by referring to the terms used in respect of one of the permanent exceptions in the schedule to the Act that the section can be construed in the manner most favourable to the employed. Then, again, unless a register of attendance could be kept, which the Inspector would have some means of verifying, it appears to us that some of the permanent exceptions to the operation of the Act will throw insuperable difficulties in the way of the Inspector when seeking to enforce the Saturday half-holiday.

Altogether, we must say, from a careful perusal of the Act, that in our opinion it is one which requires even more amendment and alteration to make it efficient, than any Sanitary Act with which we are acquainted—except, perhaps, the Adulteration of Food Act. We commend it to the consideration of the new Commission, and advise our friends, the Medical Officers of Health, to meddle with it as little as possible, but to confine their action to those deficiencies in the work-places which the Sanitary Act of 1866 enables them to rectify.

SPECIMENS OF THE EXAMINING ART.

(*Concluded from page* 15.)

Of all the various methods in use for estimating the value of answers, that adopted at the London College of Surgeons is certainly the most primitive and unsatisfactory. "Each paper is submitted to two examiners, who then, irrespective of each other, report the paper as good (G), moderate (M), or bad (B)." "A similar judgment is passed at each table in the oral examination. The judgments are now copied into a book, and there will be, of course, four letters against each candidate's number—viz., the judgments of two examiners on his written paper, and of the examiners at the two tables in the oral examination. If a candidate has four G's, he passes of course; he passes also if he has three G's and one M, provided the M is in the written examination. He may pass if he has two G's and two M's, provided both the M's are in the written examination. If he has one G. and one B. in the oral, and two G's in the written examination, he is further examined *viva voce*, and if the result is satisfactory, the B is changed to M, and he is allowed to pass; if not, he is rejected. If there are two G's *viva voce*, and B and M in the written examination, the paper is read over to the whole Court; if the B stands, he is rejected; if it is changed to M, he is passed. In all other cases the candidate is rejected."

"It will be seen," the visitors add, "that the College attaches more value to the twenty minutes' oral than to the three hours' written examination."

Can any method be more indefinite and slipshod than this? Are there no *degrees* of goodness, no *degrees* of moderateness, no *degrees* of badness? Is it possible in any pass examination to arrange men into three divisions so that every member of each division shall be of equal merit? The best of the M's must approach very closely the lowest of the G's, and the highest of the B's cannot be far removed from the lowest of the M's. If examiners find it impossible to make any more definite distinctions between men than this, they are hardly fit for their work. Every teacher of anatomy and surgery in London can tell of singular mistakes that have been made by the examiners of the London College of Surgeons. Is it to be wondered at now we see their loose method of examining? We are glad to be able to admit that the examinations at the College of Surgeons have been greatly improved of late; but it must also be acknowledged that it has only been after very considerable pressure. So recently as 1865, out of ten members of the London College of Surgeons who presented themselves for admission into our Royal Navy three failed to satisfy the mild requirements of that Board, while three others passed "an indifferent examination." In the same year at the Army Board just one-third of the candidates provided with the diplomas of the same College failed, and in March of the following year (1866) the proportion of rejections was equal to one-half. But if the London College of Surgeons in this respect has greatly sinned, the Irish Colleges (of Physicians and Surgeons) are equally if not more culpable. In 1865 these Colleges could not succeed in passing two-thirds of the candidates holding their diplomas, while in the same year, out of twenty-eight licentiates of the Edinburgh College of Physicians sent up for examination, sixteen failed to satisfy the requirements of this Board! It would be well for the honour of our Profession if some of these licensing bodies could be themselves examined. It is highly creditable to the London Society of Apothecaries that at the same examinations only one-sixth of those who held its licence failed.

The same loose system of marking as that adopted at the London College of Surgeons prevails at the London College of Physicians, with the additional defect that candidates are examined "by a single examiner, without any colleague or assessor;" so that the examiners were frequently "called on to examine and report upon their own pupils."

Such a system of examining can only be accounted for by the fact that at both Colleges the examiners are selected from amongst men eminent in practice rather than from those who have had experience in teaching.

But the most extraordinary systems of examining are presented by the Irish licensing bodies. In the University of Dublin the visitors report that the singular method is adopted of examining the candidates in classes, and passing the questions round! "About 35 per cent. constitute the minimum number of marks for passing."

At the Irish College of Physicians the reporter states, "The examination was oral; no written questions; voting not by numbers, but simply 'yes' or 'no.'" !! But the most amazing, and, we should hope, unique, method of examining is that practised at the Royal College of Surgeons, Ireland. The candidates are examined by four examiners; these hand in their voting papers to the senior examiner. "The vote was 'yes' or 'no,' and in case there was an equality of votes—two 'yes' and two 'no'—the candidate is passed." "No conference takes place between the examiners."

The diploma thus granted sends a man into society supported by an authoritative declaration that he is duly qualified to take the Medical charge of human lives, and yet *two* out of his four examiners may be firmly convinced that he is utterly unfit for the work. No fact can show more clearly and forcibly than this does the necessity for state interference in directing or inspecting the examinations for Medical degrees and licences.

It will interest those who intend to present themselves for degrees at the London University to know the system of marking adopted at the second M.B. Examination. As a general rule, 100 marks are given for an hour's work—so that a paper for which three hours are allowed may obtain a maximum of 300 marks. 360 marks are allowed for the practical examination, 300 being allotted to the two Medical cases, the candidate having three hours to examine and report on them, and the remaining sixty being apportioned to the examination and diagnosis of two or three cases of skin disease.

At the Oral Examination the candidate has to name from

four to six microscopic objects, to which forty marks are assigned. He has to write a prescription for a given disease; this is valued at twenty marks. The total marks given in the whole examination are 2020—of which Medicine takes 1020, Midwifery and Forensic Medicine 350 each, and Surgery 300.

Our attention has been specially drawn to the method of setting questions adopted by one of the oldest examiners in the University of Edinburgh, as one deserving general adoption on account of its clearness and definiteness. We give two examples:—

1. *Gallic acid:* its characters—viz., 1. Its form; 2. Taste; 3. Solubility; 4. Test for it in solution; 5. Elementary composition; 6. Action; 7. Diseases for which it is used; 8. Doses and frequency; 9. Forms for administration.

2. *Carbonate of ammonia* (34 marks). Its sensible properties (3); action on it of water (1); of rectified spirit (2); of exposure to the air (4); of metallic solutions (4); action on the body; is it poisonous? (4); medicinal actions (6); uses in diseases (6); doses (4).

There can be no doubt that questions so analysed afford great assistance to the student, and render the task of the examiners somewhat easier; but, on the other hand, it may very fairly enter into the scheme of the examiners to test the capacity of the student to analyse himself the question which he has to answer.

Finally let us select a few examples of bad questions—bad because of their indefiniteness.

"Give the physiology of digestion"!

"Give a brief sketch of the left lung"!!

"Describe the eyeball and physiology of sight"!!!

There is an easy carelessness, a nonchalance, about these questions which makes it easy to perceive that they were never set by *teachers* or by *physiologists*. They are, however, to be found in the volumes to which we have referred. But commend us to the following question, emanating from the same source as the preceding, for a haughty disregard of grammatical usage:—

"Give a case of measles, treatment, and mention the danger to be guarded against."

This economy of a few words at the expense of sense and grammatical accuracy is an intolerable vulgarity which too often disfigures the pages of Medical literature.

We have already stated our own views as to the principles which should guide those who undertake the grave responsibility of examining candidates for Medical degrees or licences. We have no intention of repeating them. Hitherto the proceedings of examiners have been protected from criticism, because of the secresy and mystery which surround the exercise of their functions. This mystery is not undignified so long as it is carefully maintained, but recently bits of what we are told is the examining mind have from time to time, regardless alike of dignity and mystery, appeared in the pages of one of our contemporaries, and students have been warned against "high" reading or "low" reading—whatever that may be. Seriously, if examiners have anything to communicate, they should seek some official and authoritative medium for their communications; they would then not be without value and importance.

THE WEEK.

TOPICS OF THE DAY.

If it were fair to take the annual meeting of the Pathological Society as a specimen of the mode in which the Society conducts business, we should have some difficulty in accounting for its present flourishing condition. We were never more painfully impressed with the justice of the imputation of unbusiness-like habits to our Profession than on Tuesday evening last. More than half the time of the Society's meeting was wasted in discussing matters which should never have been brought before it until thoroughly worked out and matured by the Council, and in passing contradictory resolutions thereon. It was proposed by the Council that alterations should be made in two of the rules of the Society. One of these was as to the terms on which non-resident members should be accepted. The original rule provided that they should be admitted on payment of a fee of two guineas in lieu of annual subscription, and a composition fee of three guineas for the annual volume of *Transactions*. In consequence of a considerable increase in the cost of the *Transactions*, the Council felt compelled to propose that non-resident members, instead of paying a composition fee, should have the privilege of purchasing the annual volume at cost price. Thereupon a member very pertinently inquired whether this were just to the gentlemen who had already paid the three guineas. The mover of the resolution at once said that it was not the intention of the Council to make the new law retrospective, and he accordingly introduced, at the suggestion, we believe, of the President, a limiting clause to the effect that, after January 1, 1869, non-resident members should have the privilege of buying the Society's publications at cost price. The next rule which the Council were anxious to get altered was as to the composition fee to be paid by ordinary members, which heretofore has been ten guineas. The Council had given notice that the alteration they proposed would be to the effect that members should, as a composition fee in lieu of annual payments, pay £15 15s. The proposer, however, influenced by the previous discussion, altered the purport of the rule agreed on by the Council, by introducing a clause that all members elected after January 1, 1869, should have the option of compounding for £15 15s. This, however, was so fundamental a change that the gentleman who had agreed to second the resolution drew back, and said that he did not agree with a rule which gave a man elected in December, 1868, the right of compounding for £10 10s., but made a man elected in the following month pay £15 15s. for the same privilege. A good deal of talk followed, in the course of which an officer high in the Council of the Society threw out the suggestion of a sliding scale, according to which, after a certain number of years of annual payments, a member's compounding fee should be lowered—for instance, that a member of ten years' standing might have the option of compounding, if he pleased, for ten guineas; after fifteen years for five guineas, or in some like ratio. Ultimately an amendment was carried by a majority of about fifty-three to five, by which the whole matter was referred back to the Council. Directly afterwards, however, the contradictory motion was carried by an equally large majority, on the advice of the original proposer, that all members elected after the beginning of the present year should have the option of compounding for fifteen guineas. Finally another motion, to the effect that the proposition of a sliding scale was to be considered by the Council, was also almost unanimously adopted. By the time this *fiasco* had been accomplished it was nearly 9 o'clock, and the ballot for "distinguished foreigners" as honorary members was taken, whilst members of the Committee on Morbid Growths read reports on specimens of which the majority of the Society had doubtless lost all recollection, seeing they were exhibited before the Christmas holidays. At about four minutes to nine the President reminded the members that the ballot for the new officers of the Society would close at nine o'clock, when there was a general rush to the voting table. After this interruption the general business of the Society was resumed and transacted as far as the remaining half-hour would permit. Then followed the retiring President's farewell address in acknowledging a vote of thanks to the retiring officers proposed by Dr. Langdon Down, and seconded by Dr. Peacock. Mr. Simon's address contained a touching and thoroughly appreciative eulogium on Dr. Hillier, who was a Councillor of the Society at the time of his death; and, as we think, by no means too low an estimate of the Society's recent work. We

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cannot, however, allow Mr. Simon's presidency to expire without joining in the general chorus of approbation which his conduct in the chair of the Society has elicited, and our sense of the value of his cultivated sagacity and keen intellect in directing the Society's scientific business. Dr. Murchison, who retires from the secretariat to the comparative repose of the treasurership, certainly has forged very strong claims on the gratitude not of the Society alone, but of the Profession at large, for he has superintended, as editor, four volumes of the Society's *Transactions*. We need scarcely add that the seven celebrities whose names we mentioned last week were unanimously elected honorary members. One redeeming point in the evening's proceedings was unquestionably Dr. Charlton Bastian's exposition of his new views as to the relation between the existence of minute embolisms of the arterioles and capillaries of the grey matter of the brain and pia mater, and the delirium which takes place in febrile diseases accompanied by great increase of temperature. When repeating the experiments of Cohnheim on the transmission of blood-corpuscles through the walls of the vessels of frogs, last summer, Dr. Bastian said he had been struck with the increase in the quantity of the white blood-corpuscles which occurred in inflammation, and in the heightening of their irritability, as shown by increased amœboid movements. The white blood-corpuscles showed a great tendency to accumulate and heap themselves together at particular points. We may notice, *en passant*, that thus far Dr. Charlton Bastian only repeats observations made by Dr. C. J. B. Williams more than twenty years ago on the phenomena of inflammation in the transparent parts of animals. But he has gone further. He has found in the blood of patients suffering from febrile diseases with rise of temperature, a great increase of white corpuscles, and masses resembling in structure white corpuscles, but very much larger, which, from his previous observations on the frog, he is led to believe are aggregated masses of white blood-corpuscles. This phenomenon he has observed in acute rheumatism and in sthenic pneumonia; and in a case of the latter disease in which temporary delirium occurred when there was no reason to suppose blood-poisoning, Dr. Bastian surmised a connexion between the increased and aggregated white corpuscles in the blood and the disturbance of the cerebral functions. It was, however, in the case of a man who died from phlegmonous erysipelas of the head, after an accident, that Dr. Charlton Bastian believes he obtained ocular evidence in confirmation of his theory. In this case he found the small arteries and capillaries of the grey matter and pia mater, as also of the kidneys and other organs, presenting dilatations and embolic plugging from accumulated white corpuscles. He is inclined to believe that the temporary albuminuria which complicates febrile conditions may have origin in like changes in the renal vessels. Without expressing any opinion as to its actual value, the theory is most ingenious, and offers an attractive path for further investigations.

The two British Universities which have undertaken the examination of women, have recently published their regulations for the fair sex, and a comparison of these regulations offers some food for reflection. Of course, the old-fashioned notion that the highest dignity an Englishwoman can attain is to be an honoured wife and mother—the real head of her household, the mistress of her servants, the accomplished, but not the learned, ornament of the society in which her husband moves, and the solace and companion of his leisure—is wellnigh exploded. In its place, woman is to be no longer a being different from man, between whom and man comparison ought never to be drawn, but a second-class man, a creature whose mental powers are constantly to be brought into comparison and collision with those of a being who, in virtue of his physical endowments, must always be her lord and master. There will be two opinions about the wisdom of all this, but as a large portion of society, and that a large portion of female society, seems to wish it, we suppose there is nothing for the prejudiced narrow male sex to do but to bow their heads in humble submission, and examine the means by which women are to be made to compete with themselves. First, let us take the examination of women at the University of London. The first thing that strikes us is that the examiners are to be male, and the lady candidates what used to be called "sweet seventeen," but how far any sweetness will remain after the amount of cram the examination requires we must leave to our readers to judge. There is a general examination, and then special examinations for certificates for proficiency in certain subjects. The general examination, which must be passed by all, comprises only the following subjects:—Latin, with grammar, history, and geography; any two of the following languages—Greek, French, German, Italian; English language, English history, and geography, physical and topographical; mathematics, including arithmetic, algebra, and geometry; natural philosophy, including mechanics, hydrostatics, hydraulics, and pneumatics, acoustics and optics; chemistry, including heat and a large part of inorganic chemistry, or botany with vegetable physiology. Is it necessary to say one word on the ridiculous character of such an examination for a young girl? If the examination be not a farce, but is really what it appears, we have no hesitation in expressing our belief that the training necessary for it would be fatal to the healthy development of the majority of girls; and, were it general, would end in the degradation of the English race to a nation of puny prigs. The certificates of higher proficiency are to be given for a more extended examination in each of the subjects mentioned above, and in human physiology, geology, and palæontology, political economy, logic, and moral philosophy, harmony, and counterpoint. As Medical men, we naturally turn to the subject-matter of the examination in human physiology, where we find that "the processes of alimentation, respiration, perspiration, and renal excretion, with the essential anatomy of the organs by which these functions are performed," is one of the principal topics on which young ladies of seventeen are to be submitted to written and *viva voce* examinations. The Cambridge regulations are, we think, framed in a far more intelligent spirit. In the first place, the University declines to foster the craving for notoriety which forms not the most attractive part of some female characters. Notice of the success of any lady candidate will be forwarded to her parents and friends, and certificates will be granted, but no pass-lists will be published. Then the examination is to be conducted under the superintendence of a committee of ladies. The University, at least, cannot be accused of trying to make its examinations extrinsically attractive to fair candidates. But the point in which above all others the framers of the Cambridge resolutions have shown sense, is that they only demand a knowledge of arithmetic, English history, geography, and the English language and literature as a basis for examination in special studies, such as the natural sciences, languages, mathematics, music, and drawing. This regulation shows, we think, far more acquaintance with the capacities and modes of development of girls' minds than the absurdly ambitious scheme set forth by the University of London. Moreover, the University of Cambridge refuses to examine young women under eighteen. If the future wives of our sons and mothers of our grandchildren are to be submitted to the ordeal of a public or semi-public examination at all, we undoubtedly prefer the Cambridge model.

Apropos of education, we noticed a sensible letter from Mr. Henry Hayman in the *Times* of Saturday last. Its immediate object is to point out the claims of geology as a branch of natural science the most fitted for the purposes of study in schools. On this he discourses ably and well. But the point to which we would draw attention is his testimony, founded, as he says, on several years' experience in more than one post of chief responsibility, that natural science is no cure for dul-

ness in the pupil, nor has it any special aptitude for bringing out faculties which have lain dormant in other lessons. He gives the palm to studies which are distinctively human in their interest, such as language and mathematics, as the corner-stone of solid education. He maintains that they are fitted in general to invigorate, concentrate, and regulate the forces which lie within the mind itself. We heartily agree with him.

The military authorities have recommended the adoption of a filter van invented by Messrs. H. Bayley and Co., of Newington-causeway, for use in the British army. The filter van contains two pure water reservoirs holding fifty gallons, and filters capable of discharging 2000 gallons a day.

One Mr. Robert Philip Dodd, a farmer, occupying seven hundred acres in Norfolk, has been sent to the House of Correction for a month for sending the body of a deceased cow to market. The magistrate said that a fine would be no punishment at all.

Accounts of men with tails have been helping to fill the columns of the daily papers during the Christmas holidays. Many of these stories have taken their origin from montrosities with spina bifida. To adorn a tale and to be adorned by a tail are two things which differ in frequency. We should like to see a specimen.

The *Moniteur* recently contained an account of the discovery by a M. Bertrand of a quantity of fossil human remains in quaternary drift. The remains were discovered in the Boulevard St. Pol, at Clichy, in a sandpit at a depth of seventeen feet, and covered by layers of humus, red sand, five of yellow sand or loegs, the latter alternating with four of clay. The last bed of loegs rested on the drift. The bones were associated with those of elephant, rhinoceros, hippopotamus, stag, horse, and ox. The skulls found were wedge-shaped and dolichocephalic, the forehead narrow, the cheek-bones very prominent, the occipital foramen very far back, and the meatus auditorius very horizontal.

THE FORTHCOMING SOIREE AT KING'S COLLEGE.

THE soirée which is to take place at King's College next Thursday evening promises to be unusually brilliant and attractive. The band of the Grenadier Guards, under the direction of Mr. D. Godfrey, and the Civil Service Musical Society, will contribute the music. Her gracious Majesty sends some pictures from Windsor Castle. Microscopes will be exhibited by Dr. Lionel Beale and the Microscopical Society. Several interesting scientific novelties are also promised. The Principal and the academical staff have issued invitations to the chief members of all the learned societies in London, and a large number of distinguished persons have promised to be present. All associates and matriculated students of the College, and all past students of the College and School, can obtain tickets by applying to the Secretary.

THE OBSTETRICAL SOCIETY.

ON the occasion of the annual meeting of this Society, held on Wednesday evening, the President, Dr. Hall Davis, in the chair, the gentlemen last week named were duly elected as office-bearers for the next two years, Dr. Graily Hewitt thus becoming president, the treasurers, secretaries, and librarian retaining their posts. The former part of the evening was occupied with the exhibition of specimens and the reading of papers, some being of great interest; but the first matter which came before the meeting in its special capacity was a motion by Dr. Barnes for a representation to the Privy Council, that the mass of the Profession, and, still more, the obstetric interest, was altogether unrepresented in the General Medical Council—a state of affairs which was unadvisable when matters of such importance as the discussion of obstetric education, obstetric curricula, etc., were impending. Dr. Barnes said that when he was a student he had to attend two winter courses of midwifery; now an attendance of about ten weeks was all that was required, and even this was now in danger of being shortened. On this subject obstetric Practitioners had a right to speak, and, that they might do so with weight, they ought to be represented in the Medical Council. Mr. Mitchell seconded the motion. Dr. L. Sedgwick saw a danger in the motion. Time was when obstetric practitioners were looked down on, when none of them could become Fellows of the College of Physicians. Now-a-days this was not so; still a separation of their branch of the Profession from the others might tend to bring back the old state of feeling. Dr. Barnes explained that he did not care for an obstetrician pure and simple, if the mass of the Profession were represented. Dr. Hicks thought the difficulty might be got over by the Privy Council appointing an obstetric Physician as one of the Government nominees. The next matter of importance was the treasurer's report, which showed that during the year 842*l.* 13s. 6d., including the balance left last year, had been received, and that, notwithstanding the very considerable expenses incurred in fitting up the library and museum, there now remained over a balance of 91*l.* 12s. 9d., a very satisfactory conclusion to the financial year. In his valedictory address the President recounted the losses by death from the ranks of the Fellows during the past year, and pointed out that the number of Fellows now on the lists of the Society amounted to six hundred. After votes of thanks to the office-bearers the meeting separated.

COMPARATIVE MORTALITY OF HERNIA CASES IN LONDON AND PARIS.

A STATISTICAL report on the mortality of the Hospitals of Rome and Paris, by Dr. Vacher, gives us some interesting facts as to the results of the treatment of hernia in the Paris Hospitals. Making use of facts tabulated by M. Broca, Dr. Vacher informs us that during a period of two years(a) a total of forty-nine hernias were reduced by the taxis, and that out of these four deaths resulted. Thirty-four of these were cases of inguinal hernia in men, and three of the deaths were in this series. There were nine femoral (three men and six women), with one death, three umbilical, and three of which the form was not specified. These facts show how comparatively rare it is for the taxis to succeed in strangulated *femoral* hernia. They also show that even after successful taxis the patient is not always out of danger, a fact which is sometimes lost sight of.

During the same period ninety-nine cases of strangulated hernia required operation, and eighty of these patients died. There were forty femoral hernias, of which thirty-one died; forty-two inguinal with thirty-three deaths; three umbilical, all of which ended fatally; and fourteen of form not specified, with thirteen deaths.

This ratio of mortality is surely very high. M. Vacher intends, we believe, to publish shortly the statistics of the London Hospitals, and we trust that he will then have better results to record. Of those of our Hospitals which publish annual volumes, two of them—St. Bartholomew's and the London—give details as to their hernia cases, which enable us easily to institute a comparison with those of Paris. In *St. Bartholomew's Hospital Reports*, vol i., we find a total of 308 hernia cases during a period of five years, operation cases are not distinguished from those of successful taxis, but the total of deaths was but 81, or about 27 per cent., as contrasted with Paris totals of 148 and 84, or 57 per cent. In vol. iv. we have an excellent table of operation cases only, during the period 1863 to 1867 inclusive. This table gives us 129 operations for hernia (46 inguinal, 73 femoral, and 10 umbilical), and of these only 65 died, or almost exactly 50 per cent., in contrast with the Paris ratio of 81 per cent. Each of the four volumes published by the *London Hospital* contains the hernia statistics of the year. Adding together the numbers given for 1863 to 1866 inclusive, we have

(a) Unfortunately the years are not specified, nor can we be certain whether more than two are included. The returns comprise all the Paris Hospitals.

exactly 100 cases with 40 deaths—that is, 40 per cent., or less than one-half of what is recorded for the Paris institutions. It is interesting to note in passing that St. Bartholomew's and the London appear to have about an equal average number of hernia operations—that is, about 25 each year, or 1 every fortnight. The *St. George's Hospital Reports*, of which only vol. i. is before us, record 16 cases in the year 1865, with the excellent result of only 5 deaths, or 31 per cent. In all but one of these 16 the sac was opened—a noteworthy fact for the advocates of Petit's operation.

A young Paris Surgeon, M. Girard, startled, as he may well be, at the mortality which now attends hernia operations, has just written a book to prove that the plan of operation is essentially wrong, and that the bowel ought not to be returned, but left in the sac after free division of the stricture.

MEDICAL CHARITY AT OLDHAM.

THERE is a proposition for erecting an infirmary at Oldham. Whether this is to be a real charity, or whether it is to degenerate into something else, time will show. The following are facts bearing on the question:—Oldham is one of the most important manufacturing towns in Lancashire. It is a boast of its inhabitants that it contains more mills than any other. It has a large population, not over-refined perhaps, but of that hard-headed industrious character peculiar to this and the neighbouring county of York. Many of the most important manufacturers are men who have themselves been "hands," and there is an ambition even among the humblest to do as well in the world as those who have gone before them. Most of the inhabitants can well afford to pay for the best Medical and Surgical advice attainable, or, if dissatisfied, Manchester, with its infirmary, is only ten miles off, and may be reached quickly and easily by two distinct lines of rail. Hitherto, therefore, the Medical men of Oldham have been averse from establishing an institution which might do but little good to the public, and would be certain to do themselves much harm. Still, the want of a good Surgical Hospital has been felt, and a proposition to erect such, which has long been mooted, has at last been definitely brought forward. There is a considerable surplus in the hands of the managers of the Lancashire Relief Fund, collected in the days of the cotton famine, and to a portion at least of this the inhabitants of Oldham deem themselves entitled, whether rightly or wrongly we do not pretend to say, and with it they propose to commence the funds for the building and endowing of the new infirmary. It must be confessed that there is something unsatisfactory about the steps taken for the realisation of the project. There is a suspicion, which has found utterance in the columns of an able local paper, the *Oldham Standard*, that it is not the very poor who will be benefited. It is asked forcibly:—

"Will large employers be chiefly benefited by the new charity? Will the non-employing public be called on to bear in part a burden which has hitherto rested on other shoulders? Will the Medical men be expected to add to their present laborious practice the duty of honorary attendance at the infirmary? Will the largely overtaxed class be called upon for annual collections to keep the charity from collapsing altogether? How can the institution be prevented from drifting into the hands of a mere political clique? In what way is it hoped to prevent the abuses which were so ably specified at the late Social Science Congress? And, above all, what real advantage will the working man derive in case of accident, who receives, on our present system, the best Surgical attendance at the expense of his master? Such questions as these the public would like to have solved, and we commend them to the consideration of the committee."

As for the Medical men, they are perfectly right in desiring to know whether, under the guise of charity to the poor, a heavy tax may be laid upon themselves in the shape of honorary services; and they have received treatment which can but be called most unworthy, in having their opinions set at nought and themselves excluded from a meeting called to decide on the most appropriate site. It is satisfactory to notice that, in reference to the latter indignity, another respectably conducted local paper, the *Oldham Chronicle*, has commented on the absurd policy of depriving the promoters of the new infirmary, when coming to a most important decision, of the aid of the Medical Profession, and has further supported the cause of the Medical men by publishing a clear statement of the facts by Dr. A. Thom Thomson, who has throughout ably represented his brother Practitioners.

FROM ABROAD.—REPORT ON THE PARIS PUBLIC ASSISTANCE—FRENCH LUNATICS.

M. HUSSON, Director-General of Public Assistance, has just issued a report addressed to the Préfet of the Seine, giving an account of the progress and ameliorations which have been realised in this service during the sixteen years 1852-67. In this latter year it had under its care no less than 277,342 persons, distributed as follows:—Patients treated in Hospitals, 96,704; Infirm and Aged Persons maintained in Hospices or Retreats, 9025; Lunatics treated in Bicêtre and Salpêtrière, 3441; Indigent Persons succoured *à domicile*, 40,644 families, composed of 105,119 individuals; Indigent Sick treated *à domicile*, 66,486, deducting 28,313 as belonging to former category, and leaving 38,173; Assisted Children (Orphans and Foundlings) placed in the country 24,880; total 277,342. For this work the administration, properly so called, has 4349 *employés* and 1989 Medical *employés*, or a total of 6338 persons. The *internes* of the Hospitals are on the staff of the *employés*, and the payments they receive, though very moderate, are of great use to those who are poor by enabling them to continue their studies for a much longer period than they otherwise could do. Paris possesses eight general and seven special Hospitals, and both together they made up 6743 beds in 1852 and 7820 in 1867, which on emergencies are increased by 300 supplementary beds. These Hospitals receive from Paris and the communes of the Department of the Seine nearly 100,000 patients per annum, which gives, on a population of 2,112,293, nearly 5 per cent. (4·73) inhabitants seeking Hospital succour.

Among the improvements signalised the diet is particularly mentioned, and all who are aware of the starvation regimen that used to prevail in the French Hospitals will be glad to hear that that is now a thing of the past. Trials made at the Hôtel-Dieu and the Lariboisière since 1854 gave the results which the English Hospitals might have furnished at once had they been sought here, and since the beginning of 1867 the amount of meat and wine has been increased in all the Hospitals, and roast meats, poultry, fish, and eggs have to a considerable extent displaced the former innutritious and indigestible articles of diet.

It is stated that the vast structure now rising to replace and exceed in dimensions the Hôtel-Dieu, will unite every appliance that the most advanced sanitary science can provide, regardless of expense. Another new Hospital is also about to be built to supply the wants of the newer portion of the city situated between the Lariboisière and the St. Antoine. Another Hospital in connexion with the Paris administration, containing 500 beds, is also to be built at once, in addition to that already existing at Berck, on the coast, containing 100 beds, and which, with those at Forges and Roche-Guyon, will altogether provide 800 beds for the treatment of scrofulous children at the seaside. Indeed, almost all the cases of chronic diseases occurring in children will be treated there, relieving at the same time the too crowded state of the children's Hospitals in the capital. Then there are for adults the convalescent asylums at Vincennes and Vésinet; and the administration is able to congratulate itself, with justifiable pride, that the Hospital wants of Paris are sufficiently and amply provided for. Nor has the administration been less solicitous in maintaining the character of Paris as a great school of Medicine. Besides authorising from twenty to twenty-five general and special courses of clinical lectures per annum, it is establishing in the

vicinity of every *salle d'autopsie* a laboratory for microscopical examinations, so that within a few months thirteen Hospitals will be so provided. Most of the Hospitals have now their ophthalmoscopic apparatus, and courses of lectures on histology and experimental physiology are delivered to the *internes* and *externes*. A pathological museum illustrative of disease of the skin has been founded at the St. Louis. The Necker has acquired a collection of diseases of the urinary organs, bequeathed by M. Civiale; and at the laboratories of the Hospital pharmacies means are provided for executing the most delicate analyses.

Some time since (*Medical Times and Gazette*, October 17, 1868, page 456) we noticed a series of papers publishing by M. Bouchard, in the *Gazette Hebdomadaire*, on the provision for lunatics in France, and on the laws regulating their detention. A few additional facts and observations may be acceptable. A defect of the French law, M. Bouchard first notices, is that there is no provision for insuring the necessary inspection and examination of a lunatic when he is the only one in the house of the person who has charge of him; and he thinks that even when the lunatic's own family take his care upon themselves he should nevertheless be liable to official inspection. Of lunatic asylums properly so called, he states that there exist 103 in France, 61 being public, and 42 private establishments. Of the public ones, 1 only—the Charenton—is a State establishment; 41 are departmental asylums, and 19 are dependencies of Hospitals and hospices. Of the 42 private asylums, 25 belong to private persons, and 17 to religious corporations. The number is manifestly insufficient, and as many as twenty-five departments, being unprovided with asylums, whether private or public, are obliged to send their lunatics to those of other departments. Even Paris is obliged to send 83 per cent. of its lunatics to great distances, to the great inconvenience of their relatives, and to the weakening of the ties which should hold them to these unfortunates. The absolute necessity of adding to the number of asylums is seen in the great increase of lunatics; for, while in 1835 the numbers in asylums were 10,539, in 1861 they had risen to 30,239, and have continued to increase. The present increase is 3·14 per cent. In 1835 there were 3947 admissions of new cases, and in 1860 10,785. The number of these derived from the military and professional classes is remarkable. Thus, while there is admitted one lunatic per 1711 of the military or marine profession, and one per 1912 of persons following liberal professions, there is only one per 18,819 of persons employed in agriculture. Taking departments exhibiting the two extremes of intellectual culture, we have one lunatic per 2768 individuals in that of the Seine, and one per 14,081 in the Pyrénées-Orientales. In 1860 it was estimated that there were but 4499 curable lunatics in the asylums, as compared with 20,648 incurable, not counting idiots and crétins.

Lunatics, as regards their disposal, are divided into three classes—the indigent, who are entirely at the charge of the State; the assisted, to whose expenses the State contributes; and boarders, who are entirely at the charge of their families; these last forming one-fifth of the entire number. The cost of indigent and assisted lunatics varies from 70 centimes to 1·85 fr. per diem, 1¼ fr. being the maximum until quite lately. Boarders pay from 1·20 fr. to 4·17 fr., according to the asylum and the class that may have been chosen. Some of the patients at the departmental asylum of Auxerre pay from 2000 to 2500 fr. per annum. The total annual expense of lunatics is not much less than 9,000,000 fr., of which relatives do not furnish much above half a million. The inadequate payments of 70 to 77 centimes per day in several of the asylums are, in some measure, supplemented by the work performed by the lunatics, which is not only an advantage to the establishments, but of benefit to themselves. More than one-half of the inhabitants of asylums are thus engaged in agricultural work, and it is estimated that a lunatic will perform one-fourth or one-fifth of the work done by a man in health. M. Bouchard, while adverting to the fact that the lunatics so engaged have an extra diet, expresses his fears that with regard to the others not so employed this is insufficient, and is injudiciously economised.

ON THE PRINCIPAL APPLICATIONS OF THE GRAPHICAL METHOD TO BIOLOGY.

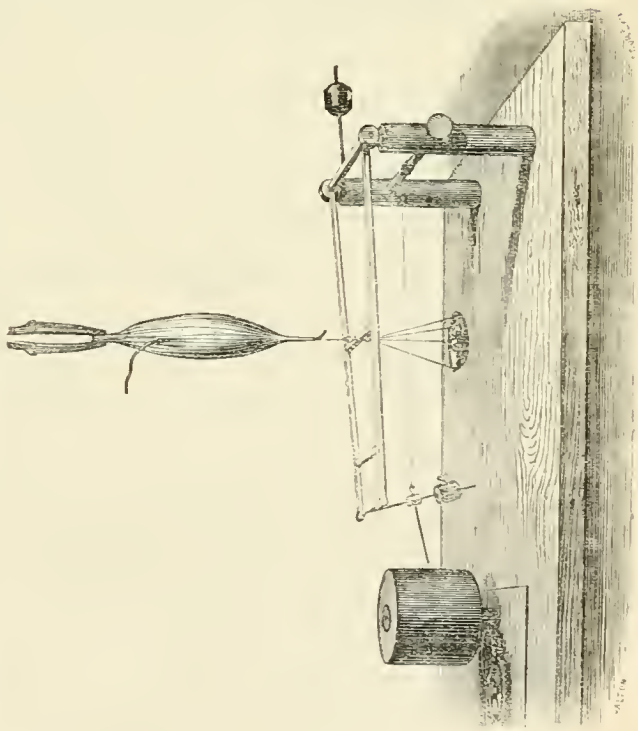
No. III.

In our preceding articles(a) we have shown the interesting results to which the graphical method has led when applied to the study of circulation, respiration, and the motions of the heart. It now remains for us to examine the principal laws of muscular contraction, as revealed by an instrument constructed on the principles which we have previously laid down—viz., the *myograph*.

Professor Helmholtz was the first observer who made use of a myograph. The instrument, in its first shape, was a rude and inconvenient contrivance; but, notwithstanding its numerous imperfections, it enabled its inventor, among many other interesting discoveries, to ascertain the precise degree of speed with which the impulse of motion travels along the nervous fibres.

A metallic frame being disposed so as to move up and down on pivots placed at one of its extremities, the other end is connected with a pencil which comes in contact with a revolving cylinder. The muscle on which the experiments are to be made is hooked on to one of the cross-bars of the frame, while a small basin is adapted to receive weights, which stretch it with more or less intensity so as to suit the observer's convenience.

Fig. 17.

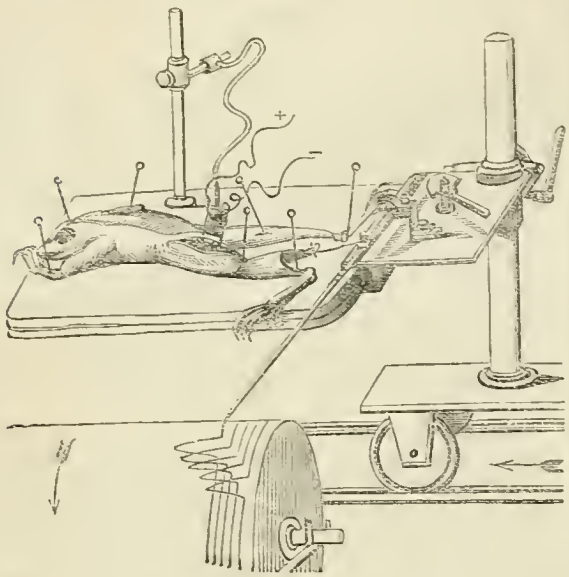


The principal defects of this ingenious instrument are—first, its size; secondly, the weight which stretches the muscle, and alters, in some respects, the natural rhythm of its contractions. Several improvements have been realised by various observers, among whom Volkmann, Boeck, Valentin, and Fick ought chiefly to be mentioned. The instrument which physiologists will generally find the most convenient

(a) Vide *Medical Times and Gazette*, January 18 and February 1, 1868.

for their purpose is Dr. Marey's *single* myograph: it may be thus briefly described:—

Fig. 18.



A live frog being pinned down to a flat piece of cork, and its spinal cord having been cut through, the tendon of a gastrocnemius muscle is laid bare, and fastened by means of a wire to the lever of the apparatus. A revolving cylinder receives the line traced by the lever at its extremity, while a spring, which presses upon the rod, opposes an elastic resistance to the contraction of the muscle. The whole apparatus rests upon a movable chariot, which runs in a line parallel to the axis of the revolving cylinder, so that the curve obtained describes a spiral groove, which gradually ascends from one end of the cylinder to the other. Muscular contraction is excited by the application of electricity to the sciatic nerve.

Dr. Marey has also constructed a myographical forceps, which allows the phenomena of muscular contraction to be registered without mutilating the animal, and may therefore be employed in the human subject.

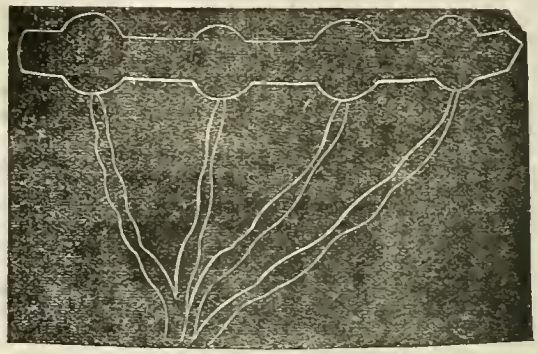
Let us now examine the chief results obtained by the use of these instruments.

It had long ago been ascertained that during muscular contraction the absolute size of a muscle does not diminish, but that its form suddenly changes. The nature of this modification had been variously interpreted by physiologists. Magendie, Weber, and several other observers, maintain that during contraction the muscular fibres suddenly grow shorter at a given moment; Baglivi and Haller, on the other hand, explained the phenomena of contraction by a wave, running through the whole length of the muscular tissue. The recent observations of micrographers have established the absolute truth of this latter view; and, by a series of ingenious graphical experiments, Aeby has shown us the precise form of this muscular undulation.

Two levers being allowed to rest upon a muscle at a certain distance from each other, and the muscle being excited at one of its extremities, the muscular wave raises first one of these levers, and shortly after the second. The curves inscribed upon the revolving cylinder show the lapse of time which occurs between the contractions of these two distant points, and the time being measured by means of the diapason (tuning-fork), we find that the undulations move with a rapidity of about three feet per second. But if both extremities of the muscle are simultaneously excited, the two curves described by the two levers coincide entirely; thus showing that when the muscle is excited in the whole of its length, all its component parts enter simultaneously into contraction.

We are thus led to suppose that in every point where a nervous fibre enters the muscular tissue a *nodus* is formed, and that from this point, as a centre, the undulation is propagated at the rate of three feet per second. Now, as the number of nervous filaments which enter a muscle is very large, it is easy to conceive that voluntary contraction must be almost instantaneous. The subjoined schematic figure explains Aeby's theory of muscular action:—

Fig. 19.



An ingenious experiment shows the exactitude of these views. In a muscle, the principal nerve of which separates into two branches, let one of these branches be cut; on exciting the nervous trunk, that portion of muscle which corresponds to the unimpaired nervous branch will instantaneously enter into contraction; while in the other part of the muscle, deprived of its nervous supply, the muscular undulations gradually spread at the slow rate of three feet per second.

All these experiments, of course, are performed by means of the graphical method, as well as those of which we are now going to speak.

The sudden contraction which the excitation of a motor nerve produces in the corresponding muscle is evidently different from that permanent effort which is the characteristic of voluntary action. Dr. Marey gives the name of *shock* (*secousse*, Zückung) to the sudden contraction produced by acting on the nerve; and this primitive shock, he proceeds to show, is the fundamental element of muscular contraction, which is engendered by a rapid succession of similar shocks, which merge into each other, like the vibrations of sound, and cannot, therefore, be easily perceived by our unassisted senses.

The myograph, which, by tracing the minute quiverings of the muscular fibre, enable us to ascertain this fact, also allows us to examine the chief characteristics of the muscular shock, its amplitude, its form, and the space of time which it occupies. The first result obtained by this mode of investigation is, that all these characters vary according to the nature of the muscular fibres, according to the mode of excitement employed, and according to various circumstances, such as heat, cold, fatigue, etc.

The amplitude of the shock in the involuntary or non-striated muscular fibre is far more extensive than in the muscles belonging to the voluntary or striated class, and even in this latter class many differences are observed. Weber has shown that the longer the fibre, the greater will the amplitude of its contractions become. An elegant experiment of Dr. Marey's gives a graphical demonstration of this. He lays bare the hyoglossus in a frog, adapts it to the myograph, and makes an electric current pass through it; as the distance between the two poles is made to increase, the amplitude of the contractions increases in the same ratio. (See Fig. 20.)

The intensity of the electric current also increases the amplitude of the shocks. Fick had already proved this by a series of ingenious experiments; Dr. Marey obtains the same result by means of the myograph.

The distance from the muscular surface at which the nerve is excited diminishes the amplitude of the shock; so does fatigue, so does cold, and the deprivation of blood by the ligature of an artery. The influence of temperature is not, however, limited to the mere extent of diminishing or increasing the amplitude of the muscular shock; it also acts upon its duration; under the action of cold contraction lasts longer; under that of heat, it is more rapid and transitory, though larger in extent. When, however, the degree of heat is sufficient to coagulate the *myosine* contained in the muscular fibres (a result which occurs, according to Külme, at 112° Fahr.), all contractility disappears at once.

Fig. 20.

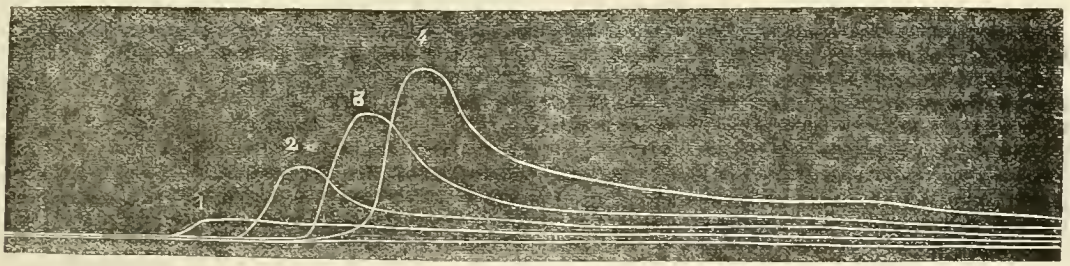


Fig. 20.—The figures 1, 2, 3, and 4 correspond to the curves obtained by exciting constantly increasing lengths of muscular fibre. No. 1 corresponds to the shortest, No. 4 to the longest distance.

When the central or peripheric portions of the nervous system have been permanently injured, the shocks become irregular, and last much longer than in the normal state, on account of the reflex actions which then take place.

The limits of this article will not allow us to describe the various experiments to which the application of the graphical method to muscular physiology has given rise. We will conclude this review by stating the results to which it has led on the interesting subject of tetanus.

Weber had advanced the idea that when a muscle is repeatedly excited at very short intervals, it enters into tonic contractions, or tetanus. He also believed that voluntary contraction was the result of a series of successive excitations, transmitted from the brain by the peripheral portions of the nervous system. According to this view, the *tremor* of paralytic subjects is produced by slowness in the transmission of voluntary excitation, which allows the successive shocks to remain independent, instead of merging into each other.

Fig. 21.

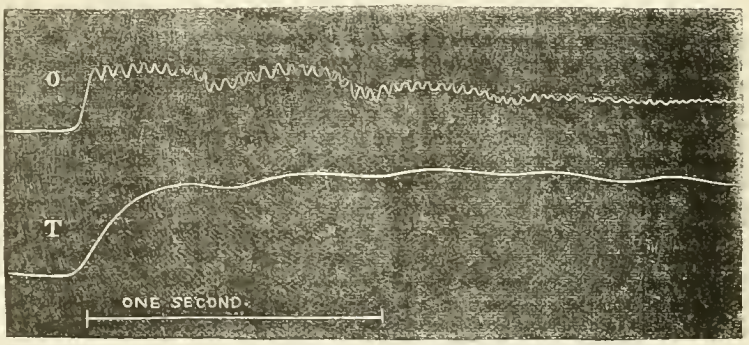


Fig. 21.—O is the curve which represents the contractions produced in the muscles of a bird by electric shocks which gradually become more and more frequent. T is the curve representing the contractions produced in the muscles of a tortoise by slow and distant electric shocks.

Various physiologists have shown that frequently interrupted electric currents do, in fact, give rise to tetanus. But the graphical method enables us to show in what manner this result is produced.

When the successive interruptions take place at distant intervals, the shocks are few and far between; and the corresponding curves exhibit a series of ample oscillations. In this state, the muscle is not in a condition of tonus. But when the shocks come closer and closer, the oscillations of the curve become smaller and smaller, till at last they entirely disappear; at this moment tetanus has been produced.

Fig. 21 amply illustrates this proposition.

There is, however, a limit to this process; when the succession of shocks becomes too rapid, the electric tetanus which had at first been produced, gradually subsides, and at last totally disappears. Various explanations of this singular fact, most of which appear unsatisfactory, have been brought forward; but the fact itself is indisputably proved by the unerring testimony of the graphical method.

The theory of voluntary contraction, to which Dr. Marey has been led by his experiments, mainly coincides with the hypothetical views expressed by Weber some twenty years ago. Contraction in the voluntary muscles, when in the healthy state, is produced by a series of successive impulses sent from the brain and transmitted by the nerves, each of which produces a sort of wave along the corresponding fibres; the succession of these waves, when they tread close upon each other, gives rise to the normal exertion of muscular power, and the natural elasticity of the muscular tissue allows this power to accumulate for a time, instead of being suddenly expended in a single effort. When, however, the waves are too distant, from various morbid conditions, our motions are no longer steady, and trembling is observed; when, on the contrary, they are too close, the muscle enters into a state of permanent contraction, and we have tetanus.

We have said enough to show the extent and importance of the application of the graphical method to biology. Many an experiment, which could only be realised by the most complicated and costly apparatus, is in this manner easily realised by contrivances the simplicity of which is as admirable as their ingenuity; while, the results of each experiment being permanent instead of transitory, the contradictory appreciations of various observers are at once reduced to unity, and the most inveterate scepticism is compelled to bow to the decision engraved in the handwriting of nature itself.

Among the numerous physiologists who, in France and abroad, have successfully cultivated this new and fertile method of investigation, no one has better deserved of the public than Dr. Marey. His ingenious instruments, his well-conducted experiments, and, above all, his indomitable perseverance, have solved many a problem which had baffled the efforts of previous observers; and the Cross of the Legion of Honour, which has recently been awarded to him, is undoubtedly the legitimate and well-earned reward of his unremitting labours and signal services to the cause of physiological science.

A PLASTERER, named Paret, having accidentally drunk a quantity of rectified petroleum, was at once seized with inflammation of the throat, violent intestinal pains, and a desire to vomit, and these symptoms were immediately followed by tetanic attacks of frightful violence. The patient writhed about in intense agony, after which was a general rigidity, accompanied by cries of suffering, and terminating in such powerful struggles that it required four or even six men to restrain him. Then came a state of relative composure for ten minutes, when the previous symptoms reappeared with more or less violence. During the attacks no liquid could be swallowed, and the attempts to vomit were intense. During the rare intervals between them Dr. Humbert contrived to administer a powerful emeto-cathartic, which was soon followed by the discharge from the mouth of an abundance of fluid smelling of petroleum, after which there was great relief. Emollients containing magnesia were then administered, and, to use the reporter's language, "in short, after three hours of vigorous treatment, art definitely triumphed over the disease." A slight inflammation of the intestines and throat remained for a few days, and the only trouble that was at all persistent was an intense ophthalmia, caused partly by the vapours of the petroleum, and partly by the violent efforts to vomit.—*Mémorial de la Loire.*

THE Amended Pharmacy Act, or Sale of Poisons Bill, came into operation on the 1st of the present month.

REVIEWS.

RECENT WORKS ON PHYSIOLOGICAL CHEMISTRY.

1. *Lehrbuch der physiologischen Chemie.* Von Dr. E. F. v. Gorup-Besanez. Zweite Auflage. 1867. Braunschweig: Vieveg und Sohn. London: Williams and Norgate.
2. *Handbuch der physiologisch- und pathologisch-chemischen Analyse für Aerzte und Studenten.* Von Professor Dr. Felix Hoppe-Seyler. Zweite Auflage. 1866. Berlin: Hirschwald. London: Williams and Norgate.
3. *Lehrbuch der physiologischen Chemie.* Von Dr. W. Kuehne. 1868. Leipzig: Engelmann. London: Williams and Norgate.
4. *Medicinisch-chemische Untersuchungen.* Herausgegeben von Dr. Felix Hoppe-Seyler. Erstes Heft, 1866; zweites Heft, 1867. Berlin: Hirschwald. London: Williams and Norgate.

If a student were compelled to limit his chemical library to a single work, which should, at the same time, be sufficiently simple for his wants as a beginner, and sufficiently complete to give him a full and philosophical insight into the mysterious depths of organic chemistry, and which further should have a large portion especially devoted to the consideration of that department which is most essential to the Physician—namely, physiological chemistry—we should have no hesitation in recommending him, if he can read German, to select Dr. E. F. v. Gorup-Besanez's *Lehrbuch der Chemie.* It consists of three octavo volumes, of which the first treats of inorganic chemistry, the second of organic chemistry—and the third of physiological chemistry. As a proof of the success which this work has deservedly met with, we may mention that the first volume, which originally appeared in 1859, has already reached a third edition, while the two other volumes are in their second editions. From the year 1862, when the "Physiological Chemistry" first appeared, it has been universally recognised as the most complete and authoritative work on the subject. The new edition, although almost identical in size with its predecessor, contains a considerable amount of new matter, and has undergone a complete revision. As an evidence of this complete revision, we may refer to the arrangement of the most important tissue-formers, commonly known as the albuminates. In the first edition (1862) they are arranged as follows:—(1) Albumen, with its modifications, Paralbumen, Metalbumen, and Pancreatin; (2) Fibrin; (3) Syntonin, with its modification, Parasyntonin; (4) Casein; (5) Globulin; (6) Hæmatocrystallin; while in the new edition (1867) they are thus arranged:—(1) Serum Albumen; (2) Egg Albumen; (3) Paralbumen; (4) Metalbumen; (5) Acid Albumen; (6) Globulin (or Fibrino-plastic substance); (7) Fibrigenin (a Fibrinogenous substance); (8) Fibrin; (9) Syntonin; (10) Myosin; (11) Parasyntonin; (12) Casein; (13) Protic Acid; (14) Amyloid; and (15) Hæmoglobin. The same careful revision may be observed throughout the whole volume. As it is not likely to be supplanted by a better work for some years, we beg leave to recommend it to the notice of the Council of the New Sydenham Society, as a volume well worthy of being translated under their auspices.

The first edition of Hoppe's volume on Medico-chemical analysis, published about a dozen years ago, was a very useful little manual. The Professor's name and his book have undergone nearly equal phases of development. He has become Dr. Hoppe-Seyler, and his book is fully twice its original size, and, as far as we can judge, is proportionally improved.

While the work of Gorup-Besanez is systematically arranged in four parts, treating respectively (1) of general chemical biostatics, (2) of the chemical constituents of the animal body—including (α) the inorganic, (β) the histogenous, and (γ) those which result from disintegration—(3) of the chemistry of the animal fluids, tissues, and organs, and (4) of the chief animal functions, as those of respiration, animal heat, and nutrition, Dr. Kühne, in his *Compendium of Physiological Chemistry*, plunges at once into the theory of digestion, and then proceeds to the discussion of the blood, lymph and serous fluids, of the tissues and glands, and concludes with the chemistry of the excretions from the skin, lungs, kidneys, and organs concerned in the propagation and support of species—namely, the seminal fluid and milk. Passing over the subject of digestion, which occupies the first quarter of the book, we arrive at the chemistry of the blood, in which there is a full and clear exposition of A. Schmidt's views regarding the formation of fibrin, which, although briefly noticed in the last edition of Carpenter's *Human Physiology*, and in Marshall's *Outlines of Physiology*, have hitherto failed to enter the general Professional mind. A. Schmidt's opinion may be thus briefly stated:—A *fibrino-plastic* substance exists in the blood-cells, and a *fibrinogenous* substance in the plasma, and when the former escapes and unites with the latter, solidified fibrin is the result. The following is a condensed sketch of Dr. Kühne's remarks on the fibrino-plastic and fibrinogenous substances:—The fibrinogenous substance, or paraglobulin, is obtained by diluting blood-plasma(a) (into which it permeates from the cells) with at least ten times its volume of ice-cold water, and passing carbonic acid through the mixture till there is a decided flocculent precipitate. The fluid, after this precipitate has been removed by filtration, no longer contains fibrin. The precipitate, after being washed with water charged with carbonic acid, exhibits the following properties. It is insoluble in pure water free from air, but dissolves, on being shaken with air or oxygen, into a scarcely opalescent fluid from which carbonic acid again precipitates it. It is soluble in extremely diluted solutions of the alkalies and their carbonates, and of chloride of sodium, and in very diluted acids, but it falls when its solution is neutralised, and likewise when treated with carbonic acid in excess. None of its solutions are coagulated by heat, and alcohol does not cause precipitation, although this substance is totally insoluble in that fluid. In most respects its characters resemble those of the albuminous bodies generally, and it only differs from the globulin which Berzelius obtained from the blood, and from the globulin of the crystalline lens, in not being precipitated either by alcohol or by boiling its solution in aerated water; hence the appropriate term of *paraglobulin* has been suggested for it. Incomparably the most characteristic action of this substance is its action on certain fluids of the animal body, as, for instance, that of hydrocele, and pericardial, pleural, and peritoneal effusions. These fluids, as a general rule, form no coagulum, or at most only a slight clot after many hours, but when paraglobulin is added to them they almost instantaneously coagulate into solid masses. It has been already stated that after the removal of this paraglobulin the fluid which yielded it no longer coagulates. That this peculiarity is due to the removal of this substance, and not to the watery dilution or the action of the carbonic acid gas, is obvious from the fact that on the restoration of the paraglobulin the fluid regains its original property.

That a material deserving the name of *fibrinogenous substance*, or *fibrinogen*, exists, is obvious from the fact that it is only *some* (not all) of the albuminous animal fluids which coagulate on the addition of paraglobulin. It may be prepared either from plasma already deprived of its paraglobulin, or from one of the above-named morbid effusions, and the process to be followed is exactly the same as that already described, except that the degree of dilution must be greater, and the current of carbonic acid must be continued for a longer period. The precipitate which ensues is very different from that of paraglobulin. At first there is merely a milky turbidity accompanied with a froth on the surface. When the turbidity disappears, a viscid precipitate is observed adhering to the sides and bottom of the vessel. This precipitate is altogether different from that of paraglobulin, and consists of rolls or minute cylinders of firmly tenacious granules, while the latter is composed simply of minute granules with no tendency to cohesion. In consequence of its viscidity, fibrinogen is not easily separated by filtration, and the best method of isolating it is by decanting the fluid and rinsing out the substance with water containing carbonic acid. These are not the only means of obtaining these substances—for example, it is more convenient to obtain paraglobulin from serum (which contains it in considerable quantity) than from plasma, and dilute acetic acid may replace the carbonic acid; and fibrinogen may be separated by the action of a mixture of alcohol and ether (3 to 1) on any fluid containing it.

In the course of his observations and experiments on this sub-

(a) As it may be a puzzle to many of our readers how to obtain blood-plasma (except on a small scale from frogs, according to J. Müller's well-known experiment), we give Dr. Kühne's directions for this purpose. A horse's blood must be caught, as it flows from the vein, in high thin-walled glass cylinders, whose diameter does not exceed two inches, and which are kept a little below the freezing point in a mixture of ice, water, and salt. At this temperature the blood does not coagulate; and after standing for some hours, the blood-column separates into three layers—namely, a lower dark-red opaque layer, which occupies more than half the height of the column; a middle grey opaque layer, about one-twentieth of the length of the preceding; and an upper transparent amber-coloured layer of fluid, which consists of pure plasma, while the middle layer is composed of plasma mixed with colourless blood-cells, and the lower of plasma and the red cells.

ject, A. Schmidt observed that the alkalinity of the blood increases during the act of coagulation. The same observation has been made in the artificial coagulation of fibrinogenous fluids by the addition to them of a little serum or paraglobulin, the previously neutral state being replaced by an alkaline reaction. According to A. Schmidt, each of these fibrin-generators acts as a feeble acid, and is combined with a little alkali, which is liberated at the moment when the two combine to form fibrin, and causes the increased alkaline reaction.

The serum is defined by Dr. Kühne as "plasma *minus* fibrinogen." It contains the following distinct albuminous bodies:—(1) *Paraglobulin*, which remains in considerable excess in the serum after the coagulation of the fibrin has removed the whole of the fibrinogen; (2) *albuminate of soda* (the serum-casein of Panum), which is always present independently of paraglobulin; and (3) *serum albumen*, which may be obtained in solid flakes after the removal of the preceding substances. This ingredient may be converted in its neutral solution either into albuminate of potash by the addition of caustic potash, or into syntonin by the addition of concentrated hydrochloric acid. In his remarks on the gases of the serum, which consist mainly of carbonic acid with a little oxygen and nitrogen, he observes that carbonic acid exists in four different states in the serum — viz., (1) NaO,CO_2; (2) $NaO,2CO_2$; (3) $2NaO,HO,PO_5,2CO_2$; and (4) as simply absorbed. The first is in a state of firm chemical union, and can only be displaced by an acid, while the others may be extracted by an air-pump.

His remarks on the blood-corpuscles are brought down to the latest date. "The colourless corpuscles consist of a more or less granular protoplasma, in which no membrane can be observed as long as they remain in the plasma or serum, each cell containing from one to five nuclei. The protoplasma is contractile—that is to say, it is capable of undergoing changes of form which are quite independent of the laws of osmosis (N. Lieberkühn, Recklinghausen). According to the observations of M. Schultze, the changes of form succeed each other with a rapidity proportional to the temperature. At about 104° F., the previously fluid part of the protoplasma coagulates. In acetic acid this substance swells, and becomes more transparent, while the nuclei present a wrinkled appearance, and granules seem to separate on the edges and in the interior. . . . M. Schultze has seen the colourless corpuscles absorb adjacent milk-globules into the depths of the protoplasma; Häckel has noticed indigo and cinnabar similarly taken up by the colourless corpuscles of the blood of the crab; and Recklinghausen has confirmed this observation with frog's blood. It is hence very probable that the colourless corpuscles take up fatty granules from the blood-plasma, and that (according to Preyer), under certain conditions, they even take up red corpuscles, and thus give rise to the so-called blood-corpuscle-containing-cells." (P. 189.)

In his remarks on the red corpuscles, he commences with a notice of A. Rollett's recent discovery that these bodies are mainly composed of a *stroma*; explains the method of exhibiting it; shows how it varies in the blood of different animals; and points out how this discovery that the blood-corpuscles consist of a solid substance seems to explain many of their well-known properties. "We can now understand," he observes, "the reason of the almost constant shape of the mammalian blood-corpuscles — the well-known disc with a central depression. This biconcave-lens-like form could not easily be explained when, according to the pre-existing view, the blood-corpuscles were regarded as vesicles consisting of an elastic membrane enclosing fluid contents." Rollett's discovery renders the existence of a surrounding natural membrane more than doubtful, although an artificial membrane may be readily produced. If we treat these corpuscles with dilute acids, as phosphorous, hydrochloric, or nitric acid (the latter of 0·1 per cent. strength), we see that shortly before the stroma is perfectly dissolved they are converted into true vesicles formed by a coagulated membrane enclosing a drop of dissolved and deeply coloured stroma. The recent investigations of Hermann and other German chemists show that this stroma is mainly composed of protagon—a very remarkable substance which has been lately discussed in an independent article—and of paraglobulin, the former ingredient preponderating.

In his remarks on the nuclei of the blood-corpuscles, our author observes that "the stroma of the corpuscles is not, in all animals, the only solid constituent of those bodies; if we except the mammals, all other red-blooded animals exhibit a nucleus in the blood-corpuscle; and in the frog and some other animals a third constituent has been recognised—namely, a radiating granular mass lying between the nucleus and the periphery, consisting probably of protoplasma." Whether the nucleus exists in the circulating blood, or only appears after its abstraction, is a question which Dr. Kühne leaves undecided. He regards the substance of the nuclei to be an albuminous body similar to fibrin.

The hæmoglobin (known also as blood-pigment, blood-crystals, hæmatoglobulin, and hæmatocrystallin) is more fully considered in this volume than in any other work with which we are acquainted, upwards of twenty pages being devoted to it. The stroma of the corpuscles is alone concerned as the carrier of the blood-pigment, the nuclei being always colourless, but regarding the mode of combination of the pigment and the stroma nothing is known, further than that the former may be removed without interfering with the other properties of the corpuscles. The different means of separating the blood-crystals, their properties and chemical composition, their optical properties, their water of crystallisation, their solubility, the result of their decoloration, and their behaviour with gases are duly noticed. From the analyses of Hoppe-Seyler it appears that 100 parts of hæmoglobin contain 54·2 of carbon, 7·2 of hydrogen, 0·42 of iron, 16·0 of nitrogen, 21·5 of oxygen, and 0·7 of sulphur, from which numbers Preyer calculates the colossal formula, (b) $C_{1200}H_{960}N_{154}Fe_2S_6O_{354}$, according to which the molecular weight is 13280. As far as is yet known, the crystals always belong to the rhombic system, except in the case of the squirrel, whose blood yields crystals belonging to the hexagonal system. These crystals are of a beautiful red colour, but when their solutions are decomposed either by acids or alkalies, a dirty brownish-red colour appears, due to the production of hæmatin, a substance to which Hoppe-Seyler assigns the formula, $C_{96}H_{51}Fe_3N_6O_{18}$, and which has hitherto been only obtained as a purplish-black amorphous powder, which becomes of a reddish-brown when rubbed. It is worthy of notice that the bilirubin of the bile, for whose formation from hæmoglobin there are numerous physiological grounds, is polymeric with iron-free hæmatin, and its production from this source may be explained by the equation—

Hæmatin. Bilirubin.

$$\overbrace{C_{96}H_{51}N_6Fe_3O_{18}} + 3HO = 3\overbrace{(C_{32}H_{17}N_2O_5)} + 3FeO.$$

Although hæmatin has not been obtained in a crystalline form, its hydrochlorate (formerly known as *hæmin*, which was the name given to it by its discoverer, Teichmann) forms beautiful groups of crystals, which are delineated in pp. 201 and 205. The formation of the crystals of this salt is the basis of the hæmin test for the detection of blood, which is fully described in Taylor's larger work on Medical Jurisprudence.

When hæmoglobin is made to yield hæmatin, an albuminous body is at the same time liberated. 100 parts of hæmoglobin yield about four parts of hydrochlorate of hæmatin, and the remaining ninety-six parts probably consist mainly of an albuminous matter whose exact nature is not known. Lastly, amongst the products of hæmoglobin, there are certain free acids which, according to the observations of Hoppe, are formic, butyric, and other (not yet determined) volatile acids, together with a non-volatile acid soluble in alcohol.

The marvellous results obtained by Hoppe and our distinguished countryman Stokes, on submitting hæmoglobin and hæmatin, in different modifications, to spectrum analysis, are very clearly described both in this work and in Gorup-Besanez's new edition; and each writer introduces an illustrative figure, that by Gorup-Besanez being printed in colours.

There are several points in the chapters on the digestive process and on the urine which we had marked for comment; but we have already exceeded our assigned limits, and for this reason we must omit, for the present, any notice of the work standing at the bottom of the list, which, however, contains various essays of such value that we shall endeavour shortly to return to them. In the meantime, we cordially welcome all these contributions to physiological chemistry.

Sanitary Character of Andine Heights. By JOHN H. SCRIVENER, M.D. Pp. 9. London. 1868.

DR. SCRIVENER having recently returned from South America, where he practised for many years as a Physician in Potosi and other cities in Bolivia, and in the Argentine Republic, has in these few pages directed the attention of the Profession and of the general public to the remarkable salubrity of the climate in the mountainous regions of these fine countries, as indicated by the entire absence of pulmonary consumption among the natives, and the great benefit that has been derived by many

(b) It is obvious that the old atomic weights are referred to in this and the following formulæ.

invalids from the coast and from distant countries when they have resided there for some time.

Dr. Archibald Smith, in his essay on the "Climate of the Swiss Alps and of the Peruvian Andes Compared," remarks that "incipient tubercular phthisis is one of the most common pulmonary affections known in Lima and other parts of the coast of Peru. The disease is almost certainly cured, if taken in time, by removing the patient to the open inland valley of Jauja, which is from ten to eleven thousand feet above the level of the sea." The experience of Dr. Scrivener in respect of the Andine heights of the regions to the south of Peru, and especially of the mountains of Cordova, fully confirm the statements of Dr. Smith. With a marked hereditary tendency to consumption himself, having lost two brothers and two sisters from the malady, he can testify strongly to the good effects of the climate upon himself, independently of what he observed in the case of others.

The following extract will serve to point out how the region can be most easily reached. We may only remark that the town of Cordova is in nearly the same latitude as Valparaiso, and is situated a little to the westward of the river Parana:—

"We would recommend the mountains of Cordova to consumptive patients, in preference to the Andine Heights of Bolivia, as being the nearest to the river Plate, and containing a greater variety of objects to divert the attention and amuse. The facility of transport, the shortness of the passage, combined with a well founded hope of renovating the health, will be of themselves sufficient reasons for undertaking the journey.

"The passage from England can be made in thirty-four days. There are several lines of merchant steamers, from London and Liverpool, as well as the Government vessels from Southampton and Bordeaux, which arrive at Buenos Ayres every month. From this port you can embark in a steamer for the city of Rosario, which is most beautifully situated on the banks of the river Parana, and is the finest port in the Argentine Confederation, at which you arrive in about twenty-six hours.

"From thence you take the Argentine Central Railway, and arrive at the city of Cordova on the same day.

"Here commence the serraicias or mountainous districts, which extend to the valley of Rimac, comprising an area of about a thousand leagues."

Dr. Scrivener has, we observe, had his pamphlet translated into French, "De la Salubrité du Climat des Andes," with the view of making its contents widely known on the Continent.

Syphilis and Local Contagious Disorders. By Berkeley Hill, M.B. Lond., F.R.C.S., Assistant-Surgeon to University College Hospital, Surgeon to Out-patients at the Lock Hospital, etc. London: James Walton. Pp. 505.

The Pathology and Treatment of Syphilis, Chancroid Ulcers, and their Complications. By J. R. Barton, M.D. Dub., F.R.C.S.I., Surgeon to the Adelaide Hospital, Lecturer on Surgery, Ledwich School of Medicine, etc. Dublin: Fannin and Co. Pp. 316.

A Treatise on Syphilis, Historical and Practical. By Dr. E. Lancereaux, Head of the Clinical Department of the Faculty of Medicine in Paris, Laureate of the French Institution, etc. In 2 vols. Vol. I. Translated by G. Whitley, M.D. New Sydenham Society. Pp. 405.

A Lecture on Syphilis, delivered at Guy's Hospital January 11, 1867, by Samuel Wilks, M.D., etc. Pp. 36.

When a want is decidedly felt, either in the body social or the body politic, we not unfrequently find a number of independent attempts, made about the same time, to satisfy this want. Such also is the case with Medical literature. For some time back there has been prevalent a feeling that a book was wanted which might bring us more into accord with what had been done in one department of Medicine, and make us acquainted with the ideas of those in our Profession best qualified to judge what had been proved, what disproved, in connexion with the recent advances in our knowledge of syphilis. The works cited above are independent contributions to syphilology, and thus it is all the more gratifying to find them thoroughly at one on the most important points.

Mr. Berkeley Hill's work is more extensive in its character than those of Lancereaux and Barton, and consequently cannot compare in exhaustiveness with Lancereaux's, although it will probably become much more popular for this very reason. Mr. Hill treats of gonorrhœa and allied disorders, as well as of syphilis, but we shall confine our remarks to the latter malady. Mr. Barton's name is not so well known in England, but his work shows him to be a sound Surgeon of matured experience, one who has seen as well as read. Of Lancereaux's work we need only say that it is admitted to be the most elaborate treatise of syphilis which has of late years appeared in our own or any other country. Mr. Berkeley Hill's book, and that of Lancereaux, begin with an historical account on syphilis, Lancereaux's, which is mostly followed by the other, being of the most exhaustive character. Both come to the conclusion that syphilis is of high antiquity, and that, as it was known in Europe before the return of Columbus, there is no reason to suppose that it it was introduced from America. There is no reference made, however, to the important contributions to the history of the complaint made known to us from the Spanish by Mr. Gaskoin, and published in these columns. However interesting from an historical point of view is the introduction of syphilis, there are many more important matters for our consideration now that it has firmly settled down among us. First among these questions is the duality or unicity of the syphilitic virus. The unanimity of the three authors above cited is gratifying, showing that on this point there is now a general agreement in the Profession. All three admit three different venereal disorders—gonorrhœa, chancre, and syphilis. Lancereaux's testimony, as well as that of the other writers, appears to be all the more valuable inasmuch as it is the testimony not of advocates for any special view, but of men who have been driven to accept this view by the force of the evidence adducible in its favour. Each author then treats of soft and hard sores; but Lancereaux does not devote to the former any great amount of space—in fact, dealing with it incidentally rather than specially.

The next most important point is the giving of mercury as a remedy for syphilis. It having been determined that an uncomplicated soft sore is never the initial lesion in syphilis, the exhibition of mercury for its cure is unnecessary; but all three authors are agreed that mercury should, as a rule, be given when the sore is a true hard one, even before any secondary symptoms have made their appearance. Another question arises—What advantage follows the use of mercury? Here, again, the evidence is unanimous that mercury, while modifying and ameliorating secondary symptoms, does not prevent their appearance; but it may cause the cessation of the disease at a much earlier period than would have been the case had no mercury been given. There would seem to be an increasing tendency to adopt Mr. Jonathan Hutchinson's ingenious, and withal truly scientific, view, that syphilis is a kind of exanthem with a period of incubation, a period of eruption, and a tendency to certain sequelæ. The eruption we cannot prevent; but we may and ought to do our best to avoid the sequelæ. The real nature of the disease, as Dr. Wilks well puts it, has remained long in obscurity because treated too exclusively as a local affection. Syphilis was not sufficiently separated from simple sexual affections. A minor, yet interesting, question is how best to give the mercury. Mr. Barton well remarks that syphilis is a protracted disease, that therefore the action of the mercury should also be prolonged and gentle. He is in favour of the plan of giving mercury by inunction. There is one great objection to this plan—it is nasty and disagreeable; the calomel vapour baths are more satisfactory. On the whole, we think the plan adopted by Mr. B. Hill is the best—that is, to give in the first instance two or three grains of blue pill or grey powder, with as much of Dover's powder, in the form of a pill, and to modify the subsequent treatment according to circumstances. Whilst on this subject, we may remark that in an otherwise excellent translation of Lancereaux's work we too frequently encounter such terms as Dupuytren's pill, Sédillot's pill, pommade de Lyon, Vigo's plaster, Van Swieten's drops, and so on, without any explanation as to the composition of these remedies. Many men may know what these contain, but more do not; and, considering the great number of subscribers to the Sydenham Society, it would have been more satisfactory had foot-notes been added indicating, at least approximately, the constitution of these medicines.

In the volume just published Lancereaux deals only with acquired syphilis, the important subject of congenital syphilis being left for discussion in the next. Both Mr. Hill and Dr. Barton treat of congenital syphilis, but not at a very great length.

Of the volumes we have noticed we think it probable that Mr. B. Hill's will become the greatest favourite: it deals with the whole group of venereal diseases, and most men prefer such a work to one which treats of one or two of them only. It is written with great clearness, and contains copious references to both English and Continental works. (Lancereaux's treatise is also remarkable for its copious bibliography.) Mr. Hill has

further adopted the plan of giving at the end of each chapter a short *résumé* of its contents, which is very convenient, and he has entered into some details as to the best plan of preventing as well as of curing venereal affections. Dr. Barton's book is also eminently a good one, but it treats of soft and hard chancres and their consequences only; it does not touch on the subjects of gonorrhœa or urethritis. Of Lancereaux's work praise is needless.

Dr. Wilks's lecture, reprinted from a contemporary, is, as might be expected, a most valuable summary of the latest doctrines by one who has done the Profession the greatest service in illustrating the common character of syphilitic lesions, external and internal.

GENERAL CORRESPONDENCE.

COLLEGIATE REPRESENTATION OF THE PROFESSION IN THE MEDICAL COUNCIL.

LETTER FROM MR. F. J. GANT.

[To the Editor of the Medical Times and Gazette.]

SIR,—Will you allow me to direct your attention to a scheme which is being agitated in a certain quarter for the direct representation of the Profession in the Medical Council by the addition of a few Professional representatives?

When the Medical Council was instituted in 1858, I was, I believe, the first to advocate an exactly opposite or constitutional mode of representing the Profession—namely, directly, through the Corporate Bodies or Colleges, to one or more of which every legally qualified Medical Practitioner necessarily belongs, and in virtue of which alone he holds his Professional status. I trust, therefore, at the present juncture, you will permit me to recur to that position.

According to the present mode of electing members to the Medical Council, the Councils of the various Colleges are, in most instances, the only electors, and are alone represented; thus excluding the general body of enrolled and accredited Fellows and Members. Hence the so-called representative of a college is really only the representative of the Council of that college; in the Royal College of Surgeons of England—a notable example—he represents only the twenty-four Councillors. How can it be expected that the interests of the other Fellows and Members of that College, some thousands in number, and constituting the great body of the Profession, shall be fairly regarded in the Medical Council by a representative in no way responsible to the Profession, over whom it has no elective influence? The same argument will apply to the representation of most other corporate bodies. Vested interests and privileges are thus carefully guarded and imperceptibly extended, not the liberal requirements of the Profession at large, and in its relations to the public. The manifest injustice of this position, both in point of electoral exclusion and representative indifference, needs no comment.

It would not be remedied by the creation of an additional and independent order of Professional representatives, whose proposed number (six) would necessarily be swamped in the overwhelming majority of Corporate representatives. Nor would it be desirable or dignified on the part of the general body of Professional men thus to acknowledge themselves done in gaining representation, and to consent to have it by renouncing their Professional *status* in connexion with the Colleges.

The *General* Medical Council should, of course, represent the whole Profession; but this should be accomplished constitutionally, by an extension of the franchise downwards through the corporate bodies, and not by any collateral and by-way mode of representation.

Let then the enrolled and accredited Fellows and Members of the several Colleges—the Royal College of Surgeons of England in particular—claim their electoral right, to which *undoubtedly they are morally and, as I am assured, legally* entitled under the Medical Act of Registration, to themselves elect, in conjunction with the members of their College Councils, the representative of their own corporate body in the General Medical Council of the Profession.

The Councils of the various Colleges, throwing aside their traditional prepossessions, are not wanting as men in a just and liberal appreciation of the electoral claims of their Professional brethren; nor need they hesitate to confront the power they have themselves created, reposing with confidence on that unerring instinct which, the history of all political freedom attests, ever guides the numerical majority when brought into a pacific relationship with the constitution. It should also be observed that Collegiate candidates, and their election taking place in the Colleges, would be an electoral system far more likely to secure desirable representatives than that of Professional candidates and their election in some other locality.

The representatives of the Colleges and of the Profession would then be one and the same; the collision of interests would cease in the general consolidation of the Profession; and there being no longer any pretence for the addition of Professional members to the Medical Council outside the Colleges, we should hear no more of this supplemental rag of representation.

I am, &c.

Connaught-square, Dec. 26. FREDERICK J. GANT, F.R.C.S.

A CASE IN CONTINENTAL PRACTICE.

[To the Editor of the Medical Times and Gazette.]

SIR,—A case occurred lately in the course of my practice for which I solicit the favour of a space in your columns at your earliest opportunity. It is one which, I think, will be found to be equally important in point of public hygiene, as well as the interests of the Medical Profession. On a night of September, 1868, while watching over a beloved wife whose earthly career was drawing to a close, a violent ring from my night-bell roused me from my gloomy thoughts, when, upon opening a window, I was addressed by the captain of an English yacht, who requested me to visit a lady on board immediately. I at once obeyed the summons, and discovered that I had to do with a case of premature confinement. The head, a small one, presented, quickly descended, and made its exit. In about half an hour I removed the placenta, which was lying loose in the vagina, and which was complete with every particle of the membranes. In fact, the confinement was *heureux*, simple to a degree; and if the lady had been French a *faire-part* would have been directly sent to all her friends, announcing that she had been *heureusement accouchée d'un fils*. The sequences connected with the parturient state proceeded in a normal manner until they ceased with the final contractions of the womb, which organ never at any time manifested the slightest trouble or pain upon any amount of pressure. A professor of midwifery in one of our great Medical institutions, engaged to attend the lady about Christmas, wrote to me, observing that he had seriously cautioned her against yachting in her position, and that he had "anticipated the result without the power of preventing it." A near relation to the patient informed me that her last monthly period had taken place towards the end of March—that it had been very profuse, amounting to flooding. According to this account, the child would have passed barely six months in utero, unless we admit the possibility of a previous conception remaining undisturbed, notwithstanding the hæmorrhage mentioned. The child, a boy, was very small, but cried lustily; weighed four pounds and a half, but appeared perfectly viable. He required a great deal of care, and, thanks to a good wet nurse, went on increasing in size and weight, and I have no doubt will continue to prosper.

Now I have to commence the sad part of my communication. The yacht inhabited by this young mother lay in an unclean basin, with many other vessels, close to the mouth of a valley where intermittent fever is endemic, having to the east a swamp, upon the borders of which I have had to treat, from time to time, cases of typhoid fever of the most malignant type; and to the north, lower down towards the sea, the sewage of the town is emptied, producing at low water, in warm weather, the most abominable effluvia. From my personal knowledge of the danger of this locality, and considering the strong susceptibilities depending upon the parturient condition, I apprehended, sooner or later, an explosion of fever, and made my fears known, in the most emphatic manner, to the family and every one connected with the patient; but all in vain. No effect whatever had been created by my admonitions; the patient was allowed to linger day and night in the same medium which I have described, and only left the ship as a residence for an hotel fully three weeks from the time of childbirth, although she had been previously driven out in a carriage. Having been sent for from the hotel to see my patient, I found the tongue much charged, with febrile pulse, but still she was not confined to bed. I prescribed according to the indications which presented themselves for the time, and afterwards commenced the administration of quinine. However, the case soon assumed

a marked aspect of typhoid fever, and of a pernicious character—malarial. The diagnosis was plain. Two *confrères* were then brought into consultation, who, in face of my knowledge of all the facts of the case from the beginning, and my opinion of its true nature, adopted the theory that something or other connected with the womb might account for the symptoms present, and, in conformity with this view, to sustain which I could not elicit a shadow of foundation, agreed to apply a large blister over the hypogastric region, thus localising the treatment in an energetic manner. The application of the blister had been decided upon apart by my *confrères*, without any participation upon my part, and clearly with the concurrence of the family. Therefore, finding myself acting the *rôle* of an outsider, and having become an object of distrust and recrimination, my patience at length gave way, and I retired altogether from the scene, quite prepared to hear of a few absurd calumnies afterwards. The poor patient struggled through her illness for about a fortnight, death taking place five weeks after delivery.

When requested politely by the husband to send him my account, I named a sum which I thought would have prevented any possible discussion, and not receiving an answer, I pressed for one, and then came an impolite note, offering me considerably less than the half. Of course I refused, and mean to be paid the whole, or content myself with the empty pride of having brought the *héritier* of wealthy parents gratis into the world.

Now, Sir, having finished this, allow me to call it, narrative, permit me a few summary and concluding remarks. I believe it exhibits a remarkable instance—First, that the laws of hygiene cannot be violated with impunity, whether through ignorance, negligence, or parsimony. Secondly, we have an example of the extreme caution which ought to be observed professionally in connecting with the uterus any affection taking place subsequently to parturition, for surely after that process a woman is exposed, like every one else, to contract disease or break her leg. Such a supposed connexion has made me acquainted with wild, ungenerous accusations, filled the heads of a family with delusions, and perhaps caused them to refuse to pay a fair reward for arduous and anxious services.

I am, &c.

France, 1868. A Continental Practitioner.

ON EDUCATION IN MIDWIFERY.

Letter from Dr. E. W. Murphy.

[To the Editor of the Medical Times and Gazette.]

Sir,—I am induced to address you earnestly on the subject of "midwifery teaching," because, from a lengthened experience, I am fully aware of the great disadvantages under which midwifery is at present taught. Formerly two courses of lectures were required—the first a long winter course of a hundred lectures, followed by a short summer course of sixty lectures. By this means the teacher had ample opportunity for giving complete instruction in midwifery and the diseases of women and children. The lessons taught in the first course were repeated in the second, so that they were impressed fully on the minds of students. During those nine months they also had the opportunity of attending cases of labour, and of verifying the instruction they received. The colleges, however, altered that curriculum to two summer courses, allowing the winter courses to be interposed, so that Medicine, Surgery, and anatomy might wipe out the knowledge of midwifery acquired in the first course before the student commenced the second and final course. They have again changed the curriculum to save the pupil this inconvenience, and now require only one summer course.

Now, Sir, it is utterly impossible for midwifery to be properly taught in sixty lectures, to say nothing of the diseases of women and children. They might as well cancel that only course as being useless, and leave midwifery altogether out of their curriculum. I have no doubt that the Medical Council would reject any such proposition, knowing the great importance of having midwifery properly taught; but if they believe this to be the case they are bound to examine carefully the "memorial" presented to them from "the London lecturers on midwifery," who state that "one short summer course" is totally inadequate to treat the subject of midwifery proper, while the extensive and important subject of diseases of women and children must be left wholly untouched. They recommend that two courses should be resumed in the summer, but that a course of clinical instruction on the diseases of women and children should also be required, so as to complete the instruction.

On this point I confess myself rather an advocate for the original long winter course, in which the diseases of women and children can be fully entered into and taught. This course, followed by a summer course, would have more effect in impressing midwifery on the pupil's attention than by having short courses divided by a year's interval. If the old rule were resumed, and the pupils were obliged to attend a larger number of cases (which could easily be done in the nine months given to midwifery), I have no doubt that this important, but sadly neglected, branch of our Profession would soon recover itself, and the public would have fewer displays of ignorance and incompetency than they have at present.

I am, &c.

Edward Wm. Murphy,
Late Professor of Midwifery, University College.
57A, Wimpole-street.

REPORTS OF SOCIETIES.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Saturday, December 19.

Dr. Druitt in the Chair.

The chief business of the evening was a paper, by Dr. Odling, on Gas Burning. Previous to this, however,

Dr. Aldis begged leave to bring before the Society some bread made by Mr. Chapman, of Hatcham, of the entire wheaten flour, and therefore very nutritious. Many Physicians thought it a pity that bread should lose so much as it does now. It was not the same as unbolted bread, the bran being reground and dressed. The unbolted bread is apt to give rise to disordered bowels; this would not. Flour suitable for infants' food is made in the same way.

Mr. Liddle agreed with Dr. Aldis, but did not think it advisable to compromise the Society by coming to any resolution as to its value.

Dr. Aldis also brought under the notice of the Association the results of a meeting of officers of health and others held at Mr. Redgrave's office to consider certain restrictions placed in the way of officers visiting workshops or factories. Mr. Redgrave thought generally there had been no great difficulty in working the Act. There was some question raised as to the cubic space necessary for workshops and schools; it was generally admitted that less than 120 cubic feet for each individual would be insufficient. Mr. Redgrave expressed as his opinion that it was advisable that the law should be executed with as little collision as possible with the proprietors of workshops—that their position should be considered.

ON THE COMBUSTION OF GAS IN PRIVATE HOUSES.

Dr. Odling said that the subject he proposed to consider was the combustion of gas in houses, especially dwelling-rooms and bedrooms. Whether, in the latter, the burning of gas was prejudicial or not was a matter for observation; he could only bring forward *à priori* considerations. Altogether he thought there was no real objection to the use of gas. If gas could be used with impunity, then it should be so for both warmth and light. Still, there were always complaints as to the heat, the dirtiness, the close oppressive smell consequent on burning gas; besides this, some said that it produced a harsh, acrid, sulphurous atmosphere. As gas was mostly burned for light, it would be better to take it light for light with candles. If any considerable quantity of gas be used for heating, arrangements are made whereby the products of combustion are carried away. It is quite true that gas gives rise to heat; but we should compare the habitual illumination of a room by gas and by candles—say in one room there was a single flame burning 3 feet of gas per hour, this would be equal to six or eight candles. We must therefore consider the actual quantity of gas consumed, for we habitually use ten or twenty times as much light when we use gas as when we are content with candles. If we take Dr. Letheby's numbers of the quantity of heat necessary to raise so many pounds of water 100° Fahr., common gas, producing a light equal to that of twelve candles, would

raise 279 lbs. of water 100° Fahr., cannel gas 195 lbs, sperm oil 233 lbs., whilst solid sources of light gave rise to much more heat. Thus, paraffin would raise 362 lbs., sperm 352 lbs., wax 383 lbs., stearine 375 lbs, whilst tallow would heat as much as 505 lbs. Really there is no room for argument here. Gas produced less heat than almost any other illuminating agent. Next, as to the fouling of the atmosphere, certain things were taken away and others added to the atmosphere by the burning substance. As to the oxygen taken away, there was not much room for comparison, owing to the great abundance of oxygen in the atmosphere. As a matter of fact, gas, in the proportion of 3 for cannel gas, 5·5 for common gas, to 7, 8, 9, and 10 respectively for the solids already named, takes less oxygen than the solid sources of light. This matter, however, was really of no importance.

Again, as to what the gas added, people complained of the dirt, especially on ceilings. If we considered the composition of the various illuminating agents—*i.e.*, essentially carbon and hydrogen—they alike burn to gases if the combustion be perfect; therefore dirt must arise from imperfect combustion. Gas makers are placed in an awkward position; the more carbonaceous the gas is, the more illuminating power it possesses, but the more it tends to dirty the room. The two common complaints of defective light and of dirtiness were, therefore, antagonistic. The combustion was relative to the amount of air supplied; therefore the dirt rather depended on this than on the substance burnt. There were two ways of burning gas, as illustrated by two burners shown, Leslie's and Sugg's steatite burner. In the latter the gas was underburned, in the other overburned, by the lengthening of the chimney. Overburning makes a whiter light, but the other was more economical. Where the air was limited, hydrogen takes its first supply, and the carbon is deposited. Still, the unconsumed material in a candle was, light for light, much greater than in gas. The large amount of gas burned and its being burned in bulk, not in a number of small flames, were the causes of the soot being visible, whilst candles, if numerous, were distributed. Again, the burners were closer to the ceiling than candles, so that the heat caused a powerful upward current, impinging against the roof. He could scarcely put the comparison between gas and candles in a numerical form, and it was to be remembered that gas was more liable to currents than lamps, which were generally placed in sheltered parts of rooms.

In the third place, gas was accused of giving closeness and oppressiveness to the atmosphere of rooms. This was largely due to the humidity of the atmosphere, which was also a variable quantity, varying with the temperature. Owing to this quantity of moisture in the atmosphere, perspiration was not freely taken up; hence the discomfort. Light for light, gas produced more water than other combustibles. The amount of carbonic acid gas given off had also to be considered. The ordinary proportion of carbonic acid gas in air is 0·4 in 1000, and, light for light, candles imparted more to the atmosphere than did gas. Thus the light of 12 candles as gas would represent 3, as sperm and other candles 5, 6, and 7 respectively, tallow producing 8 proportions of carbonic acid. To show, however, how little the carbonic acid contributed to the close feeling, he referred to the amount of carbonic acid contained in the atmosphere of highly illuminated rooms. Roscoe, in the crowded gallery of the Princess's Theatre, during Kean's time, found only ·32 in 100 cubic feet, instead of ·04, the normal quantity—that is to say, only one-third per cent. in volume produced by both gas and people. In no burner is combustion perfect, and the unpleasant feeling was especially noticeable when burning was imperfect. The smell which is produced is most observable with cannel gas. Still, gas is better than candles; only the latter are not burned in quantity. If the nose is held over a burning candle, its peculiar odour will soon be perceived, and one kind of candle can be thus distinguished from another. Many think that when the air is in excess we get complete combustion. This is not so, as was well seen in organic analysis. In the exterior flame there is always a quantity of unburnt gas, but there are also nitrogen, carbonic acid, and water, as well as external air; so the gas was no longer in a condition to burn well. Boggett's burners, which consisted of large masses of cast iron, gave out a bad smell. In short, wherever the air was excessive, so as to cool the flame, there was always a smell and acid reaction of the products of combustion. There were no good data as to the relative products of gas and candles.

Next as to the impurities contained in different kinds of illuminating agents. All gas contained some ammonia, but its maximum proportion was very little, generally not enough to affect turmeric paper, which 1 gr. in 100 cubic feet of gas will. Where in excess it was objectionable. But it was also to be remembered that the outer flame in all cases was mixed with air, both being burned together. The nitrogen of the air is also partially changed. All kinds of gas contain sulphur, which when burned is turned into sulphurous acid, and this in turn is changed into sulphuric acid. Sulphurous acid is very irritating, but not corrosive, being very weak. Coal gas is not allowed by Act of Parliament to contain more than 20 grs. of sulphur per 100 cubic feet in any form. Still, assuming that gas contained 40 grs., which are equal to 80 of sulphurous acid, if thoroughly burned, which is not true, rather more than $\frac{1}{3}$ cubic foot of sulphurous acid would be produced; or 1500 of gas would give 1 of sulphurous acid, and about two-thirds its bulk of carbonic acid; or 1000 cubic feet of carbonic acid would be produced along with 1 of sulphurous acid. We could thereby get some idea as to the actual quantity produced, seeing that in gas-lighted and crowded rooms the proportion of carbonic acid does not exceed 0·32 per cent., which but slightly exceeds the proportion found in crowded but unlighted rooms, as school and barrack bedrooms. Sulphurous acid is not speedily turned into sulphuric acid completely, although the first portion was rapidly changed. So also we could scarcely say how much was so converted. The ammonia in the atmosphere would be enough to neutralise the sulphuric acid formed. Still, by holding a cool surface over a flame, a good deal of sulphuric acid might be collected.

Dr. Letheby thought that, to a large extent, blame was attributed to gas because not burned in a proper manner. Still, there were some special causes for dislike. Gas produced more water, light for light, and this, gas being used in excess, gave rise to much discomfort. People suffered from the molecules of water so produced taking up the heat. The proportion of sulphur was rather greater than that stated by Dr. Odling. No doubt the sulphur appears as sulphurous acid first, as sulphuric acid after, and the bad effects of this sulphurous and sulphuric acid were seen in conservatories where gas was burned, for 1 part of sulphurous acid in 10,000 would kill a plant or a bouquet of flowers. In libraries also the bad effects of the sulphur were seen, as at the Athenæum, where the books in the upper part of the room rapidly perished. That sulphur was the cause of this was proved by Prout, Faraday, and others; it was so also in the College of Surgeons, the London Institution, but not in the British Museum, as no gas was used there. It may be objected that there are other sources of mischief; but where there is exposure to the gas, there is the destruction. Calf-bound books become quite rotten, and the leather acid to taste. There was no necessity for this. Processes for purifying gas had been introduced by Hawkesley and others. Washing in ammoniacal liquor did good. At gasworks where this was used, they produced gas containing only 12 or 16 grains of sulphur; where not used as much as 26 grains.

Mr. Hawkesley, C.E., said, as to the dirtiness of gas, must be burned badly indeed if any notable quantity of carbon escaped. Still ceilings are blackened; but the same effect might be produced by a steam-pipe traversing a room close to the ceiling—one black line on either side and white in the middle. The blackening was occasioned by a warm current carrying particles floating in the air upwards. It could not be unburned carbon in the case of the steam-pipe. Many now adopted the expedient of placing a sheet of talc over the burner, so that the heated air was more diffused. As to the colour of the light, many thought the pale better than the yellow. He begged to differ from them. In a frosty day the light of the sun was nearly white, while it was yellow in the summer. Still the latter was the more agreeable. One point had not, he thought, been made clear—the cause of the chokiness occasionally perceived. He did not think it was produced by either acidity or humidity; it was something *per se*, which produced dryness in the throat—a form of invisible smoke in the atmosphere. Its cause had never been ascertained. It was more frequent in gas purified by the oxide of iron than after lime had been used; also if either had not been preceded by moisture. Again, with regard to the sulphur compounds, by use of ammonia and lime these could be reduced, without any sensible depreciation of light, to 10 grains. Medical Officers of Health had complained of the lime process as

a nuisance, and gasmakers had been forced to use iron, which is not so good, and now these sulphur products are received in thousands of dwellings. It was a question whether the changes enforced under sanitary laws might not sometimes act injuriously. He did not think ammonia need be considered, its quantity was so small. The effects said to be produced on books, etc., were not so significant as people made out. There were other causes now. The coal alone used in London gives 6000 tons of sulphur into the atmosphere every year, and this must have a sensible effect. Temperature was also important—so high is it near roofs where there was no good ventilation.

Mr. Liddle objected to Medical Officers of Health being found fault with because wet lime was not used. Dry lime might be used. Good ventilation might also do much.

Mr. Finlay, a gas engineer, agreed with Mr. Hawkesley with regard to the lime process; it was the best process known, but it must always be a nuisance. One company had been summoned again and again, and made to take to purification by iron. Another company had to paint adjoining houses. The injury to goods was because there was no ventilation. He held it was unfair to blame gas for the want of ventilation.

Dr. Aldis thought a quarter of the light was lost owing to glass surroundings. The College of Physicians had just found out that their books were being destroyed.

Mr. Rendle had learnt one thing—viz., we ought perhaps to go back to the wet lime system; but this, also, that if so, gas companies must leave London.

Mr. Hawkesley did not mean to imply that companies were to go back to the blue-billy system; this was not necessary. Dry lime only, or, still better, iron first, dry lime after, might be used.

Dr. Gibbon thought gas heat the important thing, and asked if the way of burning gas in glass globes did not increase the heat.

Dr. Druitt said Mr. Hawkesley's remarks were not to be taken by officers of health with too thin a skin. For the eye the candle was best, or a small reading lamp, which throws light on the book, and leaves the rest of the room in shade.

CLINICAL SOCIETY.

Friday, December 11.

Sir Thomas Watson, President, in the Chair.

The following gentlemen were elected members of the Society:—Mr. Berkeley Hill, Mr. L. S. Little, and Dr. Fish.

The Secretary communicated, for Dr. Crouch, a case of Primary Amputation for Gunshot Wound. The operation was performed before the patient had recovered from the shock, just below the knee. There was subsequently severe delirium and a protracted convalescence.

Mr. Callender considered that in this case the amputation was rightly performed whilst the patient was yet suffering from the shock, and pointed out that in a young subject an operation was usually well borne in such a state of the system. He referred to the site of the amputation as accounting for some troublesome abscesses which formed along the tracks of the extensor tendons.

Mr. Maunder thought it contrary to recognised principles to amputate during collapse, and he urged that the good results which followed in this case must be regarded as exceptional. He had once amputated when there was extreme prostration of the nervous system, associated with complaints of urgent pain; but such a case he regarded as quite distinct from instances of ordinary so-called collapse.

Dr. Crouch, in reply, said he had followed the rule distinctly laid down by Abernethy for the treatment of cases similar to the one reported.

Dr. Pavy related a case of Diabetes in a female patient aged 68, in which the treatment consisted mainly in the exhibition of opium in gradually increased doses, without restriction of diet. Her complaint had been recognised two years back, and at one time she had been passing an exceedingly large quantity of urine, and had been gradually losing flesh and strength. The opium given was in the form of a pill, three times a day, and the dose was gradually increased. Throughout the whole period of treatment the dose of opium, the quantity of urine, and the quantity of sugar excreted in twenty-four hours were recorded daily, so that the effect of the remedy could be accurately judged of. To begin with, the quantity of urine was 100 ounces, the specific gravity 1040, the quantity of sugar per ounce 32¾ grains, and the quantity of sugar for the twenty-four hours 3275 grains. The first effect of the opium was to diminish in a notable manner the amount of urine passed. The degree of saturation with sugar remained for a time about the same, but, through the fall in the amount of urine, the quantity of sugar for the twenty-four hours was, of course, diminished. Within three weeks the quantity of opium administered was raised to 10½ grains per diem. It was then suddenly discontinued, on account of a greater degree of drowsiness than was desirable being produced, but in a few days was recommenced, and this time, being more gradually increased, was borne without producing any sign of disturbance. The quantity of urine, the specific gravity, and the amount of sugar gradually fell until July 28, when the quantity of urine was 25 oz. per diem, the specific gravity 1027, and no sugar was passed. On the three subsequent days there was a little sugar, but it afterwards disappeared, and remained absent as long as she continued in the Hospital—viz., until October 28. At the time the sugar disappeared the patient was taking 9 grains of opium per diem. It was afterwards still further increased to 12 grains, and then gradually diminished until October 17, when all was taken off, the patient, during the remaining time, taking no medicine, and passing no sugar. The last daily record was 40 oz. of urine in the twenty-four hours; specific gravity, 1025; and no sugar. With the improvement in the state of the urine, there was a corresponding improvement in the health and strength of the patient, who ultimately expressed herself as feeling perfectly well in every respect. Each time since her discharge she had come to the Hospital the urine was found to be devoid of sugar. On that day her urine was free from sugar. Dr. Pavy stated that he had given opium and morphia in other cases; and he referred to two in which the results strikingly exemplified the controlling influence of the drug over the disease. Dr. Pavy remarked that M'Gregor, as far back as the year 1837, had published in the *London Medical Gazette* a record of two cases in which opium had been given in large doses, with the effect of producing for a time a marked palliation of the disease. M'Gregor in one of his cases had increased the quantity of opium until it reached 90 grains per diem. By modern Practitioners opium had also been generally looked upon as exerting a favourable influence in the disease; but he was not aware that direct evidence of its controlling influence, such as was supplied by his communication, had been previously placed upon record. There was still, he thought, much to be learned about its extent of power in different cases. His belief was, from the case which formed the basis of his communication, and other experience that he had had, that it would be found sufficient in many instances amongst elderly subjects, where the disease was observed to assume its mildest form, to check by itself the elimination of sugar. In young and middle-aged subjects, however, where the disease, as a rule, assumed a much more severe character, his experience was that, to obtain a similar effect, the restricted diet must be conjoined.

A discussion followed, in the course of which Dr. Weber referred to the occasional recurrence of diabetes in patients apparently cured, whether by diet, regimen, or otherwise, and suggested that the case should be further reported on after an interval of six months.

The President drew attention to the age of the patient with reference to the question, whether diabetes is not more tractable, and, at the same time, more liable to recur in elderly persons than in the young.

Dr. Pavy, in his reply, admitted that in advanced life diabetes might be regarded as a comparatively trivial disorder.

Dr. Beigel read a paper founded on one hundred and fifty-two cases of Epilepsy, from which he inferred that although unconsciousness and convulsion are so frequent as phenomena of the epileptic paroxysms that most writers regard them as characteristic, there are many cases undoubtedly of epileptic nature in which those symptoms are absent. He considered that the only invariable pathognomonic signs of epilepsy were those which arose from disturbances of the circulation, and set forth various facts and observations which had led him to localise these disturbances in the vaso-motor nerves. As regards the treatment of epilepsy, Dr. Beigel believed that the most important remedy for continuous administration was the bromide of potassium. He further strongly recommended the subcutaneous injection of morphia, guarded by atropine, in the manner suggested by Dr. John Harley, immediately before an apprehended attack, as a means of warding it off, or at least of modifying its violence.

Dr. Green related a case which he described as one of Irritative Hypertrophy of the Heart. The patient, a girl of 15, was admitted into Hospital in the fourth or fifth attack of acute rheumatism. Soon after pericarditis supervened, and she eventually died with great hypertrophy, adherent pericardium, and "finely granular" degeneration of the muscular fibres of the whole heart. In explanation of this and other cases, in which hypertrophy occurs in young rheumatic persons independently of any mechanical cause, the author maintained the theory that its overgrowth is intimately connected with chronic myocarditis.

MEDICAL SOCIETY OF LONDON.

Monday, December 14, 1868.

Dr. Richardson, F.R.S., in the Chair.

Four new Fellows were elected.

Dr. Sansom proposed the election of a Committee to investigate the subject of gall-stones, the symptoms produced by them, and their treatment. The motion was carried, and the following gentlemen nominated as members:—Dr. Thudichum, Dr. Leared, Dr. Thorowgood, Mr. Peter Marshall, and Mr. John Hainworth.

Mr. C. F. Maunder exhibited two patients upon whom he had performed primary excision of the elbow-joint; in each there was considerable mobility of the artificially produced joint, one patient being able to lift the hand easily to his mouth. Both were able to lift the weight of at least a half-hundredweight.

Mr. Henry Smith certified in congratulatory terms to the success of these cases.

Some observations were made by Mr. Gregory Smith.

The President then made some further remarks on the effects of exposing animal substances to extreme heat. He showed specimens of animals and organs which had been first embedded in various substances, such as clay sand, plaster of Paris, etc., and then exposed to great heat. He had found that when animal substances, embedded and enclosed in iron flasks, were subjected to moist heat of 340° Fahr., under pressure, they were, as a rule, completely removed in the course of from one to two hours. A dead frog, placed in sand and plaster of Paris, was found, on opening the iron flask, to have been almost entirely removed, its exact shape being left as a mould from which a cast could be taken. Specimens of fish, prawns, oysters, etc., were exhibited in various stages of change towards complete destruction. The most striking fact was that the bodies of animals subjected to the influences above named would be, with the exception of one structure, destroyed, and to ordinary observation removed. The order of the process of destruction was described. The osseous system persisted after all except the pigmentary matters. The latter were pure exceptions to the rule. They seemed quite indestructible at the temperature employed. As stated on a former occasion, blood resisted the destructive process, becoming a material resembling caoutchouc; an analogy therefore existed between blood and pigment.

After some observations by Dr. Routh.

Dr. Thudichum stated that observations in some respects resembling Dr. Richardson's had been made aforetime by Papin. The solvent action of the menstruum (water) which he employed modified the results.

The President pointed out the interest of the subject with respect to fossil remains.

Dr. Thudichum then read a paper on the spectroscope in relation to physiological and pathological research.

NEW BOOKS, WITH SHORT CRITIQUES.

The Science and Art of Surgery. By John Eric Erichsen, Senior Surgeon to University College Hospital, and Holme Professor of Clinical Surgery in University College, London. 2 vols. Fifth Edition. London: James Walton. Pp. 659 and 767.

, Mr. Erichsen has spared no pains to bring his well-known work thoroughly abreast of the times, and to this end has not only carefully revised the whole work himself, but has secured the aid of able coadjutors in dealing with special subjects. Thus the portion relating to ophthalmic Surgery has been revised by Mr. Streatfeild; Mr. Berkeley Hill has assisted in rearranging the chapter on syphilis; Mr. Alexander Bruce has aided in dealing with the more general subjects of pyæmia, scrofula, and tumours; and to others Mr. Erichsen expresses his obligations in general terms. The separation of the work into two volumes, which in its last edition proved somewhat unwieldy, is advantageous to the student, whilst it has admitted of considerable enlargements being made without inconvenience. The value of Mr. Erichsen's work is too well known to need any meed of approbation from us beyond what has been already said, save that we may add a word as to the many valuable illustrations which have been added, the total number now amounting to 600.

Hooper's Physician's Vade Mecum. Eighth Edition. Edited by W. A. Guy, M.B., F.R.S., Professor of Forensic Medicine, King's College, London, etc., and John Harley, M.D., F.L.S., Late Assistant-Physician King's College Hospital, London, etc. London: Renshaw. Pp. 704.

, The new edition of this work has been carefully revised by both editors. In it, perhaps too much attention is directed to general subjects relating to physiology and pathology, so that the actual descriptions of disease are, for the sake of space, rendered somewhat cramped and meagre.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, December 31, 1868.

Birt, George, Leamington.
Buckley, Samuel, Royton, Lancashire.
Fisher, Frederic Richard, Salisbury.
Giddings, William Kitto, Calverley, near Leeds.
Handy, Henry Francis, Darlaston, Staffordshire.
Morrison, John Reid, Cannon-street-road East.
Roper, Robert Gear, City-road, E.C.
Whitcombe, Edmund Daucks, Birmingham.

APPOINTMENTS.

, The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Booth, Edward J. H., M.R.C.S. Eng., L.S.A. Lond.—Resident House-Surgeon to the Huddersfield and Upper Agbrigg Infirmary, *vice* Brewer, resigned.

Chalmers, James, M.D., L.R.C.P. Edin., L.F.P.S. Glas.—Police Casualty Surgeon, Southern District, Glasgow.

Galton, J. C., M.A. Oxon., M.R.C.S. Eng.—Clinical Assistant at the City of London Hospital for Diseases of the Chest, Victoria-park.

Gooson, Clement, M.R.C.S.E. and L.M.—Resident Obstetrical Officer to St. Bartholomew's Hospital.

King, Dr. Robert, B.A. Cantab.—Resident Medical Officer at the Middlesex Hospital, *vice* Dr. Andrew Stephen, resigned.

Murray, John, M.D.—Medical Registrar and Superintendent of Post-mortems to the Middlesex Hospital, *vice* Dr. Cayley, resigned.

MILITARY APPOINTMENTS.

2nd Foot.—Staff Surgeon John Noble Shipton, to be Surgeon, *vice* Surgeon-Major Francis Cogan, appointed to the Staff.

15th Foot.—Surgeon Henry Higgins Jones, M.D., having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of April 1, 1867.

60th Foot.—Staff Surgeon Arthur Edwin Temple Longhurst, M.D., to be Surgeon, *vice* William Wilson Mills, deceased.

101st Foot.—Staff Surgeon James Jardine, M.D., to be Surgeon, *vice* Edward Young Kellett, who exchanges.

Medical Department.—Surgeon-Major Francis Cogan, from 2nd Foot, to be Staff Surgeon-Major, *vice* Staff Surgeon John Noble Shipton, appointed to the 2nd Foot; Staff Surgeon William Johnstone Fyffe, M.D., having completed twenty years' full-pay service, to be Staff Surgeon-Major, under the provisions of the Royal Warrant of April 1, 1867; Surgeon Edward Young Kellett, from the 101st Foot, to be Staff Surgeon, *vice* James Jardine, M.D., who exchanges; Staff Assistant-Surgeon James Kelly, to be Staff Surgeon, *vice* Arthur Edwin Temple Longhurst, M.D., appointed to the 60th Foot.

Brevet.—The rank of Assistant-Surgeon conferred on Hospital Steward Joseph A. Cooper, in Medical charge of her Majesty's Punjaub Flotilla, with date of February 19, 1867, to honorary, and not local and temporary only, as then stated.

BIRTHS.

Adams.—On December 29, at Martock, the wife of J. Dixon Adams, M.D., of a daughter, stillborn.

Millea.—On November 29, at Deyrah Dhoon, India, the wife of Staff Surgeon C. M. M. Miller, of a daughter.

Spaull.—On January 5, at No. 2, Vale-place, Hammersmith, the wife of B. E. Spaull, Surgeon, of a daughter.

Stocker.—On December 30, at 2, Montagne-square, the wife of Dr. J. Sherwood Stocker, of a son.

Ward.—On January 1, at the Poplars, Twickenham-common, the wife of Martindale C. Ward, M.D., of a daughter.

MARRIAGES.

Bates—Hill.—On December 31, at St. Mark's, Regent's-park, William Bates, Esq., M.D., of 9, Stockport-road, Manchester, to Bertha Mary, second daughter of Edwin Hill, Esq., of 1, St. Mark's-square, N.W., and of the Inland Revenue, Somerset House.

Hodges—Waters.—On December 31, at the Sardinian Chapel, Frederick Hodges, Esq., of 16, Cavendish-square, to Eliza Rosa Manisty, eldest daughter of John Waters, Esq., M.D., of 15, Bedford-square. No cards.

Faingle—Chisholm.—On December 29, at St. Thomas's Episcopal Church, Edinburgh, Robert Fringle, M.D., Surgeon, H. M.'s Bengal Army, third son of the late W. A. Fringle, Esq., Bengal Civil Service, to Christina Madeline, eldest daughter of the late John Scott Chisholme, Esq., of Stuches, N. B.

Symes—Munn.—On December 31, at Christ Church, Dover, William Alexander Symes, Esq., 94th Regiment, second son of Dr. Symes, of Bridport, Dorsetshire, to Laura Comber, daughter of Major Munn, D.L., of Throwley and Churchill House, Kent. No cards.

WALKER—RANSON.—On December 31, at St. Mary's, Mold, Edward Henry Walker, F.R.G.S., H.B.M.'s Consul at Cagliari, Island of Sardinia, to Louisa Mary, only daughter of Thomas Edward Ranson, M.D., of Taranaki, New Zealand. No cards.

DEATHS.

BYERS, ROBERT, Esq., M.D., M.R.C.S., at Lismore Cottage, Australia-street, New Town, Sydney, New South Wales, on November 1.

GORDON, ALEX., M.D., of Auchanellat, Glendarnel, on December 18, aged 31.

HARTSHORNE, JOHN, M.R.C.S.E., late Assistant-Surgeon Royal Hospital, Chelsea, of Ebury-street, Pimlico, on December 24, aged 81.

HAYNES, THOMAS, Surgeon, Thirsk, Yorkshire, at Rugby (at the residence of his sister, Mrs. Cave Browne), on January 2, aged 57.

ILLINGWORTH, A. R., Surgeon, of Fowey, Cornwall, on December 7, aged 83.

LOW, WILLIAM, M.D., M.R.C.S.E., of Martley, Worcestershire, on January 2, aged 30.

MARTYN, CONSTANCE ELIZABETH, second daughter of William Martyn, M.D., F.R.C.S., at No. 6, Trevor-terrace, Rutland-gate, S.W., after a lingering illness, on January 2, aged 9 years.

POCOCK, MARY, the wife of Gavin Elliot Pocock, Surgeon, at 42, Cannon-place, Brighton, on January 5, aged 50.

STORROW, JOHN, M.R.C.S., L.S.A., at Newbottle, in the county of Durham, aged 65.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, 27, MARGARET-STREET, CAVENDISH-SQUARE.—Visiting Physician; must be M.R.C.P.L. Send testimonials to Mr. Baily, Secretary, at the Infirmary, by the 12th inst.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon and Dispenser (one office); must be M.R.C.S. or L.S.A. Applications to the Secretary at the Hospital. The election at the Hospital on January 29.

KENT AND CANTERBURY HOSPITAL.—Physician; must have been practising as a Physician for two years, and be registered as a regular Graduate in Medicine of some University of Great Britain or Ireland or M.R.C.P.L. Application to the Secretary at the Hospital. The election at the Hospital on Friday, January 29.

NOTTINGHAM DISPENSARY—Resident Surgeon and Assistant Resident Surgeon; must be M.R.C.S. or L.R.C.P. Send testimonials to Committee at the Dispensary on or before Monday, January 25. Election, February 8.

WEST LONDON HOSTITAL.—Junior Physician; must be F. or M.R.C.P. Lond. Attend personally, with diplomas and testimonials, at the Hospital, Hammersmith, W., on Monday, the 18th inst., at 3 o'clock p.m.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Henley Union.—Mr. John Johnstone has resigned the Nettlebed District; area 8084; population 1976; salary £80 per annum.

Merthyr-Tydfil Union.—The Medical Officership of the Workhouse is vacant; salary £50 per annum.

APPOINTMENTS.

Horncastle Union.—Edward Cheatle, L.R.C.P. Edin., M.R.C.S.E., to the Reversby District.

Martley Union.—Alfred J. G. Waters, L.R.C.P. Edin., M.R.C.S.E., to the Astley District.

Stamford Union.—George M. Ashforth, M.D. St. And., M.R.C.S.E., L.S.A., to the Clipsham District; Fortescue J. Morgan, M.R.C.S.E., L.S.A., to the Ryhall District.

West Derby Union.—John S. Grattan, M.R.C.S.E., L.C.P. Dub., to the Walton District.

ACADÉMIE DE MÉDECINE.—At the last meeting of the Academy, M. Marrotte was elected into the section of Therapentics and Medical Natural History.

LEGITIMATE MEDICINE IN OHIO.—It is stated in the *New York Medical Record* that no one has been allowed to practise as a Physician in Ohio without a diploma since September last.

THE will of Mr. Henry Brown, M.D., of Windsor, Surgeon to the Queen's Royal Household, has just been sworn as under 45,000*l.*

THE Academy of Natural Sciences of Philadelphia, United States, have recently appointed Dr. Cobbold, F.R.S., to be one of their honorary correspondents.

POOR-LAW MEDICAL SERVICE.—*Islington.*—The Poor-law Board recommend the guardians to appoint one public vaccinator only, instead of four, in order that they may be able to give a better salary and have a more competent man. Mr. Donald, who has been acting during the illness of Dr. Ede, Medical Officer of the Workhouse, applied for some remuneration. The guardians referred him to the gentleman for whom he is acting as substitute. *St. Pancras.*—The guardians find their resolution of July last, requiring double qualifications in assistants acting as substitutes for Medical officers, to be impracticable. Notice of motion for reseinding has been given. *Woolwich.*—Mr. E. L. Burnett applied for compensation for the loss of the Plumstead registrarship. The guardians, who are in favour of the application, directed their clerk to write again to the Poor-law Board.

TREATMENT OF SEA-SICKNESS.—M. le Coniat, a Medical officer of the French Marine attached to the service of the Transatlantic mail packets, states that, after trying the usual remedies, he has since 1865 employed faradisation of the epigastrium in combination with an application of a solution of the sulphate of atropine (two or three centigrammes to 50 grammes), and that this means has proved successful in the great majority of several hundreds of cases of both sexes in which it has been tried. He thinks that during the first day the vomiting should be allowed to have its free course. He says that he has only met with five cases of abortion during his thirty-eight crossings, and that, in this, opium is just as useful as it is useless in sea-sickness. Women usually, in these voyages, have their menstrual periods hastened forwards by some days, and some even by two or three weeks. Others, again, suffer from genetic excitement, for which the bromide of potassium may be administered.—*Archives de Méd. Navale*, November.

VACCINATION ACT.—On Wednesday, at Marylebone, Dr. William Thomas Jones, of 1, Caversham-road, was summoned, at the instance of the Board of Guardians of St. Pancras, for non-compliance with the Vaccination Act. Mr. Rickards appeared for the guardians. Mr. Rickards said Dr. Jones had refused to allow an inspection of his child; he said that if the guardians would give him a written guarantee against skin disease and other ill consequences of vaccination, then they could send their public vaccinator, and he would pay him. The guardians declined to give such a guarantee as to probable results. This was the first case of the kind brought by the guardians of St. Pancras, and they considered it important to make an example in this special case. Mr. Knox said that surely the father, being a Medical man, was the proper person to judge as to what should be done. The defendant said he was not his child's Medical attendant, and he had acted upon the advice of a person whose certificate he held in his hand. He had, under Schedule B of the Act of 1867, determined to oppose the guardians. Mr. Knox, after reading the certificate, dismissed the summons. Addressing the defendant, he told him he could fill up a form from time to time as he thought proper, and so avoid loss of time and expense in attending this court. He should leave the form at his house during his absence for it to be inspected.

THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The Hunterian oration will be delivered on Monday, Feb. 15, by Mr. Richard Quain, F.R.S., President of the Royal College of Surgeons. Mr. F. Le Gros Clark will deliver another course of lectures on Surgery and Pathology. Mr. Huxley, F.R.S., will also resume his lectures on Comparative Anatomy and Physiology; and the recently appointed "Arris and Gale" lecturer, Mr. J. W. Hulke, will also give a course of lectures. At the Royal College of Physicians the Lumleian lectures will be delivered by Dr. Barker, the Croonian lectures by Dr. J. W. Ogle, and the Gulstonian lectures by Dr. Hughlings-Jackson. The Harveian oration will be delivered by Dr. Owen Rees. The Royal College of Surgeons offer the following prizes for competition amongst its Members:—The Collegial Triennial Prize, consisting of the John Hunter medal, executed in gold, to the value of fifty guineas, or, at the option of the successful author of the dissertation, of the said medal executed in bronze, with an honorarium of £50. The subject for this prize is:—"The Anatomy and Physiology of the Organs of Taste and Smell in the Mammalia;" the essays must be delivered before Christmas-day, 1870. The subject for the Jacksonian Prize of the present year is "Aneurism by Anastomosis; the various forms of this disease, and the different methods of treatment, with the author's experience and views thereon." The prize is a sum of twenty guineas, and the essays must be sent in on or before Christmas-day next. The first anatomical and physiological examination for the diploma of Membership for the present year commences this day (Saturday), and it is stated that the number is in excess of those at the corresponding period of last year.

PROFESSOR HALFORD'S EXPERIMENTS ON SNAKE-POISONING.—The following five cases are simply given as an instalment. The results certainly are encouraging, and I should not have the slightest hesitation in applying the same treatment to any unfortunate fellow-creature severely bitten. To carry it out requires only a solution of ammonia of the strength of one part of strongest liquor ammoniæ and two parts of distilled water, and an ordinary hypodermic syringe. The ammonia is thrown directly, but gradually, into the blood by puncturing any superficial vein, and may be repeated as its beneficial

operation ceases. This mode of treatment need not be limited to snake-poisoning, but might, perhaps, be extended to opium poisoning, or to that resulting from infection, as in fever, cholera, etc. Case 1.—October 23—Small dog bitten by tiger snake at two p. m. Began vomiting and purging at four p.m., and continued more or less in the same state all night. October 24—Dog seemingly nearly dead; total paralysis, but quite sensible. Injected at slight intervals into the right external jugular vein thirty-five minims of the ammonia solution. The dog improved directly afterwards, the circulation and breathing being freer. October 25—Continued in the same state. October 26—Repeated the injection, but into the left vein. From this he gradually improved, and on the 31st could run about and eat well. Case 2.—October 28—Inoculated, at twenty minutes to eleven a.m., a small white dog with the contents of one poison-gland of a tiger snake. In twenty-five minutes vomiting and purging came on. Injected at once ten drops of the solution into the external jugular vein. Vomiting continued. At a quarter past twelve threw in another fifteen drops. After this the dog appeared quite easy, and began to eat and drink by four p.m., and is now quite well. Case 3.—November 2—Inoculated a middling-sized dog at half-past ten a.m. Vomiting and purging came on at half-past eleven a.m. Injected ten minims of the solution into one external jugular vein, and presently after twenty more minims into the other. From this time all the symptoms of poisoning ceased, although from the severity of the inoculation the dog only now runs about freely (large sloughing sores having formed). Case 4.—November 2—Inoculated a dog with the contents of one poison-gland at a quarter to eleven a. m. Vomiting and purging commenced at half-past eleven. At a quarter to twelve injected twenty minims of the solution. From this time the dog rapidly improved, all symptoms of poisoning disappearing, and is now quite well. Case 5.—November 4—Inoculated, at half-past ten a.m., a small black dog, which had been previously in the snake box, with the contents of one poison-gland. At ten minutes to eleven vomiting and purging (bloody) commenced. Injected twenty minims of the solution. The dose seemed rather strong for so small a dog, but in a minute after every symptom of purging and vomiting ceased, and after waiting nearly an hour I with two friends left, satisfied that the dog was saved, but on my returning in another hour the dog was dying. Other engagements prevented my attending further to the animal. On examining the body a few hours after, I could detect no trace of the ammonia; the urine was acid, etc. I therefore concluded that the volatile alkali had too soon passed out of the system, and that another injection might perhaps have saved him. There is one very remarkable and hopeful feature in all these cases, including the fatal one, which is that immediately after the injection of the ammonia the animal seems in perfect ease, the breathing becomes easy, the vomiting, etc., ceases.—*Melbourne Argus.*

THE MARSHALL HALL SCHOLARSHIP FUND.—Great efforts are making to put this upon a substantial footing, and to create a memorial worthy of one of the great lights of English Physiology. We have received a list of the General Committee, which include the following names:—

London: Dr. Burrows, F.R.S.; Dr. Gull; Sir Ranald Martin, F.R.S.; Dr. C. J. B. Williams, F.R.S.; Dr. Webster (Dulwich); Mr. Seymour Haden; Dr. Russell Reynolds; Professor Huxley, F.R.S.; Dr. Farr, F.R.S.; Dr. Wakley; Dr. Glover; Mr. Webber; Sir Henry Thompson; Dr. Quain; Mr. C. Hunter; Mr. Prescott Hewett; Dr. F. Winslow; Dr. J. Risdon Bennett; Dr. Dickinson; Mr. Bowman, F.R.S.; Mr. Erasmus Wilson, F.R.S.; Dr. W. Bryant; Dr. Andrew Clark; Mr. Lockhart Clarke, F.R.S.; Mr. Brodhurst; Dr. Pavy, F.R.S.; Mr. Edwin Saunders; Dr. E. Smith, F.R.S.; Mr. Solly, F.R.S.; Dr. Marcet, F.R.S.; Mr. Gay; Mr. J. Z. Laurence; Dr. Waller Lewis; Dr. Dobell; Dr. Buzzard; Dr. Marston, R.A.; Dr. Logan, C.B.; Sir H. Bulwer; Mr. Curling, F.R.S.; Mr. Critchett; Dr. Hawksley; Dr. Sankey; Dr. Richardson, F.R.S.; Dr. Yearsley; Dr. Protheroe Smith; Dr. C. B. Radcliffe; Dr. N. Ward; Dr. Julius Pollock; Dr. Chapman; Mr. Allingham; Dr. Diamond; Dr. Down; Dr. Easton; Dr. Graily Hewitt; Dr. Murchison, F.R.S.; Dr. Sutro; Dr. Tilbury Fox. *Edinburgh:* Prof. Spence; Prof. Syme; Dr. J. Matthews Duncan; Dr. Crum Brown; Thomas Annandale, Esq., F.R.C.S.E. *Dublin:* Dr. Fleetwood Churchill; Dr. Mapother; Dr. Albert J. Walsh; Dr. Quain; Dr. Rawdon Macnamara; Dr. W. Frazer, M.R.I.A. *Manchester:* Dr. Noble; G. Southam, Esq.; Sir James Bardsley; Dr. Hutchinson. *Liverpool:* Dr. A. T. Houghton Waters. *Bristol:* Dr. Edward Long Fox; Dr. Davy. *Portsmouth:* Mr. B. Norman. *Southampton:* Dr. Wiblin. *Cork:* Dr. T. C. Shinkwin. *Newcastle-on-Tyne:* Dr. Gibson; Dr. Heath; Dr. Philipson; Dr. Stainthorpe; Dr. J. S. Stuart; Dr. Embleton; Dr. Eilis. *Nottingham:* John Higginbottom, Esq., F.R.S.; Marshall Hall Higginbottom, Esq.; Dr. W. Tindal Robertson. *Bath:* Dr. Falconer. *St. Leonard's:* Dr. Trollope. *West Hartlepool:* Dr. Mackechnie. *Reading:* Mr. Harrison. *Kilmarnock:* Dr. Alexander Dundonald. *Chelmsford:* Dr. Nicholls. *Hawarden:* Dr. Moffat. *Folkestone:* Dr. Bowles. *Norwich:* Mr. Cadge. *Jersey:* Dr. C. Vandin. *Hastings:* Dr. Moore. *Congleton:* Dr. Beales. *Guernsey:* Dr. Hoskins. *Aylesbury:* Robert Cecley, Esq. *Grange, Lancashire:* Dr. Amos Beardsley; Dr. Bartleet. *Birmingham:* Mr. Alfred Baker; Dr. B. Foster. Professor Rolleston, F.R.S., Sir T. Watson, Bart., Mr. Le Gros Clark, and others support the movement. *Honorary Secretaries:* London: Dr. Tilbury Fox, Sackville-street, Piccadilly. Edinburgh: T. Annandale, Esq., Charlotte-square. Dublin: Dr. Quinan. Provincial: Dr. Ellis, Newcastle-on-Tyne. *Treasurers:* Dr. Russell Reynolds and Dr. Webster. Communications may be made to either of the Honorary Secretaries.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The next lecture by Dr. Barnes, on the Induction of Premature Labour, will appear next week.

Dr. Archibald D.—The appointment of Superintendent of Hospitals at King William's Town, Cape of Good Hope, is filled by J. P. Fitzgerald, Esq.; the salary is £500 per annum. Dr. F. C. Browne is Superintendent of the Lunatic Asylum at Barbadoes; the salary attached is £400 per annum. Dr. E. A. Manget is Surgeon-General in British Guiana, and, considering the climate, the salary of £700 per annum is moderate enough. The salary of Dr. Rutherford as Inspector of Health at Gibraltar is only £150 per annum.

A Competitor.—The names of the members of the various committees are published in the Calendar of the College of Surgeons, but for obvious reasons the adjudicators on the Jacksonian Prize are not published. No essays were sent in this Christmas for the subject mentioned. The other question is hardly fair, and we do not think the authorities will tell you.

D. M., Holloway.—The result of the recent preliminary examination in arts, etc., at the Royal College of Surgeons cannot be made known until after the report from the College of Preceptors has been submitted to the Council on the 14th inst.

*** We reprint the following advertisement from the *Nottingham Journal* of December 31, 1868:—

To the GOVERNORS and SUBSCRIBERS of the NOTTINGHAM DISPENSARY.

My Lords, Ladies, and Gentlemen,—

I am a CANDIDATE for the SURGEONCY vacant at the Dispensary.

I am a Specialist. My special knowledge is in
Diseases of Internal Organs.
,, Women and Children.
,, Bladder and Urinary Organs.

I have invented a Splint for curing Club Foot without dividing the Tendons, and a Splint for Fractured Collar Bone, models of which can be seen in the windows of Mr. Odery, Clumber-street, and Mr. Gray, Pelham-street.

If elected, my best endeavours shall be given to benefit the Institution.

I am, my Lords, Ladies, and Gentlemen,
Your obedient servant,
G. GREWCOCK, M.R.C.S., etc.

*** We extract the following elegant morsel from the columns of a new and well-conducted Canadian contemporary—the *Dominion Medical Journal.* It had been handed to an intelligent chemist for dispensing purposes:—

This is the Rect of the poders:

Jolop, ...	½ oz.
Sena	1½ oz.
Cream Tart	1 oz.
Nit Pattason	2 dr.
Golden sear	1 oz.

tak one stepon of the Poder an one stespone of shuger into a half cup of bowiling water an let it stan gein it get cold, take it four Days an Running an then every other Day gin dun, use the salf every Day so long as those Poders sten Put the Poder in to Dry bottle an cep it in a Dry Place if you shud fell them commeing on anny time the salf will do keep yourself reglar if you shud want any mor salf aoy time Right an i will make it for you Plear not leve no one have this Recet for it cost me five Dollars, but as tiss yomself you air wolking as you air good to my Dottor and Misses when she came Done to . . . .

for Mr. . . . .

Recet for the Piles.

TREATMENT OF ASCARIDES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have noticed several inquiries in your journal as to the best mode of getting rid of these tronblesome "guests," and having a few minutes' leisure I write to contribute my quota to the general fund of information. One thing is clear, that ascarides do not plague their "hosts" at all times alike; the annoyance they occasion is closely connected with changes in the health, and is often a marked precursor of indisposition. Nor does it seem to matter much what the indisposition may be; women may have the itching from ascarides before their monthly time; children after eating of heavy food or attendance at Christmas parties; men before an attack of sick headache. As the same people are not tronbled equally at all times, so neither are all persons affected with these beasts. It we get the eggs of them in fruit, in salad, or in water, which must be much the same in most houses, and certainly the same for all the denizens of any one house, all would certainly become *hosts* to the parasites if all were equally liable, which they surely are not. If I were brought into a room with eight or ten people, and were told that two had ascarides, and were bid to point them out, I think I could do so; pasty thickish complexions, cold flabby hands, capricious appetites, and dirty tongues, would indicate the victims. But how to cure? Is a cure possible? I have heard this denied, but I certainly know persons whom I treated five and twenty years ago, and who have continued free up to the present day. The remedies are simple—aloes, iron, and quassia. It does not much matter how iron is given, though I suspect that the purified iron filings made into pills with soap are the best

form; if the ferrum redactum of the British Pharmacopœia be more genteel, it is not, that I know of, one whit the more efficacious. Both will tickle the rectum and give rise to tenesmus in some subjects, and then a liquid form should be substituted. But the best way of using iron and the other remedies is by injection. After the bowels have been emptied, a tepid injection should be administered, and be retained as long as nature will bear it, having ten minims of tincture of chloride of iron to half a pint of water. Instead of water, an infusion of quassia may be mixed with the steel, or an infusion of ten grains of extract of Barbadoes aloes may be added to the quassia. I look upon the regular use of these injections as the great thing; at the same time, steel, aloes, and a bitter tonic should be administered in constant small doses by mouth till the alimentary canal is brought into good order. Some of my patients have been so tormented as to be obliged to grope with the finger in the passage, or to thrust in a bit of bacon fat, or to use some of the old worm ointments, but the injection is cleaner and more efficacious. I believe that ill-brewed table beer has a great efficacy in helping these worms to breed, and pure French wine or the more generous Hungarian Carlowitz the reverse. The acidum sulphuricum aromaticum is also a good remedy.

I am, &c.

A Practitioner of Thirty Years' Experience.

London, January 1.

Hungry Cough.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—There is a kind of cough which I am not unfrequently consulted about, and especially by women, though sometimes by men. It comes on during periods of depression, such as fatigue, anxiety, and hunger, and hence in my own mind I call it a "hungry cough." It is relieved by food and stimulants. Considerable irritation, not of the larynx, but of the windpipe about its bifurcation, seems the leading symptom, with obstinate cough, huskiness of voice, and glairy expectoration. It may last for one or two hours, and is liable to come on after journeys in the cold, though cold alone will not produce it. There is no shadow of disease of the lungs in the sufferers, who in the intervals are quite free from any pulmonic symptoms. What I desire to know is the mechanism, nervous or otherwise, by which these phenomena can be accounted for. Is there an ill-fed and hungry bit of nerve-tissue? Does it paralyse the vaso-motor nerves of the bronchial blood-vessels?

I am, &c. E. B. C.

COMMUNICATIONS have been received from—

Dr. Barnes; Mr. F. J. Gant; Mr. J. Chatto; Dr. Lionel S. Beale; Dr. B. W. Richardson; Mr. C. Lawrence Bradley; Dr. W. H. Broadbent; Mr. A. Wright; Mr. T. L. Walford; Mr. Haray Leach; Dr. Whitmore; Dr. Cobbold; Mr. C. J. Fox; Dr. Phillips; Dr. Pavy; Mr. J. C. Galton; Mr. T. L. Plant; Mr. A. T. Thomson; Dr. John Murray; Mr. Booth; Dr. J. Chalmeas; Dr. Milroy; Dr. Wickham Legg; Mr. S. J. Knott; Dr. Robert King.

BOOKS RECEIVED—

Journal of Mental Science, January.—Pharmaceutical Journal, January—The Practitioner, January—The Register and Magazine of Biography, January—Quarterly Journal of Microscopical Science, January—British and Foreign Medico-Chirurgical Review, January—British Journal of Dental Science, No. 148—Lancereaux's Treatise on Syphilis, vol. 1—Byford on an Intramural Fibrous Tumour—Westminster Review, January—Third Report of Quekett Microscopical Club—Edinburgh Medical Journal, January—Braithwaite's Retrospect, vol. 58—Thurnam's Ancient British Barrows of Wiltshire—Monthly Microscopical Journal, No. 1—Address of Samuel D. Gross, M.D., LL.D., from the Transactions of the American Medical Association.

NEWSPAPERS RECEIVED—

Nottingham Journal—Oldham Standard—Oldham Chronicle—Medical Press and Circular—Liverpool Mercury.

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 2, 1869.

BIRTHS.

Births of Boys, 1303; Girls, 1202; Total, 2505.
Average of 10 corresponding weeks, 1858-67, 1852·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	838	791	1629
Average of the ten years 1858-67	756·0	753·0	1509·0
Average corrected to increased population	...	...	1660
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	2	3	12	2	6	6	2	...
North	618210	3	18	16	3	19	18	1	...
Central	378058	...	3	11	...	6	4	...	...
East	571158	...	5	25	1	7	15	1	...
South	773175	2	6	19	4	11	13	5	...
Total	2803989	7	35	83	10	49	56	9	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·393 in.
Mean temperature	41·0
Highest point of thermometer	53·9
Lowest point of thermometer	28·7
Mean dew-point temperature	37·9
General direction of wind	S.W. & W.S.W.
Whole amount of rain in the week	1·53

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, January 2, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1868.	Persons to an Acre. (1868.)	Births Registered during the week ending Jan. 2.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Jan. 2.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3126635	40·1	2505	1441	1629	53·9	28·7	41·0	1·53	155
Bristol (City)	167487	35·7	122	75	*80	53·0	28·5	41·3	1·53	155
Birmingham (Boro')	352296	45·0	295	171	159	53·0	29·4	40·1	1·74	176
Liverpool (Boro')	500676	98·0	379	290	274	51·4	29·3	39·0	1·39	140
Manchester (City)	366835	81·8	224	208	*215	50·8	26·0	37·7	1·44	145
Salford (Borough)	117162	22·7	86	59	63	51·1	26·9	36·9	1·04	105
Sheffield (Borough)	232362	10·2	198	122	101	48·0	25·0	36·8	2·11	213
Bradford (Borough)	143000	20·3	137	55	69	...	...	...	...	...
Leeds (Borough)	246851	11·4	286	120	163	52·0	27·0	37·9	1·78	180
Hull (Borough)	122628	34·4	99	59	49	51·0	26·0	34·2	1·69	171
Newstl-on-Tyne, do.	127701	23·9	127	68	79	42·0	23·0	33·5	0·57	58
Edinburgh (City)	177039	40·0	112	85	102	41·7	25·0	34·6	0·20	20
Glasgow (City)	449868	88·9	309	262	295	44·1	25·8	35·5	1·03	103
Dublin (City and some suburbs)	319985	32·8	197	157	151	50·1	26·6	38·8	0·44	44
Total of 14 large Towns	6441525	31·9	5076	3163	3429	53·9	23·0	37·5	1·27	128
					Week ending Dec. 26.	Week ending Dec. 26.				
Vienna (City)	560000 (1863)	...	...	...	312	...	...	40.6		...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·393 in. The barometrical reading increased from 28·76 in. on Sunday, Dec. 27, to 29·98 in. on Friday, Jan. 1.

The general direction of the wind was S.W. and W.S.W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

January 9. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Royal Institution, 3 p.m. Prof. Odling, "On the Chemical Changes of Carbon" (Juvenile Lecture).

11. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London, 8 p.m. Dr. Elliott (of Hull), "On Spontaneous Fracture of the Humerus in a Patient affected with Constitutional Syphilis, with interesting Specimen." Dr. Cordwent (of Taunton), "On a Calculus removed from the Perinæum, with Specimen." Mr. Wm. Adams will deliver the first Lettsomian Lecture, "On Acute Rheumatic Affections of the Joints, their Pathology and Treatment."

Odontological Society, 8 p.m. Annual Meeting for Election of Officers and Council. Paper by Mr. R. Hulme, M.R.C.S., "On the Formation of a Dental Museum."

12. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Ethnological Society, 8 p.m. Mr. H. H. Howorth, "On the Westerly Drifting of the Nomades, from the Fifth to the Nineteenth Century."

Royal Institution, 3 p.m. Prof. Westmacott, "Fine Art."

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Gull and Dr. Sutton, "On the Natural History of Rheumatic Fever."

13. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Epidemiological Society, 8 p.m. Council Meeting.

Hunterian Society (Council, 7½ p.m.), 8 p.m. Dr. Barnes, "On the Modes of reducing Chronic Inversion of the Uterus."

14. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Royal Institution, 3 p.m. Mr. Rupert Jones, "Protozoa."

15. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Royal Institution, 8 p.m. Prof. Tyndall, "Chemical Rays and Molecules."

ORIGINAL LECTURES.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

Delivered in the Museum at Oxford

By LIONEL S. BEALE, M.B., F.R.S.,

Fellow of the Royal College of Physicians, Physician to King's College Hospital, and Professor of Physiology and of Morbid Anatomy in King's College, London.

Lecture IV.

THE PART PLAYED BY GERMINAL MATTER IN THE FORMATION OF BONE—ORGANIC AND INORGANIC MATTER — GERMINAL MATTER OF LACUNÆ — FORMATION OF CANALICULI—CANCELLI AND COMPACT TISSUE—LAMELLÆ AND PERFORATING FIBRES—CANALICULI NOT PROCESSES OF A CELL—MYELOID CELLS—PRIMARY AND SECONDARY BONE—GERMINAL MATTER OF BONE TRANSPLANTED — INFLAMMATION OF BONE.

CONTRACTILE TISSUES — CONTRACTILITY — UNSTRIPED MUSCLE—BLADDER OF FROG—ARTERIES—PREPARATIONS.

One of the most interesting structures in the body as regards the process of tissue formation is bone, for by studying this texture at different periods of its development we may determine what part of the process is due to *physical and chemical changes*, and what to exclusively *vital actions*.

Organic and Inorganic Matter of Bone.

It is important to bear in mind that every kind of bone in its lifeless state consists of an *organic substance* which yields gelatin by boiling, and *inorganic salts* composed principally of earthy phosphates. The organic and inorganic matter, although intimately incorporated, may be separated by the action of hydrochloric acid, which dissolves the earthy and leaves the animal matter. This exactly corresponds in form and size to the original bone. If, on the other hand, the animal matter be destroyed by a red heat, the earthy material will also retain the original form of the bone, although it exhibits the greatest brittleness in consequence of having been deprived of its organic matter.

Formation of the Organic Matter.—The formation of the organic matter is an operation quite distinct from its impregnation with earthy material (specimens 50, 51, 52), and the first part of the process may occur without the last. The bone may be formed, but, not being impregnated with earthy material, it is destitute of those important physical properties for which osseous tissue is required. It is soft, and can neither support the weight of the body nor form a firm framework for the attachment of muscles.

Germinal Matter.—In every kind of living growing bone are numerous masses of germinal matter (the so-called nuclei of the lacunæ or corpuscles), (specimen 54, and Fig. 5), without which the formation of bone tissue could not have taken place, and which are concerned in all the important changes going on in it during life. As long as the masses of germinal matter are living, the changes characteristic of living bone may take place, but if these be dead in any part of the bone this soon separates from the rest, and ceases for ever to be the seat of vital changes.

The masses of germinal or *living* matter are concerned in the formation of the matrix, which is subsequently impregnated with calcareous salts. The deposition of these inorganic salts is no doubt due to physical and chemical change; but the precise locality of the precipitation, as well as the mode of deposition of the calcareous particles, is determined by actions (*vital*) of which the *germinal or living matter* is the seat.

Lacunæ and Canaliculi.—Masses of germinal matter are contained in little spaces in the bone (lacunæ), which are situated in every part of bone tissue (Figs. 5, 7, 10), the distance from each lacuna to the neighbouring lacuna being seldom more than $\frac{1}{3500}$ inch. Moreover, each lacuna is connected with its neighbours by numerous minute channels (canaliculi), along which fluid readily passes from one mass of germinal matter to another. Thus every part of the hard bone tissue is irrigated by fluid, and the little channels are usually not separated from one another by a distance greater than the five-thousandth of an inch, so that no particle of osseous tissue is removed further than half this distance from the fluid which flows in the canaliculi. In the living state, these canaliculi always contain fluid, and this fluid is always in motion, flowing to and from the nearest masses of germinal matter; but if bone be dried, the germinal matter in the lacunæ shrinks, the fluid in the canaliculi disappears, and air rushes in to occupy the *spaces and canals thus formed*. The bone tissue which is usually described in works upon minute anatomy is the *dead and dried* bone, not the *living growing* bone; and it is remarkable how very difficult to understand is the description generally given of the formation of the lacunæ and canaliculi and the intervening osseous tissue.

Of the Cancellated Texture and Compact Tissue of Bone.—In some situations bone tissue is arranged to form a texture exhibiting spaces or cancelli. This is called the cancellated texture of bone (specimen 53). When dried it is sponge-like, and has been spoken of as spongy bone. In the recent state, however, all the spaces are occupied with fatty matter, connective tissue, and vessels, except in the case of birds, in which class, with some exceptions, the spaces in the bones contain air. The bony walls of these spaces are composed of thin plates or spicules of bone, on the outside of which vessels are freely distributed. If the bony walls of the cancelli become very much thickened, so as only to leave room for one vessel in the centre, we have an approach to the other kind of bone tissue which is called *compact tissue*. This contrasts remarkably in character with the spongy cancellated texture. The compact tissue is so firm and dense that you would not suppose it was traversed by numerous vessels which run in channels (Haversian canals), and are connected here and there by transverse branches, so that if the whole of the bony matter were removed from the compact tissue, we should have left a web of capillary vessels.

Lamellæ.—The bone tissue is so formed as to constitute a series of superposed thin plates called lamellæ. These are concentrically arranged round the vessel in the Haversian canal, and in section they appear as concentric lines one within the other. There are lamellæ immediately beneath the periosteum and medullary membrane, which extend uninterruptedly for a great length, or entirely round the bone. These are called respectively the *periosteal* and *medullary lamellæ*.

Perforating Fibres.—Dr. Sharpey has described, under the name of *perforating fibres*, some peculiar processes of osseous tissue which appear to perforate the laminæ of bone and, as it were, pin them together. The mode of formation of these fibres has not been satisfactorily explained. They are to be found by pulling asunder the sections of lamellæ of a decalcified cylindrical or cranial bone. From the circumstance that some of these fibres have escaped calcification, the organic matter has shrunk in the dried bone, and thus has resulted a *tube*, which has been referred to by Tomes, De Morgan, and other observers.

Formation of Osseous Tissue.

The osseous tissue itself is formed in the same way in the cancellated texture and the compact tissue, and it is worth studying very carefully. The changes may be beautifully seen in the formation of the cranial bones of the frog, which continue to grow at their edges, even in the full-grown animal. In this structure an opportunity is afforded of observing every stage of the process of bone formation in a single specimen (specimens 50, 55). At the extreme edge is ordinary cartilage, which gradually passes into tissue which is being infiltrated with calcareous deposit; and, lastly, we come to the fully formed bone (see Figs. 1, 4, 5, 6).

Commencing at the outer edge where the bone is growing, we may study the development of cartilage as I have already described (Lecture III.). A little further inwards the formation of cartilaginous tissue is complete (Fig. 1). Passing in the same direction, we soon observe that a change is taking place in the matrix. Granules and highly refracting globules have been deposited in its substance (Figs. 3, 4, 5). The deposition of this material, which is easily proved to consist of calcareous salts, invariably commences in the matrix at a point equidistant from contiguous masses of germinal matter—that is, in that part of the formed material which is, of course, most distant from the germinal matter. This is the part of the tissue which was first formed. Soon each mass of germinal matter becomes surrounded by a ring of such globules, some of which coalesce (Fig. 4), but converging lines of matrix are always left here and there uncalcified, and these are traversed by currents of fluid holding various substances in solution, which flow to and from the masses of germinal matter (Figs. 3, 5). The continual flowing of

the fluid prevents the precipitation of calcareous material, and, probably, gradually dissolves the matrix, so that little canals

Fig. 1.

Fig. 1. — Cartilage from the temporal bone of an adult frog prior to ossification. ×700.

Fig. 2.

Fig. 2. — Very young cartilage cell, showing the *germinal matter* continuous with, and being gradually converted into, the *formed material*. ×1300.

Fig. 3.

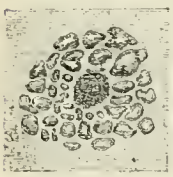


Fig. 3.—Formed material or matrix of cartilage, with globules of calcareous matter deposited around the germinal matter. To show the manner in which cartilage undergoes ossification.

Fig. 4.

Fig. 4.—Cartilage of temporal bone of frog, showing globules of calcareous matter deposited in the oldest part of the matrix midway between masses of germinal matter. ×700.

Fig. 5.

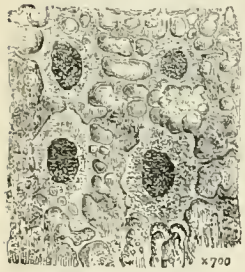


Fig. 5.—A further stage of the process of ossification. Frog. ×700.

Fig. 6.

Fig. 6.—Two recently formed lacunæ and part of a third, from the frontal bone of the frog. As the lacunæ advance in formation, the wide portion gradually becomes contracted. ×700.

are formed at short intervals in the calcifying cartilaginous tissue (Figs. 5, 6). More calcareous matter is deposited nearer and still nearer to the germinal matter in the centre of the space, and at its outer part the germinal matter continues to produce more new cartilage matrix, which in its turn becomes impregnated with calcareous salts. The little canals are at the same time increasing in length, although the distance from the centre of the germinal matter to the spot in the cartilage matrix where the canal began to be formed always remains the same. As the deposition proceeds, the germinal matter becomes smaller, and the space in which it lies is gradually encroached upon until in the fully formed bone it remains as a very small mass lying in a little cavity (lacuna) which communicates with neighbouring lacunæ by the little canals (canaliculi), the formation of which has been described (Fig. 6).

The first part of the canaliculus which is formed is not *that which is nearest to*, but that which is *most distant from, the germinal matter*, and the widest part of the canaliculus is always that nearest to the lacuna. The lacuna of young imperfectly developed bone is, of course, always much larger than that of the fully formed osseous tissue of the same animal.

(To be continued.)

LECTURES ON
DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
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Epilepsy.

We understand, by an attack of epilepsy, the case where a person suddenly loses his voluntary power, falls into insensibility, and is at the same time convulsed, these symptoms being followed by profound sleep. The two main conditions to be observed are the coma and convulsions, which the older writers used to explain by saying that there was a torpor of the brain and an excitement of the spinal marrow. The severe and characteristic symptoms which I mention as being present in well-marked cases do not necessarily exist at the commencement of the disease; but, nevertheless, we are obliged to apply the term epilepsy to the minor indications, since these may be merely the precursors of the thoroughly developed complaint. We often find, then, that long before the patient has severe convulsions he merely loses himself—that is, his consciousness. This state, therefore, must be styled one of epilepsy, and it is to this that the French give the name "petit mal," in distinction to the "grand mal." But you might ask is there any other symptom which may inaugurate the attack; may there be a convulsion occasionally occurring without any loss of consciousness, and which in time passes on to the true epilepsy? Such cases are described, as, for instance, that of a young man who had attacks of convulsions of the face, but no loss of consciousness. Now, if such can be truly relied upon, we shall scarcely be able to frame a definition of the disease; for if sudden coma and convulsions are the two facts which characterise epilepsy, and yet we say in some cases the loss of consciousness may be absent, and in another the convulsion, we altogether fail in our definition. If I judged entirely by my own experience, I should say that loss of consciousness was necessary to constitute a case of true epilepsy, for I have constantly seen this symptom precede all the other phenomena of the disease, but I have never witnessed a case which eventually proved to be epilepsy ushered in by other symptoms.

The term epilepsy, then, as generally understood, is a malady characterised by convulsive attacks, in general of short duration, with sudden and complete loss of consciousness, turgescence of face, distortion of mouth and eyes, immobility of pupil, bloody froth issuing from the mouth, etc. This is the usual attack, or the "grand mal." Many of these symptoms, however, may be absent, leaving only that which I consider as essential —the loss of consciousness. If, then, we say that epilepsy is characterised by these symptoms, is the converse true?—do these symptoms always denote epilepsy? Certainly not, as I understand the meaning of the term, and thus we can scarcely say that an accurate definition of the word has yet been given. If we say that epilepsy is marked by certain symptoms, are we to call every case by this term where similar symptoms exist? If, for example, a man has an injury to the head, and he occasionally falls into a state of unconsciousness, and has convulsions, is he to be called an epileptic? Is the name to be used to the case where such symptoms occur in a puerperal woman or in connexion with Bright's disease? Now, we are here much in the same position as we were in regard to apoplexy; the question is not so much one of scientific inquiry as it is one of usage. Formerly the disease had a much wider signification than at present, for the existence of certain symptoms appeared sufficient to warrant the adoption of the term, and thus you will find in the older works of Medicine a list of the various causes of epilepsy, such as exostosis of the skull, tumours of the brain, syphilis, etc.; but at the present day I believe that if the patient had such symptoms as loss of consciousness and convulsions, and it was discovered after death that he had a tumour in his brain, we should state that the latter was the disease from which he suffered, paying no regard to the symptoms which accompanied it. So also in all other cases where a substantive morbid condition has been found, we allow the latter to determine the name of the disease. Now, it so happens in true epilepsy, in that disease which is protracted over so many years, with intervals of comparative health to the patient, no very definite change is found in the brain, and thus, as a matter of practice, I believe the term epilepsy is now used only in that class of cases where we consider that there is no special form of disease in any part of the body which is exciting the symptoms. I of

course am not speaking of those slighter and chronic changes which are so frequently met with in old epileptics. On the contrary, if we consider that the symptoms arise from any definite cause within the cranium or in any other part of the body which may excite the brain, we rather use the term epileptiform. The obstetric Physician has long adopted the term "eclampsia," and I see no reason why it should not be used for all cases of functional epilepsy.

You no doubt all have witnessed the true epileptic fit, and have a strong impression which the horrible sight made upon you. The person subject to the seizure generally experiences some slight mental disturbance or premonitory sensation, styled the aura. At the same time an observer would note some pallor of the face; then perhaps a cry is uttered, and the patient loses his consciousness. Now commences a contraction of the muscles; the thumb is placed on the palm of the hand, and the fingers are fixed, while the arm often describes a rotatory movement. The sterno-cleido-mastoid muscle is violently convulsed, so that the head is turned to the opposite side, the muscles of the face are twisted, the eyes and lips distorted, and the whole aspect is hideous. The pulse is quickened, the chest is fixed, and the respiration suspended, so that the face becomes red and purple, whilst the veins of the forehead swell as if ready to burst. Froth oozes through the teeth, which are fast set, and if the tongue has been bitten a bloody saliva is projected from the mouth. There may be also an involuntary discharge of the secretions. This spasm lasts a moment, and is succeeded by another, so that the whole duration of the fit is made up of a number of alternate contractions and relaxations, and may last a minute or two, when a complete resolution occurs. The patient then takes a deep sigh, his head falls powerlessly on one side, the stertor and coma pass off, and a deep sleep succeeds. He generally remains in a dull, stupid, or apathetic state for some hours, and occasionally it would seem as if the mind were quite unhinged, for a temporary mania or dementia may be the result.

We will now analyse the symptoms of this epilepsy, or *morbus comitialis*. And first, the loss of consciousness I regard as the most essential and characteristic symptom of the disease—in fact, it is sometimes the only symptom. I remember a child some years ago in Lydia ward who would be sitting on a chair stitching; suddenly she would fall, but before the nurse could reach her to pick her up she would have reseated herself in a chair and be again at work. This was an example of the *petit mal*. I have for some time past had under my care a young shopman in this neighbourhood who is subject to these attacks; he tells me that he often has them whilst serving a customer, but he thinks they are quite unobserved. A lady whom I had long known, and who at last died in a demented state, was the subject for many years of a momentary forgetfulness, so that whilst conversing she would suddenly lose the thread of her discourse, and experience what she called a bewilderment. This was merely the precursor of a very severe form of epilepsy.

The warning, or aura, is a very striking and remarkable symptom, though by no means always present. It is the more remarkable because sometimes the seat of the sensation is in a veritable morbid state, and an irritation in this part has appeared sufficient to excite the paroxysms of the disease, whereas in the large majority of cases the aura is a truly subjective sensation. It would seem that the whole brain becomes suddenly troubled, and, as the sensorial function is departing, some curious feeling is referred outwardly to the surface, or to one of the organs of the body. The cause of the variation has not yet been made manifest. It might be thought that if there be a true cause for irritation on some part of the body, and that a sensation be felt in that spot, here might arise the cause of the fit, and that such case would not be strictly one of epilepsy, but of a convulsion arising from an eccentric cause. For instance, in a case related in which a sensation preceding the fit was referred to a painful corn on the toe, and in which a cure was effected by removal of the source of irritation, a question might arise whether such a case can be included in the definition of true epilepsy. I should be inclined to apply the term to the case of a little girl, a patient of mine, who referred her sensations preceding the fit to a sore spot on the face, although her father assured me that the application of laudanum to this spot was sometimes effectual in arresting the paroxysm. Sometimes the sensation is that of coldness in a part, or coldness all over the body, sometimes flashes of light are seen, sometimes the patient starts up as if he were mad, sometimes a sudden and piercing cry is uttered.

As the first cases of disease which we witness often make the strongest impression upon us, so I have a vivid remembrance of this epileptic cry. When quite a youth I was walking behind a gentleman in the street, when he suddenly gave a most painful shriek—

> Sent forth a sudden, sharp, and bitter cry,
> As of a wild thing taken in the trap—

and then rushed across the road, where he fell momentarily as if dead; he then commenced to struggle, and I learned from the crowd around him that he was in a fit. My own impression was that he had been shot dead, but had force enough left to run a few paces; since a bird or other animal, when shot, will certainly exhibit phenomena very like what I witnessed in this poor gentleman. Sometimes the impressions are conveyed through the sympathetic to the viscera, and the stomach may be the organ where the aura is felt, or sometimes the heart in the form of a violent palpitation, or as an angina, more rarely as a pain darting through the head. Thus some of you may remember the case of a little boy who experiences a sudden pain in his head, and then falls. Some years ago a girl, nine years of age, was sent to me on the supposition that she had some disease of the brain, but the case was evidently one of epilepsy. It appeared that, for some considerable period, she had been suddenly seized with a pain darting through the head, and a momentary loss of consciousness. These attacks occurred once a week until lately, and now there are three or four daily. She would be sitting in a chair, feel a pain dart through her head, and then suddenly fall back insensible. The child's intellects were dull, and her whole appearance answered to that of an epileptic.

As regards the convulsions, these, as a rule, are more on one side than the other, and sometimes are altogether unilateral. The head is turned round, and one arm violently twisted on itself, so that sometimes dislocation takes place. The dressers must be very familiar with a woman who is repeatedly here to have a dislocated shoulder reduced after her fit. Not only is the convulsion on one side, but the whole body is sometimes violently twisted round; there is now a boy in Stephen ward, under my care, who at the onset of the paroxysm rotates two or three times. I see a child who sometimes, instead of having a regular fit, throws out his left arm, and for a moment appears strange. The spasm of the thorax causes suspension of respiration and consequent redness of face; the consciousness is gone, and consequently all sensation. On closely watching the patient, you observe alternate contractions and relaxations. He is in a state which was formerly called one of apoplexy, being insensible, with froth issuing from his mouth.

The pupils are dilated during the fit, and it is very remarkable how this is associated purely with the epileptic condition. You may, for example, as occurred to me not long ago, be speaking to a patient, and suddenly he falls in a fit; you immediately raise the eyelid, and find the pupil dilated; in a few seconds the convulsion ceases, and at the same time the iris contracts to its normal size. The convulsion, however, is the most important phenomenon in epilepsy, and thus it is that after a fit is over the circumstances attending it constitute the main features by which the fact of its occurrence is known. Thus, if the paroxysm be violent, an actual rupture of the tender capillaries in the muscles and skin may take place, and thus, as Trousseau has observed, a general mottling of the skin may sometimes exist for a day or two afterwards. I remember the case of a young man whom I saw some years ago, with Dr. Farr, of this neighbourhood, who, for the first time in his life, had a most violent epileptic paroxysm, and when we saw him afterwards with an almost purpuric condition of the skin, we suspected that this indicated a blood-poisoning, and that probably the fit was the onset of small-pox; as it eventually proved, however, the mottling was due to the violence of the spasms and the injury to the capillaries. If a person have fits in the night, his only knowledge of the occurrence may be the sight of the disturbed bed-clothes. In some instances he might discover some soreness of his limbs, or the presence of some of the evacuations. I might mention, as a circumstance worth remembering, and one no doubt intimately connected with the immediate cause of the fit, that there are persons who have been the subjects of epilepsy for many years and never had an attack except in the night.

After the attack is over the patient awakes, looks round him like a drunken man, and mumbles something, as if his faculties had scarcely returned. He allows himself to be put to bed, or led anywhere, without any remonstrance. Sometimes one side of the body remains weak for some hours. The mind is affected in various ways in epilepsy; it becomes, in course of time, enfeebled, and at the time of the paroxysm often much excited. At the onset of the attack, the patient is sometimes furiously maniacal, so that it becomes a serious matter to know in what state the brain is in those subject to fits. In-

deed, a French Physcian, Dr. Falret, has come to the conclusion that no epileptic is a responsible agent. Sometimes those who have epileptic fits show a remarkable derangement for a short period before the attack, as well as afterwards. I know the case of a lad who, according to the mother's account, is quite mad about the time of the occurrence of the fits. I think there can scarcely be a doubt that, as a rule, the mental condition of epileptics is low. In the course of time the mind becomes impaired or obtuse, with a loss of memory. This is my experience; although it has been said by writers that the mind is in no way affected—for they make out a case against themselves when they can bring no cases from their own experience, but quote such apocryphal instances as those of Napoleon or Julius Cæsar. The mental impairment and epileptic attacks may stand in relation of cause and effect, or be associated only as symptoms of an antecedent derangement. Thus I might say that the same cause which produces epilepsy tends to produce imbecility; but I also believe that epilepsy occurring from some violent exciting cause in a previously healthy brain will, if continued, affect the integrity of the brain structure. On the other hand, there are well-marked organic changes in the brain, which lead to impairment of the mind at the same time that they induce fits. Thus, I believe, ten per cent. of all those mentally affected are at the same time epileptic. It is for this reason that a permanent paralysis may be sometimes observed in epileptics, but which is attributable directly to the organic change in the brain, and is not a part of the paroxysmal disorder.

These patients, with all varieties of epilepsy, do not, as a rule, complain of headache, although a pain in the head may be the principal symptom of the disease in those exceptional cases already mentioned.

You will be prepared, from what I have already said, that the epileptic attacks in different individuals do not always present exactly the same phenomena. There is the case where the patient experiences nothing but a simple loss of consciousness, then that where there is a slight convulsion, and, again, that which I have described as the grand attack. Whether the case of convulsion without coma can strictly be called epilepsy is questionable. Then the premonitory warning is sometimes absent and sometimes present. It may occur as a sensation styled the aura, which, beginning at the surface, creeps up to the head when consciousness departs, or it may occur in the various other ways described. Then, again, the period of the day in which the fit takes place varies, sometimes occurring only after the patient has retired to rest. The intervals between the attacks also vary much, these consisting of days, weeks, or months. I am now seeing a lady who was a confirmed epileptic for nine years, during the first five of which she consulted numerous Medical men, and took all the usual medicines. Receiving no benefit, she desisted from all treatment for two years, when they gradually became less severe and left her. They were absent for seven years, when again, two years ago, they reappeared, and now she has a fit about once a week, and always at night time. There are also other classes of cases which entirely preclude the idea of epilepsy being an organic disease situated in one spot of the brain. For instance, I know several cases of ladies who, being subject to slight fits whilst they were child-bearing, have entirely lost them at a later period of life. Then there are those remarkable cases of epileptic fits occurring only once in a person's life. Such have been described as being occasionally fatal, but a death I have never seen under these circumstances, although I expected its occurrence in many of them. A few nights ago I was summoned to Mitcham to see a gentleman about 45 years of age, who had been seized with a fit. He had driven home as usual, and appeared in perfect health until the evening, when he fell in a convulsive fit. He had several attacks, and when I saw him he was in the lethargic state which commonly succeeds the paroxysm. He had no more, and rapidly recovered. Every possible cause was gone over by the Medical men and his friends, but no light was thrown upon the case. A somewhat similar case I saw a few months ago in the person of a remarkably fine young man—the same in which the convulsions were so strong as to rupture the capillaries, and induce a purpuric appearance, which suggested the advent of an exanthem. In this case the fits were of the most violent kind, and could be attributed to no cause. Sometimes a severe shock or mental emotion will induce a fit. A young man who had been somewhat irregular in his accounts was called into the room of his superior to receive a reprimand; he fell down on the floor in a fit as if he had been shot, and remaining in an insensible condition, Medical advice was sought. He recovered, but continued in a remarkably apathetic condition for some days. He had never had a fit previous to this occurrence, nor has he had one since.

In a well-marked case of epilepsy the diagnosis is easy, owing to the insensibility and unconsciousness of the patient. If he show any signs of feeling or voluntary power, there is suspicion of the fits being feigned. If he fall so as to injure himself, of course there can be no doubt of the reality of the seizure; but, on the contrary, the avoidance of danger does not mark the patient as an impostor, for sufficient warning of its approach is sometimes given to the real epileptic. The most difficult diagnosis is that between epilepsy and hysteria; indeed, the symptoms in a particular instance may partake so much of the nature of both diseases, that we are forced to employ the term hysterical epilepsy. And this compound condition is by no means confined to women, for I have seen several men suffer from this complex state. I know a gentleman who, for many years, has been subject to fits, and they partake quite as much of an hysterical as an epileptic nature. In a severe hysterical fit it is, however, important to be sure that the patient is no epileptic. This may be told by the want of utter insensibility, by the long continuance of the paroxysm, by the contraction of the eyelids, and the resistance used to their being raised, the contraction of the pupil, the choking, throwing the arms about, screaming; in fact, the hysterical patient is very noisy, whilst the other is quiet. If told that a patient has a fit, the circumstances under which it has occurred may often form a guide as to its nature; for example, if a woman have a fit whilst alone in her house or room, and fall into danger, there can be little doubt about its severity, but if, on the other hand, it never occurs except the patient be in company, there is a strong surmise as to its hysteric character.

I have already said that when a well-marked cause exists for the fits, as renal disease, the term epileptiform fit or eclampsia is used; but as regards the character of the fit itself, it cannot be told from true epilepsy. When fits arise from organic disease of the brain, there are generally some other cerebral symptoms to denote the cause, and it is remarkable that in many of those cases where there has been a local disease of the surface, giving rise to violent paroxysms of convulsions, the coma has been often absent, and thus the disease has, not fallen strictly into the category of epileptic complaints. Many years ago Dr. Bright was led to make the observation that in those cases where consciousness had not altogether departed during the fit, there would be discovered a local disease of the brain.

(To be continued.)

COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

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Lecture XX.—Part I.

THE INDUCTION OF PREMATURE LABOUR—THE MORAL BEARING OF THE OPERATION—THE FITNESS OF THE SYSTEM AND OF THE GENITAL ORGANS FOR PREMATURE LABOUR—THE INSUFFICIENCY OF SIMPLY PROVOCATIVE MEANS—TWO STAGES OF PREMATURE LABOUR ARTIFICIALLY INDUCED—THE PROVOCATIVE; THE ACCELERATIVE.

We now come to an operation which carries us fairly back within the domains of Conservative Midwifery. The induction of premature labour is designed to save the mother and child, or at least the mother, from those perils which one or both would have to encounter at or before the natural term of gestation. In many cases those perils increase in an accelerated ratio with the advance of gestation. By anticipating the ordinary epoch of delivery, by selecting a time when these perils have either not yet arisen or are still comparatively small, we may make the labour auspicious, indeed natural in everything but in the moment of its occurrence. In many other cases we may obtain an equally auspicious result by commanding the entire course of the labour, overcoming certain difficulties by appropriate proceedings. I shall show that it has been too much the custom to consider that our resources are limited to the first order of cases—to leave too much to accident—and that, by taking the whole conduct of labour into our own hands, we

may greatly extend the application of this most beneficent operation, save much suffering, and greatly add to the probability of saving the lives of mother and child.

We have thus three great conservative operations. Two of these—the forceps and the induction of premature labour—have been contributed by the London school.

Denman tells us that he learned from Dr. C. Kelly that "about the year 1756 there was a consultation of the most eminent men at that time in London to consider the moral rectitude of, and advantages which might be expected from, this practice." It met with their general approbation; and under this sanction the operation was resorted to with success in many instances.

It is happily no longer necessary to prove the moral rectitude of the practice. Its justification rests upon the same basis as that from which the whole art of Medicine derives its authority. Its design and its general effect are to save life, in many cases the lives of both mother and child, and in the rest, where the child cannot be rescued, to increase at least the chances of safety to the mother. The moral aspect of the question is now reversed; the accuser and defendant have changed places; it rests with those who neglect that which will rescue a woman and her off-spring from impending danger, who suffer one or both to drift to destruction, to justify their neglect.

We may therefore proceed at once to discuss what are the advantages to be derived from the practice.

A preliminary question arises, the solution of which is necessary to the right appreciation of what can be gained by inducing labour prematurely, and of the means of accomplishing this purpose. This question, one which has been almost wholly neglected hitherto, is—What is the condition of the uterus and the system generally in reference to its fitness to assume the work of parturition prematurely?

First, as to the fitness of the general system to enter upon labour and the puerperal state. Upon this point little need be said, since we must be content to accept the conditions as they exist at the time of our selection for the operation. We cannot materially modify them. Experience, moreover, has amply shown that the system is fairly competent to assume the duties cast upon it at any time after the end of seven months. To apply the physiological formula of the Genesial Cycle so beautifully described by Tyler Smith, we observe that when gestation is brought to a term, the breasts enter upon their office, milk is secreted for the nourishment of the infant, and the uterus, thrown out of work, undergoes involution. These processes are usually carried on with scarcely less efficiency when labour occurs prematurely.

Almost all the consequences of labour at term may follow premature labour and even abortion—inflammation and abscess of the breast; peritonitis, including pelvic peritonitis and pelvic cellulitis; thrombosis, including phlegmasia dolens; and all the forms of puerperal fever. But experience does not seem to indicate that these complications are in any sensible degree more likely to attend premature labour.

Secondly, as to the fitness of the parturient organs. Here the case is widely different; for, any lack of efficiency in these must be made up by art. *When labour comes prematurely the uterus is overtaken in an imperfect state of development.* It is taken by surprise. This implies imperfection in the contractile power of the body of the uterus, and greater resistance in the cervix. It is true that the child, the body to be expelled, is smaller, and that in this way the balance between power and resistance is to some extent restored. But this is certainly not always so. It frequently, nay commonly, happens that the uterus is slow to respond to the unexpected call made upon it. It is but reasonable to anticipate that help will often be useful. And help can be given both to facilitate the dilatation of the cervix, and to supplement the contractile energy, if this cannot be aroused.

Now, the expediency of giving this help, and the means of doing it, have been almost entirely overlooked. Action has been limited to attempts at provoking the uterus to expel its contents, leaving the rest very much to chance. The consequence too frequently has been that the child has been born at some unforeseen, inopportune time, before aid could be procured, and has perished from one of those accidents, such as preternatural presentation or descent of the cord, which are so likely to occur in premature labour. Thus, supposing it was determined to bring on labour at the eighth month by detaching the membranes, by puncturing them, or by inserting a bougie in the uterus. This done, it has been considered that there was nothing to do but to wait patiently until active labour should set in, when the Medical attendant should be sent for. Now this may come to pass in twelve hours, in twenty-four hours, or in two, three, four days, or even later. There is no certainty about it. When labour comes the child is expelled with little warning, almost suddenly, and before the Medical attendant can be fetched. And it has to run the gauntlet of all those perils which especially surround premature labour unaided.

Does it not follow that it is desirable to keep a control over the whole course of labour—to take care that nothing adverse to mother or child shall happen in our absence—to substitute, in short, skill and foresight for accident? Few, perhaps, will hesitate to answer this question in the affirmative. But another question must follow. Can we so regulate a provoked labour throughout as to limit and define the time expended, and to conduct the delivery so as to give more security to the child and to the mother? This also I am prepared to answer in the affirmative. Repeated experience justifies the declaration made by me in 1862, (a) "that it is just as feasible to make an appointment at any distance from home to carry out at one sitting the induction of labour, as it is to cut for the stone." The operation may be brought entirely within the control of the operator. Instead of being the slave of circumstances, waiting anxiously for the response of Nature to his provocations, he should be master of the position.

Assuming, then, that it is both desirable and possible to control and regulate the entire course of a labour prematurely induced, let me describe the method after which the proceeding should be conducted.

The act of artificial labour may be divided into two stages.

The *first stage is provocative and preparatory.* This includes some amount of dilatation of the cervix uteri, and implies a certain amount of uterine action, and lubrication of the cervix and vagina.

The *second stage is the accelerative or concluding stage.* It consists in the expulsion or extraction of the fœtus and placenta.

The ordinary modes of conducting an induced labour almost ignore the last stage, or the means of accelerating delivery.

ORIGINAL COMMUNICATIONS.

CRANIOTOMY AND CÆSARIAN SECTION.

By THOMAS RADFORD, M.D.

I most readily acknowledge Dr. Barnes has extended to the unborn infant as full a consideration for its preservation as he could, up to the extreme limits which bound the use of the forceps and of turning, and in all he has stated upon the powers and advisability of these operations I most cordially agree; but the life of the infant demands a more serious deliberation (even beyond the boundary above mentioned) than has been and still is exercised. To prevent the reckless use of the perforator is an object of the highest importance, and claims the force of the restrictive influence of every obstetrist whose professional talents and reputation stand as high as those of Dr. Barnes.

Dr. Barnes asks if I, or any other "Cæsarianist," dispute that craniotomy may not be resorted to "to save the mother's life." In answer to this question, I beg most unequivocally to say, Yes, when her life is jeopardised by some temporary existing cause; and under other circumstances I should conditionally make craniotomy an operation of election, but neither my judgment nor my conscience would ever lead me to such a conclusion because I considered the Cæsarian section a more hazardous operation than craniotomy in cases of extreme deformity of the pelvis.

Two cases, in one of which there is only a limited degree of contraction of the pelvic brim, and in the other an extreme degree of diminution in this aperture, are not analogous. In one (the first), craniotomy may only be required to be performed *once*, as, in the event of subsequent pregnancies occurring, *premature labour* may be induced and the *infants be thereby saved*; whereas, in the other case, craniotomy would have to be repeated time after time. In such cases, my conscience tells me such horrible destruction of life cannot be justifiable on any ground whatsoever.

I maintain, as I stated in my last communication (*Medical Times and Gazette*, January 2, p. 9), that it is quite impossible to ascertain with such mathematical accuracy the precise measurement of an extremely contracted pelvic brim, in which a mistake of a very small fractional diminution would render the

(a) "On the New Method of inducing Premature Labour at a Predetermined Hour." *Edinb. Med. Journal.*

extraction of the base of a full-sized infant's head quite impossible. If this opinion be admitted as true, and acted on, I cannot agree with Dr. Barnes that both Cæsarian section and craniotomy are equally influenced by it. If craniotomy is performed under a miscalculation of the exact pelvic measurements, and delivery "*per vias naturales*" cannot be effected, then, after sacrificing the infant, the woman must be left to perish, or she must undergo the Cæsarian section; whereas, if the Cæsarian section had been performed as an operation of election, the lives of both mother and infant might be preserved.

The hands of different individuals vary considerably in size, and therefore a computation made on such a basis as to the use of the cephalotribe must be liable to lead to an erroneous conclusion. I would concede to Dr. Barnes in a pelvic exploratory inquiry what I should deny to the great majority of obstetricians, and, as I have already stated, the measurement of the brim may be more than is said to be required for craniotomy, and yet delivery cannot be effected.

No doubt the success of both operations would be very different if they were duly performed before irretrievable mischief was inflicted by protraction. We have no statistics of craniotomy when performed in cases of high pelvic distortion, but we have those (which I have elsewhere given) of Cæsarian section, which show great maternal mortality, and which consequently weigh against this operation; but if an unprejudiced analysis is made of them, a different conclusion must be come to. They very decidedly show the mischievous results of protracted labour.

When I said (*Medical Times and Gazette*, January 2, 1869, page 10) that "I had never known a case of osteomalacia to be permanently arrested during the child-bearing period," I meant whilst the woman was successively becoming pregnant. During this state the disease progressively increases. Doubtless a woman, after suffering from this disease, may so far recover as to enjoy a fair state of health, provided pregnancy never occurs. Dr. Barnes's case (related in *Med. Chir. Trans.* vol. xxvii. page 63) was of this kind, and deserves a careful perusal.

In conclusion, I beg to say I hope Dr. Barnes will be able to fulfil his intention, and publish his clinical observations bearing upon these subjects, which I shall read with great interest and pleasure. Although I differ from him as to the relative position which craniotomy and Cæsarian section should hold in obstetricy, yet I entertain the highest respect for his great talents and practical ability.

Manchester.

ON THE EARLY PROGRESS OF ARMY SANITATION IN INDIA.

By C. A. GORDON, M.D., C.B.,
Deputy Inspector-General of Hospitals.

(*Continued from page* 8.)

Pay—Clothing.

In 1828, taking the remuneration of soldiers of the 16th Lancers as fairly representing that of British cavalry serving in India, we learn from the reports(a) which form the basis of these remarks that a soldier of that regiment, if under ten years' service, received at that time ten rupees per month, and one rupee additional as "batta." If between ten and seventeen years in the service, his pay amounted to twelve rupees in all; if above that period, to thirteen rupees three annas. In addition to those sums, he received six shillings yearly in lieu of a pair of boots, but this he expended in the purchase of four pairs of country-made ones, the current rate then charged for which was one rupee four annas, or about two shillings and sixpence each.

I have already alluded to the system at one time in force, by which the soldier was, under some circumstances, credited with a sum equal to the difference between the ordinary "stoppages" on account of rations and the actual amount paid by Government for these rations, and also to the fact that, when the allowance of spirits was withdrawn from the soldier, its equivalent in money was paid to him. In regard to the former, it had, year after year, been protested against by Medical officers, on the ground that it gave to men the means of indulging their passions, and thus led to disease among them. That those representations, however, for a long time failed to remove the objectionable circumstances against which they were directed, is evident from the reflections of Dr. Clarke regarding them in 1844, when he is with reluctance obliged to confess that regarding the many that had up till then been made, no notice had been taken of them by the authorities. In respect to the latter, I would observe that, in accordance with general orders of April 21, 1828, the issue of spirits as a portion of the daily ration was abolished, an equivalent in money being substituted for it. I may add, however, that by the operation of that order the sum of money which the soldier received in this way amounted, at what were then called *full-batta* stations, to double that paid to him at the *half-batta* ones. In fact, the order(b) itself is explicit on this point, for, according to it, "compensation at stations where two drams per man are now daily issued will be granted to each man at the rate of three rupees two annas *per mensem*, for a month of thirty days, and half that sum at stations where one dram only *per diem* is now issued to the troops."(c)

The entire pay of the soldier in India has since 1840 been consolidated. During the interval between 1828 and that year he had received what to him was a considerable sum, and in addition to the items already mentioned was furnished from some other sources with moneys. They comprised bounties on occasions of volunteering, and the prize money or batta given after campaigns. There was yet another method, however, by which, at no distant time, the soldier was enabled to indulge in vicious courses; and, strange as it may now appear, the measure to which objection is taken was introduced by Government. With reference to it I would only remark that, as is well known to all who are acquainted with military life, tradespeople and others are from time to time warned against giving the soldier any credit whatever for purchases made by him. All transactions must be in ready money. With this knowledge, it now reads strangely that on December 19, 1834, the Indian Government issued an order in virtue of which a soldier could obtain credit to almost any extent from the native merchants around cantonments. The result which speedily followed this, and shortly afterwards was brought to notice by Dr. Hart, Surgeon of the 31st Foot, was that a soldier "will now purchase articles for which he has no use whatever, except for the purpose of selling them again for half their value and purchasing arrack." This order was further described by Dr. Burke as having "produced a very demoralising effect upon the European soldiers" in that country.(d)

Regarding the question of stoppages, we find that the cavalry soldier had to pay his share of the wages of one *syce*(e) for every two horses—that is, he was charged for half the pay of *half a syce*, the sum so charged against him being two rupees per month. His messing cost him three rupees per month; his washing, shoeblack, and barber, one and a quarter rupee; a belt man, with pipeclay, a quarter rupee; the benevolent fund, six annas; so that, taking his monthly expenses, together with that of keeping up his kit, he had but little money actually to spare.(f)

Doubtless there existed some little difference in the actual amount of deductions necessarily made from the soldier's pay, as to whether the particular station at which he was quartered was an expensive one or otherwise. Cawnpore is cited as having been in 1832 one of the cheapest stations in India; and we learn that in that year the amount deducted from the soldier on account of his messing was only one anna and three pies, or 2½d. per day. The average balance of his monthly pay, after deducting the above and other items already enumerated, was for a soldier of the infantry, if of fourteen years' service, seven rupees and three-quarters; of seven years, six rupees and three-quarters; and for one under seven years five rupees and three-quarters. We are moreover informed that then, as now, the moiety of his pay, after all deductions had been made, was issued to him daily.

Allusion has already been made to the circumstance of a soldier's stoppages on account of rations having been the same whether he received the larger scale allowed in the North-western Provinces, or the smaller in Lower Bengal. In 1839 this subject was taken up by Dr. McLeod. "My inquiries and observations lead me to believe that the soldier pays more than he gets value for—that is, the stoppage from his pay is more than the cost of the articles he receives—and that if he, under the control of his officers, was to go to the open market with the money in his hand, he would be supplied at every station of this command with every article he now gets, of a better quality and in a more satisfactory manner. I allude," continues Dr. McLeod, "to the chief articles of the soldier's food, meat, bread, milk, etc." He recommended that,

(a) Namely, those in the Army Medical Office, Calcutta.

(b) No. 69 of 1828.
(c) Report for 1833, page 235.
(d) Report for 1835, page 301.
(e) *Syce*, a native groom.
(f) Report, 1828, page 311.

as the rations ought to be equalised throughout the command, the sums deducted on their account be also assimilated, and that an increase should be made in their amount. The arguments by which the last of these propositions was maintained were thus expressed:—"Much advantage," so he wrote, "would be derived from detaining a larger sum from the soldier's pay. It would give him articles of food of a better quality, and leave him less to spend in spirituous liquors." As a further reason for increasing the sum to be deducted, he mentioned the improvement which he saw was needed not only in the quality, but in the quantity of the soldier's food. This subject is commented on in the section on rations,(g) but, in so far as its present bearings are concerned, it is right here to advert to it again. Dr. McLeod, in addition to the decrease which would necessarily follow in the amount of money available for expenditure, adds that, "besides that, the quantity and quality of his food could be better regulated; for, as at present, although at times he has enough, at others, when the quality of the meat issued is *too inferior*, he really has not a sufficient quantity of good wholesome food."

There was, at the time referred to, no question as to the sufficiency of the soldiers' pay. On the contrary, it was considered that to give them any sum of money beyond what was absolutely necessary to supply their daily wants was to place within their power the means of inflicting moral and physical injury on themselves. The desirability of attracting to the ranks a better class of men than for the most part were to be found in them, was indeed acknowledged, but the attractions and advantages in this respect that would have been expected from improved rates of pay do not seem to have commanded any attention. "When," so wrote Dr. Burke in 1831,(h) "the soldier's wants are supplied, when he is well clad, comfortably lodged, and fully and wholesomely fed, the overplus of money remaining in his hand is a positive injury to him. It is the demon stimulating him to evil; and if to keep him from drinking be beyond the reach of counsel or command, the object of those in authority over him should be, in place of husbanding his means of excess, to exhaust them as quickly as it can be done."

It will be observed that the preceding remarks have reference to soldiers in health and performing their every-day duties. Let us see what was said on the subject of deductions, under the name of Hospital stoppages, from men who were under Medical treatment. This matter was in 1832 made a subject of discussion, and we find it stated in the report for that year that the sum deducted on this account was then, as now, 2 annas, or 3¾d. for a private, 3 annas, or 5¾d. for a non-commissioned officer. Soldiers who had received injuries or wounds on duty or in battle were, however, exempt from deductions of this nature while in Hospital.

Passing on to the subject of clothing, I would briefly observe that in 1829 the kit of the infantry soldier in India consisted of the following articles—namely, six white cotton shirts, six pairs of nankeen trousers, six nankeen jackets, one great coat, one cloth coat, one pair of cloth trousers, two flannel bands, three pairs of socks, two pairs of boots, two towels, three brushes, one forage cap, a comb and sponge, one knapsack and straps, one havresac, knife, fork, and spoon, a stock and clasp. Some men, we learn, wore flannel all over their body, but in regard to this it does not appear that any order or regulation existed—in fact, we learn that only some of the men wore flannel waistcoats; others threw them off, and it was impossible to prevent them from doing so, as "many men have positively refused to put them on at any risk."(i)

From March 15 to November 14 they wore, as they do still, a cotton jacket and cotton trousers; from November 15 to March 14, a red jacket, grey cloth trousers, and a cloth cap.(k) The men changed their body linen at least three times a week, and many of them oftener, no restriction being placed upon the quantity of clothes to be washed, for which the monthly sum deducted was eight annas, or one shilling per man. Such was the theory, but there is reason to believe that not only at the time to which these remarks specially refer, but many years afterwards, the health of the soldiers suffered that their officers might indulge in the taste for uniform and mere appearance to which some have ever been prone. It was against this that we find the Inspector-General recording his protest in the following terms:—

"I believe," so wrote Dr. Clarke in 1843, "there can be no doubt that the clothing of the soldier in the hot months, and particularly while performing active duties, is too heavy and oppressive. Red cloth jackets at such times overpower the strongest man; still more objectionable is the cap, affording no protection from the burning rays of the sun;" and he further observes, "it would seem as if they were made on purpose to produce *coup de soleil*, or solar apoplexy, and certainly to this fatal disease they mainly contribute."

In 1827, each cavalry soldier in India was supplied with one cap, one dress and one undress cloth jacket biennially, one pair of cloth overalls, one flannel waistcoat, one pair of drawers, and one pair of gloves annually. He was, moreover, as already mentioned, allowed six shillings yearly for boots. He was obliged to have in his possession the following supplies—namely, six shirts, six pairs white trousers, two pairs strong overalls for riding, a blue cotton jacket, a blue forage cap, a valise, boots with overall chains, etc. He had also to provide a mane comb, pricker, sponge, scissors, turnscrew-worm, button stick, four brushes, and pad for riding the horse to water in.

White clothing was, in this branch of the service, allowed to be worn in the hot season so long as the men remained in or about their "lines," but no dragoon was permitted to go beyond them except "in the regular uniform of the regiment." This regulation was not in all regiments considered equally stringent. In the 11th Light Dragoons it was adhered to to the letter, notwithstanding that, in the opinion of the Surgeon, "the men should be allowed to perform their regimental duties during the extreme heat of the season in white jackets." We shall see presently some of the results that followed the system which at this time prevailed in this regiment of drilling the men in their woollen dress and buttoned up, during the extreme heat of the season, when, in the words of the Surgeon, "mere appearances should be waived, not merely for the comfort but good of the men."(l)

A soldier of the corps having in 1827 died from apoplexy, Dr. Burke had occasion to submit to the then Commander-in-Chief a report on the subject of clothing of cavalry soldiers generally, and more especially of those of the 11th Light Dragoons. The report proceeded thus:—

"The Inspector-General of Hospitals, his Majesty's Forces, begs leave to submit to his Excellency the Commander-in-Chief the following extract from the quarterly report of the Surgeon of his Majesty's 11th Light Dragoons:—

"Blumley was a healthy man, and went on guard at 6 p.m., buttoned up in his blue cloth jacket, when the thermometer stood, in a house surrounded by tatties, at 98° F., and must have been at least 106° or 108° in the open air. At 7 p.m., one hour after going on this duty, he was, as it were, knocked down under apoplexy, which the most active means failed in relieving, and he died in about two hours." Dr. Burke thus continues his memorandum:—"The Inspector of Hospitals begs to submit that even from the above there appears a necessity that during the hot season, and hot winds especially, the men of the 11th Light Dragoons should be exempted from wearing their blue cloth jackets on duty, as *before brought* to the notice of his Excellency."(m)

Notwithstanding these and other representations, however, the same pernicious system of sacrificing health and life to what was called "smartness" continued to prevail. It did so in both branches of the service, but more particularly in the cavalry, and with the results that were naturally to be expected—namely, the higher rates of mortality and invaliding among them than among the infantry. This is stated to have been remarkably the case between the years 1825 and 1832; nor did the circumstance escape the notice of the Inspector-General. In his report for 1833, he expressed his belief that one cause of this difference may be, as regards the dragoons, the frequent—it may be almost said, the constant—use by them of their warm clothing. "The cloth jacket," he adds, "in addition to its weight, absorbs the sun's rays, and is constantly saturated with the perspiration of the person."

Ten more years passed, and still the same objectionable practice was in force in some at least of what were deemed smart regiments. Doubtless the Medical authorities had in the interval raised their voice in condemnation of the system; but it is quite evident that they did so with but little good result.

At the time to which I refer, we read(n) that "the bedding consists of a charpoy made of wood, with rattan bottom, and a gudrie, a sort of quilt stuffed with cotton, one part of which is put under, and the other over the body, and which is during the day folded so as to admit of circulation of air through it. It is changed only once a year. Pillows are provided by the men."

(g) *Medical Times and Gazette*, vol. i. 1869, No. 966.
(h) Report, 1831, page 467.
(i) Report, 1834, page 81. (k) Report, 1828, page 312.
(l) Report for 1828, page 309. (m) Report for 1828, page 178.
(n) Report for 1830, page 315.

By an arrangement that now seems most extraordinary, if not indeed perfectly barbarous, our soldiers quartered in the upper provinces had to supply themselves with bedsteads. For years this defect, and others in connexion with bedding of soldiers, had been urged by the Medical authorities. "It is submitted by the Inspector-General of Hospitals to his Excellency the Commander-in-Chief that no bedsteads are supplied by Government to his Majesty's regiments at Meerut, Cawnpore, and Kurnaul, and the want of them has been evident to him on every inspection he has made." Dr. Burke then alludes to a report on this subject which he had addressed to his Excellency on June 7, 1827, and concludes with the pertinent remark that "there existed as great a necessity for the troops at Cawnpore and Meerut being furnished by Government with the above as in the lower stations." In 1833 he revived the subject, and in his report for that year wrote as follows:—

"As I fully represented in my memorial of June 7, 1827, there being no measure to go by, some men provide themselves with high and some with low bedsteads of different dimensions and materials. A low cot or bedstead I have often seen between two high ones, thus impeding perflation. It is urgently necessary," he adds, "that Government provide proper bedsteads; and good iron ones would be preferable for the soldiers in the full-batta stations as well as in the half-batta."

Cots or bedsteads were in due time supplied to all, and in 1840 Dr. McLeod thus describes them:—"The cots," he states, "are made of wooden frames, with rattan bottoms, forming easy shelter for bugs." He also suggests the remedy. "This," he says, "might be readily obviated by substituting iron cots, which," he continues, "have been often recommended, but as yet not attended to."

Will it be believed that in 1867, while I prepare these notes, iron cots are being tried in India on a very limited scale, and *experimentally*—as if any experiment were needed—and that in all other respects, save and except that each soldier has now two thin miserable cotton sheets, the bedding of the soldier in that country is precisely as it has been described in 1827?

(To be continued.)

A CONTRIBUTION TO THE CLINICAL HISTORY OF CHOREA.

MENTAL AND EMOTIONAL DISTURBANCE.

By JAMES RUSSELL, M.D., F.R.C.P.,
Physician to the Birmingham General Hospital.

Whatever theory we adopt to explain the phenomena of chorea, it is equally necessary for us to ascertain whether the disease in question be essentially a motor disease, or whether other of the nervous functions are also liable to be implicated—in other words, whether the morbid condition on which the malady depends is necessarily confined to the motor tract, or whether it may also involve other districts of nerve tissue in the brain. If, for instance, we adopt the explanation suggested by Dr. Hughlings-Jackson, which appears to me to accord most satisfactorily with the clinical and pathological phenomena of the disease, it is of course a necessary question whether the supposed plugging of the minute vessels take place only in the district of the brain subservient to the motor function, or whether, as we should naturally anticipate, the plugging is liable to extend to other parts of the brain; and though it cannot be asserted that the fact of the nervous disorder in chorea being restricted to the motor function would disprove the theory in question, yet undoubtedly the opposite condition, should it be proved to exist, would afford important confirmation to it.

There are some interesting circumstances connected with the union of epilepsy with chorea in the same patient which have a bearing upon this question, to which, on some future occasion, I may make reference. At present my inquiry is confined to the mental functions and to emotional development. What is the degree of liability in the emotions and the intellectual functions to be involved in the disorder of chorea, and what extent may their derangement attain? We know that both chorea and mental disorder may show themselves separately in the course of the same disorder. Thus, in pregnancy chorea is one of the exceptional concomitants; mania is another. Again, in rheumatism chorea is an occurrence of greater frequency, and delirium or mania may also present itself. Since, then, these two forms of nervous disorder may occur in the same disease independently of each other, there is probability, *à priori*, that they will be met with in conjunction as joint effects of one common cause.

Now, of 99 of my cases of chorea in which a report upon the subject is given, in 38 emotional development or mental disturbance was present; the former, however, much more frequently than the latter. I ought perhaps to add 15 other cases in which the patient's sleep was interfered with, apparently independently of the movements.

An important conclusion is derivable from an examination of these cases—that there is no necessary relation between the amount of motor and of intellectual or emotional disturbance. The 61 cases in which the mental functions were not disturbed include 8 of very severe chorea; in two, indeed, the chorea attained its very highest state of development, and one of these two ended fatally. Three other cases of a very severe form of the malady were accompanied with only the lowest degree of mental disorder, and the converse obtained in some other cases, considerable mental disorder manifesting itself with only a slight degree of choreic movement.

The degree of mental or emotional disturbance which was present varied between the widest limits; in a large proportion of the cases the disturbance existed in a very mild form, but in many it constituted a prominent phenomenon of the disease. There were, however, six cases which call for special remark, because in them the mental disorder was of a serious nature, amounting either to urgent delirium or to violent mania. These cases, therefore, exhibit in their broadest features the nature of the derangements upon which I am writing. Now, these six cases appear to indicate two distinct methods in which delirium or mania may manifest itself in the course of a case of chorea, and seem to throw light upon the nature of the cause to which they are attributable.

In three of the six cases the mental disorder, though severe, was entirely subordinate to the motor, and appeared dependent upon it. They were cases of the very severe form of chorea, one terminating rapidly in death, but the mental disorder occurred at a considerable interval subsequently to the setting in of the violent movements; it was temporary in duration, recurred in paroxysms, and appeared to be simply the consequence of exhaustion and want of sleep. One example will suffice; it is characteristic of all.

A girl, aged 19, had suffered from chorea in a very severe form, for nine days; she obtained sleep only at intervals, though morphia was administered in repeated doses, and the movements recurred with renewed violence the moment she awoke. They seemed only to have gained vigour from the period of repose. On the tenth day (May 19) she became delirious; two brief intervals of sleep were obtained by the inhalation of chloroform, but with no permanent amendment. During the night she was violently maniacal, screaming and tossing in the most frightful manner. She continued somewhat maniacal through the 20th. In the evening, having been kept under the influence of chloroform for an hour and a half, and after having taken a glass of brandy, she fell asleep for three hours, but awoke in a state of uncontrollable mania; again she slept for three hours after another glass of brandy, and again awoke in a state of mania. The administration of opium was then resumed; the patient was much more quiet on the 21st, and had lost the delirium. At night chloroform was again successfully administered; about noon on the 22nd she became sleepy, and continued sleeping for nine hours until the next morning; from that time she recovered rapidly.

Nothing can be more complete than the contrast between the case I have just narrated, together with the other two, and the three others to which I am about to refer. These last were properly cases of maniacal chorea, in which the mental disorder seemed altogether independent of the movements, and appeared to be, with the chorea, concurrent effects of the same cause. The mental derangement was coincident, or nearly so, with the movements; in one, probably in two, it even preceded them, and in one continued in a very serious form for several weeks after the chorea had entirely subsided.

A girl, aged 17, without rheumatic developments or cardiac disease, had her thigh amputated for necrosis by my colleague, Mr. Pemberton, on November 13. A week afterwards very slight choreic movements were observed, merely "a twitching of the fingers, or a peculiar turn of the eyes." On December 5 the movements became severe, affecting both sides of the body, and on the same day she was observed to be constantly talking to herself. Her sleep was also disturbed. She continued in much the same state through the 6th, the movements becoming incessant, and articulation unintelligible, though deglutition was perfect. Her lips were dry, swollen, and cracked; the stump was dry and indolent.

On the 7th she was very violent, but in the afternoon she fell asleep, and continued sleeping for nine hours, after which she awoke more quiet. From this date the choreic movements gradually subsided; the mental affection, on the other hand, assumed a more serious aspect; though obedient, she was incessantly talking, but took nourishment, and slept a good deal. She then became more incoherent and more wild; she was constantly under the impression that she was to be killed; she asserted that people were entering the ward to come to her, and watched the door intently; she laughed and sang to herself for half an hour together. Her evacuations were passed into the bed. Subsequently she became silent and hid her food; then she fell into a passive automatic condition, writhing in uncomfortable attitudes, or maintaining the same posture for long periods of time, never speaking nor giving any sign that she was aware of what was passing around her, except by yielding a sluggish obedience to orders. She seemed falling into a condition of hopeless imbecility, living a merely vegetative life, taking food and sleeping and passing her evacuations into her bed. In the middle of December an abscess formed over each parotid gland, and profuse discharge took place from each ear.

Early in January signs of amendment began to manifest themselves; the discharge from the abscesses and from the ears gradually lessened, and ceased by the end of the month, and the stump was healed by the beginning of February; but it was not till after this date that she passed her evacuations in a natural manner, and parted with her delusions. She left the Hospital nearly well just three months after the setting in of serious symptoms. My friend, Mr. Arthur Bracey, examined her eyes with the ophthalmoscope during her recovery, but found nothing abnormal.

One can hardly resist the conviction that in this case the mental and the motor districts of the brain were affected with disease at the same time, and, moreover, that the disease of the former was far more severe than in the latter. The former of these two conclusions seemed warranted also in the next case, of which a very few particulars will suffice.

A fine healthy young man, aged 16, was taken with erythema nodosum in both legs, and coincidently, or nearly so, choreic movements came on, combined with "hysteric muttering." This occurred eleven days before admission. Three days after the commencement of his illness he manifested delusions, refusing food under the impression that it was poisoned; during the last three days he was violent, and the choreic movements had become more severe. He was utterly sleepless.

He was admitted on April 28 in a state of maniacal excitement, breaking out at times with uncontrollable violence. There were general choreic movements, aggravated at intervals into paroxysms of great severity, with cries or unintelligible muttering. His sleep was much disturbed; if he dosed he awoke with horrible screams. Chloroform instantly laid him asleep, but its influence was very brief. His lips became covered with scattered crusts; his heart was healthy.

He began to mend on May 2, and rapidly improved, but so late as June 11 retained some mental peculiarity.

It was stated that he had seemed to "mope" for some time anterior to his attack. His family was free from insanity.

With respect to the cases in which the mental or emotional disorder was of a less serious character, I have only to add that, so far as accurate information upon the subject could be obtained, they appeared to belong to the class of which the last-mentioned cases are the type—in which the mental derangement occurred at or about the same time with the motor. I have already stated that they included instances of very various degrees of the mental as they did of the motor affection; some of the patients being affected but slightly, others to a very decided extent, though none approaching in severity the cases cited above.

May it not be inferred from these premises, I would ask in conclusion, that in chorea the change—be it what it may—which takes place in the nervous centres, is one which is not necessarily limited to one particular part of these centres, but that it may reach at the same time other parts to a different extent and with different degrees of intensity, and may even affect such other parts more severely than it does the purely motor tract?

PRURITUS VULVÆ.—Corrosive sublimate five parts, alcohol fifty parts. A teaspoonful of this solution is to be added to a pint of tepid water, and used as a lotion several times a day. It frequently entirely removes the pruritus, and always diminishes it.—*Gaz. des Hôp.*, Jan. 7.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.

CASES OF PHTHISIS TREATED BY REST AND DIET ONLY.

(Under the care of Dr. RISDON BENNETT.)

PATIENTS suffering from decided phthisis frequently improve very much while they are in this Hospital; they gain flesh, night sweats disappear, appetite improves, cough becomes less troublesome, pulse and respirations diminish in frequency, and the patients state that they feel much stronger and altogether better. It has often been asked how much of their improvement is due to medicine, and how much to rest, diet, and other conditions of the Hospital. It would appear that we cannot explain the improvement by supposing that the majority of these patients have suffered from want of food before coming into this Hospital, for their appearance and position in life would lead one to think that, although they might not have been able to obtain luxuries, yet they have been able to obtain as much food as they could eat.

Many of the in-patients, before entering the Hospital, have attended as out-patients, and been treated by tonic medicines and cod-liver oil; but they improved more rapidly and to a greater extent while in the Hospital. In order to ascertain how far this amendment in the patients' health was due to medicine, or how far to other conditions, Dr. Risdon Bennett has resolved to treat some cases of phthisis without medicine.

We believe this to be a very important and yet a very difficult inquiry. It is necessary that we should know more about the natural course of phthisis before we can determine the value of any drug in the treatment of this disease. Every now and then a new remedy for phthisis is brought forward, and cases are quoted to show that patients have improved while taking the advocated drug; and numerous, we might say countless, remedies have been recommended, tried, and failed.

Before we are able to say that a patient's amendment is due to a drug, we ought to be able to show that cases, such as have been treated by this drug, do not, as a rule, improve, or do not improve so rapidly when treated without drugs.

In this week's number we report two cases under the care of Dr. Bennett, and we hope to be able to report others. Dr. Bennett has kindly promised to give us a summary of the cases and his conclusions at the end of his inquiry.

Ellen S., aged 25, married woman, admitted on September 9, 1867, under the care of Dr. Bennett. Her illness commenced with dry cough, fourteen months before admission. She was pregnant at this time. Her cough continued after delivery, and she had slight hæmoptysis; debility and loss of flesh followed. Four months before admission she began to expectorate, and had night sweats followed. On admission her height was 5 ft. 4½ in., and she weighed 7 stone. She was emaciated. She said that she had lost four stone in weight. Complexion was pale; tongue was red and transversely fissured; appetite was good; bowels rather confined, and she had had diarrhœa; cough was not very troublesome; there was not much expectoration; breath was short; pulse 106, moderately full, and very compressible; she appeared very weak, but she was able to walk about the ward; catamenia regular. There was no family history of phthisis. Physical Signs: Some dulness, bronchial breathing, and sonorous rhonchi at both apices; the vocal resonance was increased, and there was flattening under the right clavicle.

On September 11, two days after admission, she was ordered ℞ Tinct. cardamomi co. ʒss., aquæ ʒj. ter die; mixed diet, which consisted of meat, vegetables, and light pudding for dinner, egg, cocoa, bread and butter for breakfast, bread-and-butter for tea, and milk for supper; also three ounces of port wine daily. The quantity of food was not limited. The temperature of the body all the time she was in the Hospital was below 100°, and only on one day did it reach 100°. Her pulse ranged from 106 to 90.

On the 30th—that is, twenty-one days after admission, and nineteen days after the treatment without medicine was begun—she felt better and stronger; cough less troublesome; expectoration moderate and rather viscid; tongue glazed; appetite good; bowels confined; she slept well; pulse 91, small and firm. She had gained 9½ lbs. in weight since she entered the Hospital.

October 11.—She felt much better; her general health had much improved; cough was less troublesome; expectoration was scanty. Physical Signs: Sonorous rhonchi were less marked, and confined to right infra-clavicular region; breathing under left clavicle was less bronchial, and distinctly wavy. She continued to go on much the same, but her cough was occasionally more troublesome; expectoration remained scanty. She did not suffer from night sweats the whole time that she was in the Hospital.

On November 9 she left the Hospital, much improved in every respect, and she gained eleven pounds in weight while in the Hospital.

In the next case there were no decided physical signs of phthisis, but there was a clear history of hæmoptysis to the extent of many ounces. This patient was a boy aged 12. He was ordered mixed diet, and he gained ten pounds in weight while in the Hospital.

The third case was that of John H., aged 13, under the care of Dr. Bennett. He was admitted September 4, 1867. Four months before admission his illness commenced with cold and dry cough. The cough continued, accompanied by expectoration, and slight hæmoptysis followed. He had an uncle who had died of consumption, but there was no other family history of phthisis. On admission into the Hospital he was thin, but otherwise fairly healthy in appearance. His tongue was glazed and furred; his cough was not very troublesome, and he did not expectorate much; his breath was short; and he slept well, but he had night sweats; pulse 120 and feeble. Physical Signs: Dulness over the upper half of the left lung in front, with *bruit de pot-fêlé* over the third interspace, also loud cavernous breathing and gurgling. On the right side the percussion was normal, but in the infra-clavicular region the inspiration was harsh, and the expiration was loud, prolonged, and tubular. At both apices posteriorly there was prolonged expiration, associated on the left side with dulness and crepitation. The expiration was slightly prolonged at the base of the left lung.

On September 6—that is, two days after admission—he was ordered tinct. cardmomi compos. ʒss., aquae ʒi., ter die, and mixed diet, similar to what was ordered in the first-named patient, excepting that he had half a pint of porter instead of wine. On November 1, having been treated by diet only, and in the Hospital two months, his condition was as follows. General state much improved. He felt better and much stronger. He gained six pounds in weight during the first six weeks that he was in the Hospital, but subsequently he lost two pounds of the six. His tongue was somewhat furred. Appetite was very good. Bowels were regular. He had very little cough or expectoration, and no shortness of breath. He slept well, and had no night sweats. Pulse 80, of fair volume. On admission his pulse was 120. The physical signs were much the same as on admission, except that the *bruit de pot-fêlé* could not be elicited. After this date (November 1) he was placed on a tonic plan of treatment. Tincture of muriate of iron and nitric acid were ordered, and counter-irritation by iodine to the chest. On November 30—that is, twenty-nine days after the commencement of the tonic treatment—the following notes were entered:—The general health had continued to improve under the tonic treatment, but not more rapidly than under the diet treatment. He had no cough or expectoration; no night sweats; appetite good; pulse 96, fair volume. His general symptoms were much the same on November 30 as on November 1, when he discontinued the diet treatment; but his pulse had gradually increased in frequency while under the tonic treatment. It was 80 on November 1, when the diet treatment was discontinued; it was 84 on November 8; 90 on the 15th; 92 on the 22nd; and 96 on the 30th. The physical signs remained much the same as on admission. He had gained altogether since admission five pounds in weight. Therefore he gained four pounds while on the diet treatment only, and one pound when treated by tonic medicine, the diet remaining the same under both plans of treatment. His temperature while under the diet treatment was normal, and only reached 99·5° on two days. While under the tonic plan of treatment his temperature was every day above 99°, but under 100°, except during one day.

For the particulars of these cases we have to acknowledge our obligations to Mr. Power, the Resident Medical Officer of this Hospital.

SOME REMARKS ON DEATH FROM HÆMOPTYSIS—A CASE OF ANEURISM OF THE PULMONARY ARTERY.

(Under the care of Dr. BIRKETT.)

An interesting case of this kind occurred in Victoria-park Hospital, in a patient under the care of Dr. Birkett. The following are the particulars:—

Thomas G., aged 40, a commercial traveller, was admitted November 6, 1867. Mr. Power, the Resident Medical Officer of Victoria-park Hospital, recognised the patient as having been in Bartholomew's Hospital in November, 1864, suffering from bronchitis. A week before he was admitted as in-patient he had attended as an out-patient at Bartholomew's Hospital for fractured rib. He was discharged from this Hospital apparently much relieved. He was admitted into Victoria-park Hospital during the summer of 1866 suffering from phthisis complicated with bronchitis. He improved, and was discharged from Victoria-park Hospital. He was a second time admitted November 6, 1867. At that time there were well-marked physical signs of phthisis, also of bronchitis. The bronchitic râles were most marked over the left lung. On December 11—that is, thirty-five days after admission—he spat blood rather freely. The hæmoptysis subsided to a great extent in three days, but his sputum remained tinged with blood. His breath continued very short. On the night of December 18 he had profuse hæmorrhage from the lung; the blood gushed out of his mouth, and he fainted. Mr. Power saw him, and he was in deep syncope. Cold water was dashed in his face, friction applied over the heart, and after about half an hour he began to revive, although slowly. After this he passed a fair night. Next day, the 19th, he had rallied, but in the afternoon he had again free hæmoptysis. He appeared very much weakened by the loss of blood, but he passed a tolerably good night. On the morning of the 20th he had another attack of copious hæmoptysis; after this he rallied for a few hours, but in the evening of the 20th he had a rush of blood from his mouth, and died.

Mr. Power said that after the profuse hæmoptysis on the 18th, as soon as the patient's circulation became fully established, hæmoptysis returned.

The autopsy was conducted by Dr. H. G. Sutton, and an abstract of his report is here given very briefly:—

At the junction of the upper with the middle third of the right lung, in the posterior and outer part, the pleuræ were very much thickened and adherent. On cutting through the thickened pleuræ into the lung, a cavity was seen, situated about one-sixth of an inch from the surface of the lung. This cavity was about the size of a pigeon's egg; it was enclosed by a thick, tough fibrous wall, and filled with coagulated blood. On removing this large black clot, a portion of the coagulum was noticed to be decolorised. This portion was situated over what appeared to be the mouth of a large vessel. This ruptured vessel, in the shape of a small sac, projected from the anterior wall of the cavity, and it was plugged by a clot part of which was decolorised; another part was not decolorised, simply black coagulated blood. A probe was passed into the sac, and with a little care it was passed into a good-sized branch of the pulmonary artery; the latter was large enough to admit a good-sized quill pen. It was therefore clear that there was an aneurism of the pulmonary artery which had burst, and fatal hæmorrhage had ensued. The bronchial tubes of the right lung were filled with blood, and there was blood in the tubes of the left lung also, but not so much as in those of the right. Some tubercles were observed in the upper lobe of the right lung. A large cavity was seen in the upper lobe of the left lung, also scattered tubercle in this lung. There was no aneurism in the wall of the cavity that was situated in the left lung. The rib corresponding to the thickened pleura was examined; its surface was uneven and thickened.

It is interesting to notice that the source of the hæmorrage was situated in the lower portion of the right lung, and it would appear probable that this patient's fractured rib had wounded his lung, and, circumscribed pleuro-pneumonia having been thus set up, great thickening of the pleura and a cavity in the lung followed.

This case is also clinically very instructive, for apparently the rupture of the aneurism was not followed by immediate death. On December 11 he spat blood rather freely, and although this subsided to a great extent, it did not completely do so. Seven days after this there was profuse hæmorrhage, which returned more or less every day until he died. The patient lived, therefore, nine days after the first appearance of the hæmoptysis, and two days after the first profuse hæmorrhage from the lung. The ruptured mouth of the aneurismal sac was seen to be partially plugged by a decolorised clot, which would also tend to show that the sac had ruptured some hours, a day or two, or maybe nine days, before death. The fatal hæmorrhage in this case was like what is frequently seen when aneurisms of the chest and abdomen open on mucous surfaces: it was preceded by minor hæmorrhages. And experience in

such cases has shown that there may be gushes of blood for several hours, days, or even weeks, before the fatal discharge takes place.

Dr. H. G. Sutton mentioned to us that, in 1859, a male, aged 44, died of hæmoptysis in this Hospital, and aneurism of the pulmonary artery was found also. In 1860, a patient died of hæmoptysis in the Hospital, and a similar aneurism was discovered. The last-named case was that of a male aged 29. In the upper lobe of the right lung was a cavity about the size of two walnuts; it was filled with a clot of blood, and in the wall of the cavity was found a vessel ruptured, and its mouth was stopped by a clot. There was tubercle in other parts of this lung.

In the post-mortem records of this Hospital we also noticed an account of another patient who had died of hæmoptysis. A sailor, aged 39, was in the Hospital in 1863. There was no tubercle in the lungs, but one of the tertiary branches of the right bronchial tube was adherent to the diaphragm, and it communicated with a large abscess in the right lobe of the liver. A few weeks ago a patient died in the Hospital of hæmoptysis, and there was no tubercle in the lungs. The left lung was much wasted; it weighed only thirteen ounces, and was otherwise healthy. In the right lung the bronchial tubes were exceedingly dilated in a uniform and saccular manner. There was no tubercle in either lung. We may here be allowed to mention that Dr. Grainger Stewart, in his excellent essay on "Dilatation of the Bronchial Tubes," states that Barth met with two cases of dilated bronchial tubes in which hæmoptysis proved fatal. Dr. H. G. Sutton, speaking of hæmoptysis, said it is exceedingly common, as is well known, for patients suffering from phthisis to spit blood, but very few indeed die of hæmoptysis. During the last eleven and a half years sixteen patients have died of hæmoptysis in this Hospital, and during that time 321 patients have died in this Hospital of phthisis, so that very little more than 5 per cent. of those labouring under and dying with phthisis have suffered from fatal hæmoptysis while in the Hospital. It is very instructive to notice that all but two of these sixteen patients were males, and this bears out what Dr. Walshe has said respecting the greater liability of males to suffer from profuse hæmoptysis (*vide* work "On Diseases of the Lungs," p. 448, 3rd edition). He says very profuse hæmoptysis from the lungs is more common in males than in females. Dr. Walshe, moreover, states that the percentage of hæmoptysis of all amounts in cases of phthisis is 80·92, and it is stated by Dr. Sutton that very little more than 5 per cent. of those labouring under phthisis, and dying while in the Hospital, had fatal hæmoptysis, which evidence tends to show that death from hæmoptysis in persons suffering from tubercular phthisis is, in comparison with the number who spit blood, very rare.

The Gloucester grocers, having agreed to discontinue giving Christmas-boxes, and in lieu thereof to subscribe to the local charities, have (under such arrangement) paid £20 to the Infirmary, £10 to the Hospital for Children, £5 to the Dispensary, and £25 16s. 8d. to other charities.

Water Supply.—It is worthy of being again noticed that, whilst in many towns and districts of England water had become a scarce commodity, whilst many of the northern lakes were becoming very shallow, owing to the drying up of their tributaries, and whilst hundreds of homesteads were literally without water, the daily supply to London not only did not diminish, but on the contrary, owing to the heat and dry weather, was greatly increased; and that, with all this extra supply, the drought, heat, and consequent enormous evaporation, the Thames showed no diminution in its depth and ordinary summer flow. An eminent engineer connected with one of the water companies assured me that, although at that time 55 millions of gallons were abstracted from the river daily, the quantity might have been doubled without any serious diminution of the storage and flow of the river. As the question of a pure and abundant water supply is one which seriously concerns the health of upwards of three millions of human beings, it is gratifying to know that the conservancy of the Thames is now being carried out with zeal and activity. We hear of locks and rivers being repaired, of the removal of dead animals, weeds, and other noxious matters, of dredging and other matters of dispollution, and, best of all, of notices having been served on the authorities of all places between the western boundary of the metropolis and Oxford, to divert their sewage and drainage from the river.—*Annual Report on the Health of the Parish of St. Marylebone*, 1867.

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Medical Times and Gazette.

SATURDAY, JANUARY 16, 1869.

DOCTORS' BILLS.

Perhaps we are wrong in using the vulgar word "bill" to designate the memorandum, redolent of the essence of refinement and suavity, with which the Medical Practitioner "of the period" enlightens his patients as to the amount of their pecuniary obligations to him. The most refined formula that we are acquainted with is this:—

"Mr. Galen presents his compliments to Mr. Victim, and will be obliged if he will favour him, at his convenience, with a cheque for £*x* *xs.* 0d., being the amount of Mr. Galen's fees for Medical attendance on Mr. Victim's family and household during the past year."

Other formulæ, a little sterner, represent "Mr. Victim, Dr. to Thomas Galen, M.R.C.S., for Medical and Surgical attendance from Jan. 1 to Dec. 31, 1868, £*x* *ys.* *zd.*" Others descend more and more into particulars, and state the charges separately for Medical attendance, Medical and Surgical appliances, and medicines, if the latter are supplied. In fact, the scale of charges is various enough to suit every pocket in every locality. Some men charge a reasonable fee for attendance, and write a prescription; some charge a similar fee and supply the requisite medicine without charging for it; some supply medicine and charge moderately for it, besides the modest fee for attendance; and in some practices the old-fashioned plan is adhered to of putting a high price on medicines, which are supplied in forms more or less expensive according to the circumstances of the patient, whilst the visits go unremunerated, unless into the country, or at night, or under circumstances which give unusual trouble. Then these several medicines are detailed in an old-fashioned bill of particulars, which old-fashioned patients scrutinise jealously to detect overcharges and mistakes, and to recount the number and flavour of the various doses which have tickled their palates. This old mode of business suits the poorer patients in towns, but is kept up in some of the most lucrative practices in the country amongst wealthy farmers and people of the old school, who, as they say, like to know what they pay for.

Doubtless the status of the Practitioner is higher, and his whole occupation more agreeable, when the practice is as far as possible dissociated from trade—whether it be more lucrative is another thing. When the consumption of drugs was popular, and they were paid for *seriatim*, the returns of the general Practitioner were very large; for each member of a family required his separate set of medicines, whereas one visit is generally made to serve for almost any number of patients in a house. Moreover, it is a lamentable fact that Medical remuneration in any shape does not rise in proportion to the price

*

of every necessary of life. House rent, poor's rates, and improvement rates are constantly rising; and all articles of food, meat, potatoes, vegetables, butter, eggs, and poultry are fully thirty per cent. higher than they were thirty years ago. In fact, we believe that the payment of the modern scientific Practitioner is not so good, in proportion either to his services or to the value of money, as was that of the apothecary of the last century.

As we write, we have before us a bundle of old apothecaries' bills, hoarded up amongst sundry papers of the last century, and they give us a curious insight into the status and remuneration of the apothecary of that day. The following is a specimen of a running account, whose first *item* is dated July 31, 1749, and the last January 11, 1756:—

Dbtor. to Elias Young.

1749.	Mr. D——.	s.	d.
July 31.	Item: Bleeding	1	0
Nov. 10.	Item: Tobacco ¼ lb.	0	6
	Item: Bleeding	1	0
	Item: Curing your eye & face	10	6
Feb. 9.	Item: Mixture of oils	0	6
10.	Item: 7 lb. of Salmon cost	5	3
Oct. 23.	Item: bleeding	1	0
	Item: Emulsion	2	6
	Item: perl Barley	0	2
25.	Item: Emulsion	2	6
	Item: perl Barley	0	2
26.	Item: 2 Draughts	2	0
28.	Item: Electuary	2	0
	Item: Pectoral Apozem	2	6
29.	Item: Tincture Rhubarb	1	0
	Item: Balsamic Apozem	3	0
	Item: Hartshorn	0	4
	Item: Volatile Aromatic Spirit	0	6
	Item: Perl Barley	0	2
30.	Item: Stomatick Elixer	1	0
	Item: Bottle Bristol Water	1	0
31.	Item: Sagoe	0	4

The *items* go on at much the same rate during the early part of November, when there occur the following:—

		£	s.	d.
Nov. 4.	Item: Curing yr legs	1	1	0
7	Item: 1 Flask Spaa Water		1	6
	Item: Stomatick Tincture		2	0
	Item: Paid for a hatt	1	0	0

The account goes on at intervals with many miscellaneous *items*; occasional shillings for bleeding and tooth-drawing; purging and other draughts at a shilling apiece; nervous tincture, gargarisms, and the like. What looks most like a daily attendance during a continuous illness runs from October 23 to November 7, as above, and the charges during that fortnight, including the curing the legs, but not the "hatt," amounted to £2 9s. 3d.

It does not appear as if the prices of medicines had been raised during the last century and a quarter; pills, draughts, and boluses were at about the ordinary price now, but bleeding, toothdrawing, and journeys were decidedly cheaper. There is no doubt that bleeding was a very common shillingsworth. This is a specimen of an ordinary bill:—

1745.		s.	d.
May 16.	2 bleedings	2	6
	A sudorific mixt.	1	4
	A contrayerva do.	1	6
18.	Electuary	2	6
	Ingredients for drinke, and Mixture	2	3
	My attendance	3	6

In another bill we find the charge for "curing your ague," *5s.*

1745.		s.	d.
Mar. 23.	A cordial Bolus	1	4
	A pint Julap	2	6
24.	A box Hysteric Pills	2	0
	A cathartic Mixture	1	3
	Anodyne do.	1	0
	A pint medicated wine	2	6
		10	7

The idea which we gather from the documents before us, of the status of the apothecary 120 years ago, was that he was a tradesman of the better sort. Considering the small expenses of education and living, his emoluments could not be called bad, and, as a matter of fact, we know that many of the fraternity left considerable property behind them. He was, apparently, a genial kind of fellow; lived on good terms with his patients, lent them money, paid their hatter, and went shares in a fine salmon. Although he chiefly lived by his drugs, yet his charges for attendance were more frequent than might have been expected. When not busy he would lend his horse, and charge for the same in his bill. Besides supplying such medicines as he thought fit, or such as a Physician might prescribe, he dealt in sick comforts, as sago, barley, and hartshorn; sal volatile, spirits of wine, and camphor, of course. The use of mineral waters at that date is worth noting. We are unwilling to say it, but it is clear that the apothecary also dealt in many other things which would shock his brethren of the present day—"oyls," colours, and painting brushes, tobacco, vinegar, and horseballs are amongst them—but more especially brandy, the price of which seems to have been 1s. 1½d. per quart! Certainly, if practice can make perfect, the Practitioners of that day must have been expert bleeders.

The moral of the matter is, that in abandoning pharmacy Medical men abandon what used to be a most lucrative branch of business, and that the fees for visits ought to be on a liberal scale to make up for the loss. Be it remembered that, unlike the old apothecary, the modern Practitioner very rarely receives anything over his demand. The old apothecary, on the contrary, never sent out a bill for medicines to a respectable family without receiving a bonus, as an honorarium for his personal attention to his patients.

THE WEEK.

TOPICS OF THE DAY.

THE conclusion is pretty evident, that if the world continue to go on for a few hundred, or at the most a very few thousand years, as it has during the last four thousand, the mammalian sub-class will come to be represented by man, the domestic ruminants, the horse and donkey, the cat and dog, the hog, a few small rodents and insectivores, and perhaps some of the marine mammalia. How long the country gentlemen, *feras consumere nati*, will preserve a few deer in their park, and foxes in their covers, for the sake of gratifying their natural instinct, is a question which increasing population will soon take out of their hands. In the whole of the Western Hemisphere the fauna which the white man found is disappearing before his cows, and sheep, and horses, and rats as fast as his copper- and black-coloured brethren disappear before himself. The large mammals of the old world are fast being driven back—in other words, exterminated—and are destined to be as much things of the past as the mammoth and the Irish elk. Man will be the only important carnivore left, unless, indeed, "preordained becomings of living beings" have anything in store to diversify a condition of things which, though peaceful and productive, will be dull for naturalists. That the aforementioned instinct will be the chief motive power in producing this consummation is a thing patent and clear. How much it had to do with getting rid of the post-glacial fauna, it is of course impossible to say, but we suspect a good deal. We only hope beef and mutton will remain unaffected by the natural law which determines the disappearance of species, as the history of New Zealand after the destruction of the Moa does not suggest pleasant thoughts. To escape them, we revert to the circumstances which threw us into this reverie. It is the celebrated correspondence on the destruction of bottle-nosed whales and porpoises between Mr. Drew, of Nairn, and Mr. John Bright. The comical absurdity of Mr. Drew's unvarnished proposal, and the additional fun to be got out of the letters in which it is made, the way in which Mr. Bright is begged to bring "'his great mind' to the capture of

bottle-nosed whales and other ponderous monsters," suggest that the whole matter is a Conservative joke on Mr. Bright. But it is evident, on a second reading, that Mr. Drew is in earnest. He has an idea that porpoises and bottle-nosed whales eat the fish which might be caught by "our hardy fishermen," and therefore they are to be exterminated by the Board of Trade. On what evidence Mr. Drew grounds his assumption that porpoises and bottle-nosed whales destroy fish he does not state; probably because they are large, and the fish are small, he takes it for granted. Mr. Flower, however, who is an authority on all that pertains to the cetacea, denies that many of them prey on fish at all: they live chiefly, if not exclusively, on cephalopods—cuttle fish and squid—which are themselves destroyers of enormous quantities of eatable fish. But any excuse, good or bad, is held sufficient to justify the work of extermination. If the present fashion of carrying birds' wing feathers and breast plumage in the things women call hats be continued, gulls and guillemots and penguins will soon follow the great auk and the dodo to the land of shadows. Time and observation can only show whether any new species will arise to replace those that have disappeared in the memory of man. But it is ominous that, although history has recorded the extinction of several, it furnishes no example of a single new creation.

The Holborn Board of Guardians are making a vigorous opposition to the order of the Poor-law Board which amalgamates the Holborn Union with the parishes of St. James, Clerkenwell, and St. Luke, Middlesex, in the Finsbury sick asylum district, and which would necessitate the erection of an infirmary with 800 beds (one-third larger than St. Bartholomew's Hospital), out of town, at the expense of the ratepayers. The Guardians charge the Poor-law Board with instigating them to acquire property for the erection of an infirmary in the immediate neighbourhood of their workhouse, and then, after the Guardians have entered into an agreement for the purchase of a site at the cost of £5000, the Poor-law Board issue the order for the creation of the Finsbury sick asylum district. Their other arguments may be summed up:—That a monster infirmary out of town is not necessary; that, being at a distance, it will entail great inconvenience to the sick poor; and that it will cost an enormous sum, and will impose a heavy expenditure on the ratepayers for its maintenance. We think that public opinion is already siding with the Board of Guardians. At least, the matter ought not to be pressed forward until the House of Commons has come to a decision on Mr. Torrens's motion.

The December number of the *Transactions of the Odontological Society* is entirely devoted to the report of the Committee of that Society on nitrous oxide as an anæsthetic, and to the discussion which followed the presentation of that report to a meeting of the Society. Both the report and the discussion have great interest for the whole body of the Medical Profession. The report is confessedly only a preliminary one; it does not enter on the question of the physiological action of the gas, which was the principal point mooted in the discussion; but, as far as it goes, it is strongly in favour of the use of the gas in operations requiring but a short time for their performance. It is based on experiments on animals; on 1380 cases in which the gas has been administered to the human subject, and where the administration has been watched by members of the Committee; and on 1051 cases of administration of the gas reported to them by Practitioners of credit. They acknowledge the disadvantages of the gas arising from its rapid anæsthetic effects and the rapid recovery which follows, rendering it unsuitable for long operations, or for operations followed by much smarting and pain. Another objection they notice is that muscular twitchings often occur during its use, and might interfere with a delicate operation. The trouble of administering it, the difficulty of transportation, and its cost also, are objections which must be allowed. On the other hand, the rapid recovery in from 100 to 120 seconds, the tasteless unirritating quality of the gas, the absence of nausea and vomiting after its use in ninety-nine cases out of a hundred, and the general freedom from giddiness, headache, and other unpleasant effects, are strong points in its favour. The Committee—very wisely, we think—decline to rest their inferences on the 200,000 cases in which the gas is said to have been administered in America with only a single death. And we would remind them that—although we acknowledge the great value of their report to general Medical science—the number of observed cases in this country has not as yet been sufficient to warrant perfect security in the use of the gas for all patients. The reporters very judiciously advise caution in its use in cases of organic disease of the heart, lungs, arteries, and brain, and in plethoric persons with short necks, although they have as yet met with no instances where untoward symptoms arose under such conditions. In two cases in which the gas was given to patients with tubercular consolidation of the pulmonary apices, recovery was perfect, but slower than usual. It has been given with impunity to a patient suffering from spasmodic asthma, and to persons whose arteries were "hard, tortuous, and loaded with atheromatous matter." Yet when we recollect the numerous instances which exist of Hospitals where chloroform has been used for years without a death, whilst nevertheless deaths from chloroform have been calculated at not much less than one in 1500, we would still counsel caution. We have no doubt that we have in nitrous oxide a valuable anæsthetic, but we must wait for further evidence before its degree of safety can be assigned with certainty. The theory that the anæsthetic effects of the gas were simply due to its producing apnœa was advocated in the discussion by Mr. Norton and Mr. Sewill, but was opposed by Dr. Sanderson and Mr. Cattlin as irreconcilable with the results of their experiments. Dr. Sanderson said that the action of nitrous oxide upon the respiration and circulation was the same as that of pure nitrogen—both produced apnœa—but nitrous oxide produced anæsthesia in less than a minute, whilst, when pure nitrogen was used, anæsthesia did not occur until the patient was already asphyxiated—*i.e.*, three minutes or so after inhalation. Mr. Cattlin's experiments on pigs showed that animals deprived of atmospheric air manifested signs of pain when pricked with a spur, although lying as if dead, whereas no such signs of pain were produced when the animal had inhaled nitrous oxide. The whole discussion, however, is well worth reading, and it reflects great credit on the Odontological Society, which appointed a committee to carry out the investigation, the results of which are embodied in the report. This committee has acted in conjunction with a sub-committee appointed by the authorities of the Dental Hospital to institute a series of experiments on the anæsthetic properties of the gas: to carry out which, it may be remembered, the Hospital authorities were assisted by a donation of £100 from Dr. T. W. Evans, of Paris.

In his lecture, delivered on Tuesday last, Dr. Richardson proposed the inhalation of cold and dry air as a remedy for the condition associated with separation of fibrine from the blood in inflammatory diseases. He finds, by experiment, that the inhalation of air artificially cooled is capable of bringing down the temperature of an animal several degrees. In the condition above referred to, there is, concomitant with an increase of the fibrine and water of the blood and a diminution of the corpuscles, a marked rise in the temperature of the body. By an ingenious apparatus he is enabled to cool and dry the air which is to be breathed by a patient in this condition, and he suggests that the diminution of temperature which will result may probably be accompanied by an arrest of the tendency to separation of the fibrine from the blood. As a therapeutical means the inhalation of cold air is not new. Dr. Richardson informs us that the treatment of disease by the inhalation of air rendered artificially cold was proposed by Dr. Drake, a follower of Dr. Currie, of Liverpool, in the second volume of the *American Journal of the Medical Sciences*. We

believe, however, that Dr. Richardson has been led to suggest it as a means of reducing the temperature by his experiments and his researches into the phenomena which accompany the separation of fibrine.

The Medical evidence in the alleged Norwich murder will be of enormous importance. The human remains found in 1851 were considered by the Medical men who examined them to be those of a young woman. The official placard issued by the police stated them to be those of a young female between the ages of sixteen and twenty-six years. Of the Medical men who examined them, two, Dr. Ranking and Mr. B. H. Norgate, are dead; but two are still living, Mr. W. P. Nichols and Dr. D. Dalrymple, the member for Bath. It seems that, through some neglect of the authorities, an inquest was not held at the time of the discovery of the remains, and the idea got abroad that they were those of a body which had been used for the purposes of dissection. Dr. Ranking, it is said, stoutly opposed such an explanation. The woman who was the wife of the man who is now in custody, on his own confession, for her murder, was, it is stated, nearly sixty years of age. If so, the remains found in 1851 could not have belonged to her. We hope that there will be no serious difficulty in coming to a decided conclusion as to the age of the person to whom the remains now undergoing fresh examination belonged. Of course a discrepancy in this point would entirely shake the public confidence in Sheward's story.

It is announced that the French Minister of Public Instruction has decided that homœopathy shall have a place amongst the subjects to be taught at the Sorbonne. One Dr. Léon Simon is to be the Professor. We can only thank our stars that in England neither our Universities nor our Profession are under a central authority.

The principal point which calls for attention in the sanitary condition of the country is the continued prevalence of scarlatina. The Registrar-General reports that in London alone scarlet fever has destroyed fifteen lives, of children chiefly, every day for the last thirteen weeks, or 1324 lives in the aggregate. But the epidemic is not confined to London, nor even to England, for the Scottish returns show that it has been unusually prevalent in the eight principal towns. In Glasgow last month it caused 13·2 per cent. of the deaths; in Greenock 8·2 per cent. The Registrar-General for England, we observe, has given exceptional prominence to a paper from Dr. William Budd on the prevention of scarlet fever, which lately appeared in a Medical contemporary. The paper contains much that is good, but nothing that is new, and some things the utility of which certainly requires proof, such as the anointing of the patient's body with oil and camphor—a very disagreeable process.

MEDICAL CANDIDATES FOR THE ARMY.

We understand that there will not be any examination in February next of candidates for admission to the Army Medical Department, there being already a considerable number of supernumeraries.

UNIFORM OF MEDICAL OFFICERS.

We are informed that the highly objectionable "black strap" hitherto in vogue to distinguish Medical from combatant officers of the army is at last, after many solicitations, to be rendered of a more ornamental character, by the addition of a border of gold lace on the pouch and sword belt. Medical officers, we are sure, will be glad to hear of the improvement.

MAN OF THE PALÆOLITHIC AGE.

Mr. Whitley, in the pages of the *Popular Science Review*, has hit a hard blow at the theory which assumes a human origin for flint flakes and knives as such. If polished, or bearing marks of use, of course they tell an unmistakable story. But, with regard to the rough flakes found in such abundance, Mr. Whitley argues, 1st, that stone implements pass by such insensible gradations into other forms of fractured flint, obviously the result of natural causes, that their advocates find it difficult to determine whether they are artificial or natural; 2ndly, that these flakes are found in relation to the chalk—sometimes being *in situ*, at others transported by floods; 3rdly, they are found profusely all over the world, and on precipitous cliffs where man could hardly find a foothold, and certainly no means of subsistence. They are found of all sizes, from one-eighth of an inch to eight inches; good and bad are found together promiscuously, and what savage, says Mr. Whitley, chipping flints for use, would throw away good and bad specimens alike? It is calculated that one savage living by the chase requires ten square miles at least for subsistence, and his flint implements, if found, must be few and far between. But flint flakes may be found by the bushel over spaces which no savages could have occupied. Nevertheless, flint flakes were selected, ground, polished, and used by man; but that is quite a different thing from asserting that every knife-shaped bit of flint was the work of man's hands.

ARMY MEDICAL DEPARTMENT.

Amid the many rumours of approaching retrenchment in all branches of the public service, it is not to be wondered at that the Army Medical Department should have come in for its share—or, indeed, rather more than its share—of threatened reduction, with that sort of "It is naught! it is naught" cry with which a sharp purchaser always depreciates the article which he desires to possess, but on the lowest possible terms. We are told by some of our daily contemporaries that the Army Medical Department is inefficient, over-officered, and under-worked, and that a parish doctor would compound to do the combined Medical work of ever so many garrisons for an infinitesimal portion of the pay of the present establishment. We hardly think the present Medical parochial system so satisfactory to the members of our Profession or to the country generally that it would be desirable to establish the treatment of our soldiers on the same system. Whatever may be the shortcomings of the Army Medical Department, they have arisen from extrinsic causes quite beyond its own control. The Department in its present state is merely the natural result of the system of military administration under which this country has laboured for so many centuries, and until this has undergone a thorough remodelling it is idle to speak of reductions in this or that department. When "Our Future Army" stands forth completed on the system now being sketched in outline by the *Pall Mall Gazette*—when our soldiers are enlisted for short periods—when an army of reserve of trained men, able to support themselves in civil life by trades learned or cultivated during their military service, is ready to take the field on emergency—when the colonies are in a position to support their own armies on a similar footing, and when India no longer requires fully one-third of the Imperial forces, the Medical Department of our Army will, of course, partake of all those changes. It is certain that great modifications are impending, but they must be the work of time, and whilst being gradually evolved it would be premature as yet to speculate on their nature. If reduction of general taxation and a material increase in the prosperity of all classes can be effected consistently with adequate provision for protection from foreign foes, we, as a Profession, shall come in for our due share of the improvement, and should not be induced to join, from feelings of class interest, in clamour against any measures which the country may consider to be conducive to the general welfare. One thing is certain—there will be no increase to the Department, and if the troops be withdrawn from many of the colonies there must be reductions in all ranks, particularly in the inspectorial, so that Surgeon-Majors can have little or no

inducement to hold on after the expiration of their twenty-five years' service. They can attain no advantage by doing so; and we feel certain that many of them would retire at once should Mr. Childers' scheme, now likely to be carried into effect for the Royal Engineers and Artillery, be extended to the Army Medical Department. The consolidated sum, in lieu of retiring pension, would enable many of them to make arrangements for the future support of their families at home or in the colonies, in which so many army Medical officers have formed for themselves valuable friendships and connexions.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE proceedings of this Society on Tuesday evening were of unusual interest; the announcement of a paper by Drs. Gull and Sutton on Rheumatic Fever sufficed to bring together some of our best-known Physicians, and to fill the benches with faces we now unfortunately too rarely see. The paper was chiefly founded on a number of cases observed by Dr. Sutton in the London Hospital, and treated with mint-water only, a little opium being sometimes given to allay pain when excessive. The cases were contrasted with those treated by Dr. Garrod with alkalies, those treated by Dr. Owen Rees by lime-juice, and those treated by Dr. Herbert Davies by blistering. The period of stay in Hospital was not insisted on, but the length of the disease, as tested by the thermometer, was given, and found to average about ten days after admission. What the paper, however, chiefly aimed at showing, was the relation of the affection to heart complaint, and the authors succeeded in proving that the great tendency to heart complication was during the first week of the disorder—in fact, coincident with the joint affection. They also pointed out that patients rarely came under treatment till this period had passed, that after their reception into Hospital there was really little tendency to heart affection, and that the supposed remedies had consequently very little influence on its occurrence or non-occurrence. This thesis was vigorously attacked by Dr. Fuller, who tried to show that patients really did recover faster and better under the judicious use of alkalies than by any other mode—that they did obviate the tendency to heart complication, which extended over a longer period than the authors were disposed to admit,—that the reason why alkalies had been condemned was, that errors of diagnosis had been made, and that suchlike affections as gonorrhœal rheumatism had been taken for the true complaint. Dr. Gull replied warmly, urging that stay in Hospital was no criterion of the length of a disease, that the question of heart complication was one of careful diagnosis in the early period of the acute disease, and that such a thing as diagnosis of acute rheumatism in a case like this was out of the question, the patients having been selected with peculiar care. Dr. Stewart said that he concluded that, with remedies or without remedies, the disease was much the same, whilst some cases were obviously unsuited for alkaline treatment. The question could only be settled by experience lasting over years. Dr. Dickinson attacked the authors on the question of heart complication, and maintained that, in his experience, heart affection had begun in the first, second, third, and even fourth week of the disease. As the debate promised to be of such interest, on the motion of the President, it was adjourned for a fortnight.

THE CLINICAL SOCIETY.

THIS Society held its first annual meeting in the rooms of the London Medical Society, on Friday, the 8th inst., the President, Sir Thomas Watson, in the chair. Various reports were read, tending to show the prosperity of the Society; its finances were proved to be in a sound condition, a balance of 73*l.* 4s. 1d. remaining in the hands of Dr. Greenhow, the Treasurer. As a worthy successor to a worthy occupant of the chair, Mr. Paget was elected President for the ensuing year. Sir Thomas Watson made some interesting remarks on the state and work of the Society, which, however good, had scarcely been of the kind he most desired to see—viz., therapentical. He desired to correct an error into which some, it seemed, had fallen with regard to his own opinion of the means at our disposal for remedying disease. So far from despairing of obtaining a sound knowledge of disease and its treatment, it was from his confidence in the resources of the Physician that he desired to see these converted into arms of greater precision, and therefore of greater value. After several interesting remarks of a like tendency, the illustrious President concluded by thanking the Society for the honour it had done him in electing him as the first to fill such an important office. The ordinary business of the Society then proceeded; short and interesting communications being read by Mr. Moore on the use of acupressure of the brachial artery in a case of acute suppuration of the hand, and by Mr. Thomas Smith on puncturing the abdomen for the relief of intestines distended with gas.

THE HARVEIAN SOCIETY.

ON the evening of Thursday, the 7th inst., the Harveian Society held their annual meeting for the election of office-bearers. The former part of the evening was devoted to a conversazione. Some of the best-known instrument-makers exhibited specimens of their art; the Messrs. Silver, of Cornhill, showed the Norwegian cooking apparatus; Dr. Kirby some of his miniature dispensaries; and Van Abbot a variety of eatables and drinkables for invalids' consumption. The reports of the Treasurer and Council were highly favourable, Dr. Fuller reporting that he held 150*l.* of the Society's money after all expenses had been paid. The number of members had also largely increased. Dr. Greenhow was elected President for the ensuing year; and Mr. Ernest Hart, the retiring President, delivered an address. He had intended to read one on the applications of the ophthalmoscope to ordinary Medicine; but as time did not admit of this, the paper was postponed to the next ordinary meeting. Mr. Hart, in the course of his speech, directed attention to two important matters connected with the Society. One was the failure of the Therapeutical Committees to obtain anything like sound and good information on any of the questions laid before the public; what replies had been received had not been of the kind wanted. Again, as to the cares which wealth entails, they had to decide what to do with their money. Dr. Fuller, with a treasurer's instinct, wanted to fund it. He thought it better to spend it. The plan he advocated implied neither eating nor drinking, nor indeed any other form of creature comfort—as separate rooms, with magazines, and so on—but he thought it would much conduce to the benefit of the Society if abstracts of the various papers brought before them were printed and circulated among the members, not after they had heard the whole read, but before the meeting, in order that the debates might be improved. Mr. Hart intends to adopt this plan in his own case before the next meeting. After votes of thanks to the various office-bearers, the meeting adjourned.

MEDICAL JURISPRUDENCE IN DEVONSHIRE.

THREE young men were charged at the Devon Epiphany Sessions with stealing a piece of pork, and in the house of the father of the prisoners a joint was found resembling that which was lost, and presenting marks of teeth, as if a little had been bitten off. Sergeant Coles, a man of an inventive turn of mind, hit upon the following mode of identifying the tooth-marks. He took a piece of mutton-suet and went into No. 1 cell. This fact being admitted, the following cross-examination took place:—Q. Did you invite the prisoners to bite?—A. I did. Q. Was it raw?—A. It was. Q. Did you want to administer an emetic?—A. I don't know what you mean. Q. You don't know what an emetic is?—A. No, sir. Q. Did you ask the first prisoner to have a bite?—A. Yes; I had seen that some one had bitten it (the pork) before.

Q. Did he like the raw meat?—A. He bit it. Q. And did you ask the other prisoners to bite?—A. Yes. Q. What was the object of making them bite?—A. To see if any of their bites corresponded with the bite that had been taken before. Q. Would not soft wax have been a better thing? You would then have had the very model of them. Do you think it your duty to go about the cells making experiments? The Chairman (the Earl of Devon) thought this question should be left to the jury—a view in which we cannot concur. As a matter of common sense, we should conceive that such experiments as Sergeant Cole instituted were utterly unwarantable and illegal. As an illustration of the mental calibre of Devonshire juries, we may mention that a few days subsequently a horse-warranty case was tried at Torquay. After much deliberation the jury returned the following extraordinary verdict:—"We agree that the words made use of by the defendant at the time of sale constitute a warranty, but at the same time are of opinion that he believed he was selling a sound horse. We, therefore, give a verdict for half the amount claimed." Are these the Solons to whom, in the opinion of the Earl of Devon, the regulation of the duties and powers of our police should be referred?

DR. THURNAM ON ANCIENT BRITISH SKULLS AND BARROWS.

Dr. Thurnam has published an extremely clear and concise account of the inferences deducible from his researches on ancient British barrows in Wiltshire and the adjoining counties. He begins by describing the two kinds of barrow, the long and the round. The long barrows (which in stone districts contain chambers, galleries, or cists of huge stones) are oblong *tumuli*, with their biggest end toward the east; the round barrows, more numerous, are more or less conical or bowlshaped. The sepulchral deposit for which the *tumulus* was built, is called the primary interment; but either kind of barrow may contain secondary interments—that is, bodies buried in the barrow after its construction.

"In no case," says Dr. Thurnam, "have the primary interments in the long barrows yielded objects of metal, whether bronze or iron; though in several instances instruments or weapons of bone and stone have been found with them. Among the latter are specially to be noticed certain delicate, well-chipped arrow-heads of flint, of a leaf-shape; and probably, as at Uley, axe-heads of flint and green-stone, both polished. I therefore think we do not err in attributing this form of *tumulus*, as it occurs in the south-west of England, to the *neolithic age*, and to a period when the burning of the dead, though not unknown, was not a generally received or favourite method of disposing of their remains."

The round barrows much more frequently contain the results of burial after burning, in addition to implements of stone, "including beautifully barbed arrow-heads of flint, and not unfrequently comprise other implements of *bronze*, and also the finer and more decorated sorts of ancient British *fictilia*—the so-called 'drinking cups' and 'incense cups.' We may safely conclude that all are of the same *bronze age*."

It happens that the skulls found in the long barrows are usually dolichocephalic, or long-headed, with a mean breadth to length as 71 to 100. Those in the round barrows, and in many secondary interments in the long barrows, are brachycephalic, with breadth to length as 81 to 100. It is contended, says Dr. Thurnam,

"That the long heads were the true primeval race; and that they were succeeded by a taller, more powerful, and more civilised people, who gradually extended themselves, and became dominant through a great part, perhaps nearly the whole, of the island. These British *dolichocephali*, or long-heads, are the earliest people whose sepulchral monuments can be shown to remain to us. The exploration of their tombs—the long barrows—shows that they buried their dead entire, and almost always without cremation; that they possessed herds of small short-horned oxen—the *Bos longifrons*, or *Bos brachyceros*—that they subsisted largely by the chase of the red-deer and wild boar; that some of their customs were barbarous in the extreme; and in particular, that, if not addicted to anthropophagism, they at least sacrificed many human victims, whose cleft skulls and half-charred bones are found in their tombs."

Dr. Thurnam goes on to infer that the two people, so differing in skull and in civilisation, were described by Cæsar, who says that the aboriginal Britons inhabiting the interior did not sow corn, but lived on milk and flesh, and were clad in skins, whilst the inhabitants of Kent, who had migrated from Belgium, were agriculturists. Considering, too, that the measurement of the thigh bones shows the long-heads to have had an average stature of 5 ft. 6 in., and the short-heads of 5 ft. 9 in., it is probable that the latter were tall Gauls, of light complexion; the former dark Silurians, of shorter stature; the former derived from the brachycephalic stock of North-eastern Europe and Asia, the latter from the Iberians, whose affinities are unknown. It is painful to have to confess that the evidence of the cannibal habits of primitive man is overwhelming; for instance, the human bones found about the old pit dwellings near Salisbury are split up as if for the extraction of marrow, and scored with knives, just like other mammalian remains.

SURGICAL AND MATERNITY HOSPITALS.

The reiterated statements of Sir James Simpson on the subject of Maternity Hospitals, as ordinarily erected and conducted, and their mortality, must in course of time produce an effect. *Apropos* of a letter on the subject of the mortality in the Edinburgh Maternity Hospitals, Sir James, in a long letter to the *Scotsman*, makes some remarks on the subject of Surgical Hospitals, which he likens in many ways to Maternity Hospitals, which are well worthy of general attention. He puts his remarks in the convenient form of propositions, which we here reproduce. Taking limb amputation as the standard of comparison, he goes on to state:—

"*First Proposition.—About three times as many patients die after limb amputation in our large Hospitals as die from the same operations in private and country practice.*—I have collected the reports of 1000 and odd limb amputations in country and provincial practice. Out of the 1000, the proportion of deaths was nearly 110, or 1 in 9. But out of 1000 similar amputations performed in the large Hospitals of Edinburgh, Glasgow, London, etc., the proportion of deaths is generally above 300, or about 1 in 3. In our Hospitals, then, as at present constructed, we thus induce a sacrifice of some 200 human lives out of every 1000 limb amputations, over similar operations performed in the country, chiefly in the habitations and cottages of the poor; and so, no doubt, proportionally with regard to other Surgical operations; if not also with regard to other diseases when treated in Hospitals, as Hospitals are at present commonly constructed and used.

"*Second Proposition.—Hospitals seem generally to be much more healthy when first built than after they become used for a few years.*—For example, Mr. Liston told me that for years after he was transferred from Edinburgh to the charge of the new Surgical Hospital at University College, London, his success appeared to himself to be astonishing. Mr. Potter has published the statistics of the amputations in University College Hospital for the first five or six years after the Hospital was opened. The deaths amounted to 1 in 6 or 7 of those operated upon. In the last returns which I have seen published (1855-57), the deaths had more than doubled, for they had increased to above 1 in 3. In 1752, the first Professor Munro published the results of the first 99 or 100 limb-amputations performed in our own Infirmary here. Of the 100 only 8 died, or 1 in 12. The last tables published show a death-rate from the same operations of above 30 in 100, or 1 in 3. Hence there are some evils in our Hospital constructions which make their deleterious influence and atmosphere far more than neutralise and counteract all the benefits derivable from the advancements of Surgical science.

"*Third Proposition.—To reduce the death-rate from operations in our Surgical Hospitals, we should perhaps specially strive to assimilate the form and arrangements of these hospitals to the condition of patients in private and country practice, where these operations are so much more successful.*—Writing on this subject upwards of twenty years ago, I suggested that our Medical, Surgical, and Obstetric Hospitals should be changed from overcrowded and many-storied palaces, with layers of sick placed

on each flat, into villages or cottages; and that these villages, or the working wards and parts of the Hospitals, should not be built of stone and lime, but of some temporary material which allowed them to be taken down and rebuilt every few years—as brick, wood, or iron; and I added that if constructed of iron the material would not greatly deteriorate from use. An iron house or ward can always be readily taken down and screwed up again. But if constructed of permanent materials—as stone and lime—the Hospital, to assimilate it to the country village, should at least consist of only one story, underbuilt or not with structures for other Hospital purposes. I have heard the idea of an Hospital village objected to on æsthetic and architectural grounds. I feel sure, however, that Mr. Bryce could erect for us a splendid village as well as a splendid palace. He might make the administrative part of the Hospital as rich and elegant a stone structure as art could devise.

"*Fourth Proposition.—If permanent stone and lime structures are raised, there should be many wards of reserve, so that every ward should be duly cleansed and fumigated every few months in turn.*—Much advantage has already resulted from this plan; but it is, of course, not so certain as reconstructing the wards anew.

"Cottage or hut wards, made of wood and canvas, have, since the late German war (when they were found to be better and safer than palatial Hospitals), been erected on the grounds around various Medical and Surgical Hospitals in the larger cities of Germany. They are used during the summer, as they have not yet been made to resist the intense cold of the Continental winter. The whole system of village Hospitals now spreading over England is founded on this principle. In the grounds of our own Infirmary sheds and tents were used most successfully when the wards of the Hospital were overcrowded in two epidemics of fever and scurvy. Speaking of the results of observations on this matter during the late civil war in America, Dr. Hammond, formerly Surgeon-General to the United States army, states:—'Temporary Hospitals . . . are far healthier than permanent buildings; an assertion the truth of which has been thoroughly demonstrated during the present rebellion.' He thinks they are best made of wood. One made of iron, and forming a ward of twenty beds, has lately been erected and used at Bathgate. It cost £7 a bed. Each bed in our chief Hospitals—when the structure is a mansion built of stone and lime—has generally cost £100 to £200; and some have cost much more."

Sir J. Y. Simpson contends that as crowding is liable to affect the death-rate out of the Hospital, still more is it likely to affect both the death-rate and period of convalescence in a mansioned Hospital. Hence, to insure an abundant supply of fresh and ever-changing air, the larger the area over which a Hospital is spread the better, and he therefore advocates additional grounds to be added to those of the present or proposed infirmary. Sir James, although strongly opposed to Maternity Hospitals in their present form, maintains that the objections to them hold with equal force against Surgical Hospitals, and as we cannot well do without either we must give them the best possible form and structure. After adducing some arguments in favour of having a new Maternity Hospital associated with the new infirmary, he concludes a powerful letter as follows:—

"The new model Obstetric Hospital should, I hold, certainly not be large; should be built cheaply, and with temporary rooms and wards; and should be a structure, like the Lock, Fever, and Small-pox Hospitals, separated from the other Hospital buildings."

FROM ABROAD.—PARIS MÉDICAL—THE RIBERI PRIZE.

THE Paris *Almanach de Médecine* for 1869, the nearest approach to the London Medical Directory (for there is no general Medical Directory for France), furnishes some figures that may be of interest. The Almanack first gives an account of the course of study to be pursued by students, and of the laws regulating the Profession. The Medical student must, before he makes his inscriptions, have obtained the diplomas of the Baccalauréat-ès-lettres and -ès-sciences, the first costing him 100 and the second 50 fr. For his purely Medical studies he has to make sixteen inscriptions during the four years over which these are continued, the entire expense necessary for obtaining his Doctor's diploma being 1272 fr., to which 150 fr. of optional expenses for special advantages may be added. The diploma of the *officier de santé*, or Medical Practitioner of an inferior class, educated in the provincial schools, and confined in his practice to the department he selects, costs 848 fr. There are in France three Faculties of Medicine, that of Paris, with 6 Honorary Professors, 27 Professors, and 26 *agrégés* or Assistant Professors; the number of Doctors admitted from 1798 to 1867 inclusive was 17,190—282 having been admitted in 1867. At the Faculty of Montpellier there are 19 Professors and 16 *agrégés;* and at Strasbourg 16 Professors with 12 *agrégés*. There are 22 Preparatory Schools of Medicine in the provinces, at which the *officiers de santé* receive their education, some of these, as those of Lyons, Bordeaux, and Marseilles, demanding to be raised into Faculties. Though not Medical, yet having a scientific relation to the Profession, are certain learned bodies, as the *Muséum d'Histoire Naturelle*, with its 16 Professors—all men of European eminence—its 13 *aides-naturalistes*, and 6 *préparateurs;* the Collége de *France*, with its 31 Professors of the various branches of science and letters, amongst whom, as most connected with our Profession, we may notice the names of Claude Bernard, Daremberg, Marey, and Coste; the *Faculté des Sciences*, with 16 Professors and 3 *aides;* and the *Faculté des Lettres*, with 11 Professors.

Among the public appointments of the Profession we may notice that of the *Bureau Central*, having the duty of distributing all but the most urgent cases to the various Hospitals, and having for its staff 12 Physicians and 4 Surgeons, elected by *concours*. To the 24 Hospitals and Hospices are attached 77 Physicians, 29 Surgeons, and 16 Pharmaciens. A *Bureau de Bienfaisance*, for administering relief *à domicile*, is placed in every one of the twenty *arrondissements*, each having from 6 to 12 Physicians attached to it. Six Dispensaries also supply the 20 *arrondissements*, having 18 Physicians, 18 Surgeons, and 48 Pharmaciens attached to them. One of the public employments which seems to absorb an immense number of Practitioners is that of Physician to the theatres—the 21 theatres of Paris having no less than 218 Physicians attached to them. Another office is that of Verificator of Deaths (to which Verificator of Births is in future to be attached), who are 64 in number, with 13 Inspectors.

There are two Medical Benevolent Societies—the *Association Générale de Prévoyance*, consisting of 6314 members, with a capital of 534,810 fr.; and the *Association des Médecins de la Seine*, with a capital of 350,000 fr. Of learned bodies there are the Academies of Medicine and Science, and 22 Medical and Scientific Societies, besides several local Medical Societies in the different *arrondissements*. Thirty Medical and Pharmaceutical journals appear in Paris alone, but only 8 in the various provincial towns.

The total number of Doctors practising in Paris is 1567, to which are to be added 295 *officiers de santé* and 547 *pharmaciens*. As exhibiting the great difference which prevails in France as to obstetrical practice, as compared with this country, we may observe that the list of licensed midwives given amounts to the formidable number of 764. It is to be recollected, however, that the law compels these women to call in a Doctor of Medecine on the necessity arising of any instrumental interference.

Few offices are more thankless and unsatisfactory than the award of prizes, especially when the subjects of these have not been judiciously chosen. The Royal Academy of Medicine of Turin is now suffering under considerable obloquy for the award it has just made of the Riberi Prize. The celebrated Turinese Surgeon on his death bequeathed to the Academy a very large sum of money, but saddled with not the wisest conditions. In place of founding a prize in perpetuity, and of moderate amount, he established one of very large amount (20,000 lire or £800) to be awarded, in seven successive triennial periods, for the best work on Operative Medicine published during the preceding three years. It can be scarcely expected that a work calling for so great an acknowledgment will manifest itself at such short intervals. We do not remember to

have seen what the award was for the first triennial period (1861-64); but that for the second (1865-67) which has just been made in favour of Professor von Bruns, of Tübingen, for his work *Die Laryngoscopie* 1865 has excited a storm of indigation in Turin. Dr. Borelli, the editor of the *Gazetta Medica* of that city, has constituted himself its mouthpiece, although, as one of the competitors, this is a matter of some delicacy. This, however, does not trouble him much when he has the sacred cause of "Italian Operative Medicine" to defend against the inroads of a "German specialist," as he designates the famous Tübingen Professor. In fact, he makes it a mere question of country, not caring whether works published in other parts of Europe might not advantageously compete with that of von Bruns, but maintaining that the prize ought to have been bestowed upon an Italian Surgeon. We fear that in this matter he will scarcely carry the voice of Surgical Europe with him, for he is unable to point to other than detached papers by Italian Surgeons, which to reward in so costly a manner would be simply ridiculous.

REVIEWS.

On Diseases peculiar to Women, including Displacements of the Uterus. By Hugh L. Hodge, M.D., Emeritus Professor of Obstetrics in the University of Pennsylvania. With illustrations. Second edition. Philadelphia: Lea. London: Trübner and Co. 1868. Pp. 532.

In this work we find a full, elaborate, and most useful account of the doctrine of irritation as an element in uterine maladies. The term "irritable uterus" has been the subject of controversy, discarded and restored according to the views of the writer. Some consider "irritable uterus" to mean simply chronic or subacute inflammation, while others, with the author, assert that there may be "irritable uterus" without any inflammation. "One great object of the present work," the author states, "is to maintain that in many cases the independence of nervous diseases is complete; and also that when complications exist demanding therapeutic assistance, the *neurotic affection* is often of primary and essential importance, and demands the chief attention of the Practitioner." He considers these nervous diseases as physical, and that the irritations of the medullary matter of the brain, of the spinal cord, and of their radiations the nerves, are truly organic diseases, as inflammations, fevers, etc., are irritations of the heart, arteries, capillaries, and organic cells. (Page 72.) Hence the terms "irritability," "nervous," and the like, have a real meaning when applied to the nerves, and signify disease of the nerves essentially. The author proceeds to compare organic or vascular irritation with animal or nervous irritation. "Mental and moral affections excite the brain; powerful passions, as anger, irritate this organ, not as the subject of organic life, but as the subject of animal life. This excitement or irritation often appears or disappears without any appreciable disturbance of the circulation. This, therefore, is 'nervous irritation.'" A distinction is also drawn between inflammatory and simple (nervous) congestions. The inflammatory form is a disease essentially of the ganglionic nervous system of organic life. Simple congestion is an affection of the cerebro-spinal nervous system of the organs of animal life. When this congestion occurs it moves with wonderful rapidity. How rapidly will a transient thought mantle the face, neck, and breast of a modest woman with a scarlet blush! How suddenly will a cerebral irritation be sometimes followed by apoplectic congestion, convulsions, death! To show the Professional mistakes that are made, the author asks the question—"What is neuralgia?" He says it is, as its name implies, a variety of nervous irritation—in common parlance, pain. This comprehends the whole idea. But in the minds of many, neuralgia is associated almost invariably with inflammation; with them pain is a symptom of inflammation. No mistake, he says, is more frequent, none more erroneous, and few, perhaps, more injurious in practice. He points out that pain occurs frequently without inflammation, and sometimes there is inflammation without pain. Having described "anæmia" and "toxæmia," the author proceeds with his proper subject—"irritable uterus"—and asks what idea is to be associated with the expression. And the answer is—"No other than that the organ is more sensitive, more easily excited, than when in a healthy state." It is no longer in a normal condition, but in an abnormal, unhealthy, diseased state. Having given this definition, the author proceeds to discuss the opinions of pathologists; the supposed difficulty of treatment arising from erroneous views; the local symptoms of irritable uterus—as pain, congestion, inflammation; and, lastly, the general symptoms—as the cerebro-spinal irritations and cerebral disturbances, the sympathetic and reflex actions on the respiratory organs and those of digestion—and the results of irritable uterus in causing irritable rectum, bladder, vulva, vagina. The causes and pathology of these diseases are discussed and the treatment. In this he considers the removal or palliation of the cause, when known, and the hygienic and medicinal treatment.

In the second part the displacements of the uterus and their variety are considered, with their treatment, in which the use of the pessary is fully discussed, and especially of the vulcanite lever pessary, with which the author's name is associated. The use of this instrument is illustrated by diagrams, which are likely to be of great use to the Practitioner who is not familiar with it.

Altogether, we consider the work valuable, in pointing our attention more particularly to those diseases of the uterus in which the nervous system is most prominently engaged, and about which differences of opinion hitherto have prevailed amongst the Profession. It is the work of a clear and able thinker, a courteous, considerate, not dogmatic, writer, and a conservative and cautious Practitioner.

Traité de Physiologie. Par F. A. Longet, Professeur de Physiologie à la Faculté de Médecine de Paris, etc. Troisième édition, revue, corrigée et augmentée. Tome premier. 1868. Paris: G. Baillière. London: H. Baillière, and Williams and Norgate. Pp. 820.

Professor Longet's "Treatise on Physiology" is one of the most popular works on that subject in the French language. The first volume of the third edition, which now lies before us, treats of digestion, absorption, and respiration. We shall postpone any general notice of this work until its completion, which, if the statement on the cover can be trusted, will be effected next March. We will now merely observe that it is very deficient in illustrative figures as compared with Ranke's "Physiology," which we shall shortly notice, while it has the advantage over that work in being far more copious in the comparative physiology of each function—a subject in which diagrams are especially required.

A Sketch of a Philosophy. Part II. *Matter and Molecular Morphology. The Elemental Synthesis.* 1868. Williams and Norgate.

Such works as these are a sore trouble to the reviewer. Although there is no author's name on the title-page, we had not the slightest doubt, after reading a few pages, that this singular little work emanate from the active but somewhat eccentric brain of Dr. Macvicar, the worthy minister of Moffatt, who has already treated of the topics discussed in this pamphlet in a work of considerable interest, published as long ago as 1830, and entitled "Elements of the Economy of Nature," and subsequently in some of the scientific periodicals. Our view of the authorship was confirmed by a footnote in p.28 in which Dr. Macvicar reveals himself. Knowing him to be a very fair chemist, and to be an ardent searcher for the truth, we heartily recommend his little book to those of our readers who are interested in the study of chemical physics.

In amputations we generally use acupressure; very occasionally we still make use of the ligature. I do not abhor the ligature, but I admire the simplicity and confide in the efficiency of the needle. I have had to operate with my palanquin bearers as my assistants. One has administered chloroform, and another has handed me the instruments. In such circumstances there is all the difference in the world between finding three or four arterial mouths and tying them, and passing a needle underneath them in their course, and twisting a wire round it. I have never been troubled with secondary hæmorrhage. I generally remove the needles after forty-eight hours. Erysipelas and pyæmia are very uncommon in Madagascar. The Malagasy, unlike the natives of India, stand operations wonderfully well.—*Dr. Davidson's Report of the Antananarivo Dispensary for* 1865-6.

FOREIGN CORRESPONDENCE.

GERMANY.

THE ANNUAL CONGRESS OF GERMAN NATURALISTS AND PHYSICIANS.

BERLIN, December 27, 1868.

I TO-DAY finish my report of the more important transactions of this year's Congress. Professor Zenker, of Erlangen, who, as is well known, was the first to observe and recognise trichina disease in the living subject, communicated the results of his investigations into the "Life and History of *Oxyuris vermicularis*." He found that the real seat of this parasite—that is, the place where the female worms love to reside and congregate—is not the rectum, as has been generally assumed, but the cæcum; and that the males, which were formerly believed to be extremely rare, are just as numerous as the females. The history of the worm is the following:—Embryonic ova are swallowed; the embryos are set free in the stomach and grow up in the small intestines, being found in all parts of the latter from the duodenum downwards, and in all stages of development. They here undergo a process of moulting, and then assume the definite form of males and females. Fecundation frequently takes place in the small intestines. The females, after having been impregnated, rapidly migrate into the large intestines, while the males spend a longer time in the jejunum, and are found in large masses in the lower portion of the ileum, especially near the cæcal valve. A drop of mucus taken thence often contains a dozen males without a single female. Impregnated females accumulate in the cæcum, but the ova are not excreted in the cæcum, nor, indeed, in the upper portion of the large intestines. The development of the vitellus is now proceeding, but the ova are only set free in the rectum, near the anus, or after the worms have been discharged from the bowel. A further development of the embryos in the open air, or in an intermediate host, does not take place, and infection occurs by swallowing embryonic ova.

Professor Weber, of Halle, then spoke on reflex phenomena in the nerves of the rectum and the genito-urinary organs; after which Professor Munk, of Berne, read a paper on renal affections occurring in consequence of heart diseases. He said that three different kinds of such affections must be distinguished—viz., passive hyperæmia of the kidneys, interstitial nephritis, and shrinking of renal tissue. The symptoms in passive hyperæmia were diminution of the quantity of urine, which assumed a high colour, and had a higher specific gravity, containing albumen, epithelium, and blood-corpuscles. In such cases the chief object of the treatment must be to increase the pressure in the aortic system. In interstitial nephritis there were, besides the symptoms already mentioned, pus-corpuscles and cylinders in the urine; and the pressure in the aortic system must, under such circumstances, be lowered. In shrinking of renal tissue, the urine was clear and abundant; there was dilatation of the left ventricle, increased tension of the radial artery, and copious hæmorrhage, especially epistaxis, after which severe symptoms of uræmia supervened. In such cases the pressure in the aortic system should be alternately increased and diminished.

Dr. Jürgensen, of Kiel, then communicated his observations on the administration of quinine in febrile diseases, saying that this drug had the power of lowering the fever heat, and that this was done by the agency of the nervous system. Dr. Binz, of Bonn, spoke on the antiseptic effects of quinine, and maintained that the drug had no direct effect on the nervous system, but altered the composition of the blood, and that its nervine effects were only secondary. Papers were also read by Professor Biermer on fatty degeneration of the heart and the vessels, in consequence of idiopathic and secondary anæmia; by Dr. Ewich on artificial mineral waters; and by Dr. von Sniderski on an epidemic of relapsing fever which occurred at Posen during August and September last.

In the section for Anatomy and Physiology, Professor Heidenhaim spoke on the development of animal heat, and on chemical processes in the nervous system. He had found that no elevation of temperature took place in peripheral nerves, even if they were tetanised to the highest degree, but that the heat of the brain was more considerable than that of the blood contained in the carotid artery, in the heart, and the inferior vena cava. No acid was produced during the state of activity in the nerve, and the acid reaction found in dead nerves was not owing to decomposition of nervous matter, but communicated to them from the surrounding muscles. Dr. Gruenhagen, of Königsberg, spoke on the electrical phenomena in the nerves and muscles. Professor Ludwig said that, by establishing an artificial conduction of the current of blood through the intestines and the liver, he had succeeded in producing absorption from the intestines and formation of bile for several hours consecutively. Professor Goltz, of Königsberg, related the results of experiments on frogs, the cerebrum of which had been removed several months before. He concluded that the intellect was not limited to one special part of the brain, but that each portion to which a special motive power was assigned had also a certain limited amount of intellect bestowed upon itself. The spinal cord alone had no intellect as, after the removal of the cerebrum, the optic thalami, and the cerebellum, orderly movements were impossible. Professor Winther, of Giessen, then made a communication on the life of the white blood-corpuscles; Dr. Wolff, of Berlin, on the growth of bones; Dr. Schaafhausen, of Bonn, on the difference between the brain of man and monkey; Dr. Waldeyer on the development of the sexual organs in the embryo of birds; and Professor Nagel, of Tübingen, on rotation of the eyes, and the causation of myopia.

In the section for Surgery and Ophthalmology, Dr. Schildbach, of Leipzig, described a new method of treating deformities of the hip-joint, by continued traction, without causing any annoyance to the patient. The traction is performed by weights, fixed on to the leg by means of belts, and hanging down at the lower end of the bed over a roller; counter-extension is made by the weight of the body, the foot-end of the bed being eight or nine inches higher than the head-end. Dr. Suersen, of Berlin, spoke on the restoration of distinct articulation in acquired and congenital defects of the palate, by means of artificial palates. The apparatus consists of a tooth-plate, which is fixed to the teeth by means of clamps, and covers the deficiency of the hard palate; when the patient is not talking, and the superior constrictor muscle of the pharynx is therefore inactive, it fills the cavum pharyngo-palatinum. When the patient is speaking, the muscle just mentioned is laid over the posterior part of the obturator, and thus renders articulation possible. The instrument is at first made of plastic gutta-percha, which is inserted into the mouth of the patient, and becomes, by the contractions of the muscles, adapted to its place. It is then taken out; anything that appears to be superfluous is removed, and a cast then taken in hardened caoutchouc. The apparatus should not be used in patients under 8 years of age. When the defect is congenital, and the patients have therefore never learnt to articulate, the success is more tardy than in acquired deficiency. Professor Heine, of Heidelberg, said that uranoplasty and staphylorrhaphy were also more successful in acquired than in congenital defects. He thought that in congenital cleft palate, where this was extensive, the obturator would be very useful, but that even in this case subperiosteal uranoplasty should be performed. Professor Wagner, of Königsberg, thought that Suersen's apparatus would prove very useful, especially in cases where the operation had been performed without any result as regards the recovery of articulation. Professor Thiersch, of Leipzig, introduced a patient on whom uranoplasty had been performed for acquired defect of the hard palate, and where the obturator could not be borne. The cleft was closed by transplantation of the skin of the cheek. The flap healed perfectly; there were still some small fistulæ between the nose and mouth; the epidermis, bristling with hair, was seen in the cavity of the mouth. He also introduced an epispadias, on whom he had performed four operations. He at first closed the funnel-shaped opening of the bladder below the symphysis by a flap taken from the skin of the abdomen, then made a canal for the penis by forming two flaps, to adjoin one another longitudinally, from the skin of the penis, one flap being reflected outwards, and the other being fixed above the external cut surface. In order to form a canal for the gland, he then made two incisions in the body of that organ, which converged downwards but did not meet; pushed them over the cuneiform part which was between them, and joined them together. At last the gland was, in order to close the cleft between the canal of the penis and the gland, pushed through a fenestra cut in the prepuce. It was not found necessary to establish a temporary perineal fistula until the parts had healed.

(*To be continued.*)

AUSTRALIAN MEAT.—A large party of working-men and their wives are invited to a dinner and exhibition of Australian meats, at the central depôt, 31, Norton Folgate, E.C., on Tuesday evening, January 19. The chair is to be taken by Mr. T. Hughes, M.P.

GENERAL CORRESPONDENCE.

ARMY MEDICAL OFFICERS.

*** The following letter from the Professors of the Army Medical School, at Netley, in reply to some disparaging remarks of the *Daily Telegraph*, reached us too late for insertion last week:—

Army Medical School, Royal Victoria Hospital,
Netley, January 6, 1869.

[To the Editor of the *Daily Telegraph*.]

Sir,—We observe in your impression of the 1st inst. that you speak disparagingly of the Professional acquirements of the Medical Officers of the Army, as compared with those of Medical men in civil life. During the last eight years and a half all the gentlemen entering the Medical service of the Army have passed through our hands; we have had to teach and to examine them. We have also had the task of reading the examination papers of the Assistant-Surgeons prior to promotion; and as the date of those examinations extended back to gentlemen who entered the Army in 1852 or 1853, we may lay claim to having a knowledge of the acquirements of every Medical Officer who has entered for the last sixteen years. We have also seen and served with a great number of the senior Medical Officers. We are therefore in a position to speak with certainty of the Professional knowledge of these gentlemen. We have, on the other hand, seen a great deal of the Practitioners in civil life; and one of our number in particular has had unusual opportunity of knowing the qualifications of civil Medical men on their entrance into practice.

We beg to assure you that we speak without bias when we assert that the Medical Officers of the Army are in no way inferior to their civil brethren, but are, in fact, as far as we can judge, above the average. And there are also in the Army many Medical men whose acquirements and skill are quite equal to those of any Practitioners in civil life, even the most eminent.

You are perhaps not aware of the great trouble the Government take in order to insure proper Medical attendance for the troops. Every Medical gentleman desirous of entering the Army Medical Service must have two legal qualifications entitling him to practise anywhere in her Majesty's dominions; he has then to pass an examination in London, conducted by examiners who are independent of, and, except in one instance, entirely unconnected with, the Army Medical Department. After passing this examination, in which he must reach a certain standard, he is sent to Netley, and comes under our teaching for four months, after which he has to undergo a second examination in the specialities of Army Medical service. If found competent, he then enters the Army, and after five years has to submit to a third examination, intended to insure that he has kept up his knowledge during that time. No government could do more for its soldiers.

It appears strange to us that, at the very time when the most signal and astonishing improvement has taken place in the health of the Army at home and abroad, the efficiency of the officers, to whose labours this is mainly due, should be called in question. If it be said that this improvement is owing to the sanitary measures lately introduced, we admit it; but we ask to whom the credit of this movement is due. We reply, mainly to the Medical Officers of the Army. It originated *in* the service. From the days of Dr. Robert Jackson until now, Military Medical Officers have never been wanting to urge on the authorities the measures now, after so many years, adopted. It is not too much to say that if public opinion had been enlightened up to the level of the Army Medical Officers' knowledge, and if the Medical Officers had had power to carry out their recommendations, the great improvement in the health of the soldier would have been antedated by many years. We may also add that the efficiency of the Army Medical Department, as now administered, has been tested in three wars, in China, in New Zealand, and in Abyssinia, and in all the Medical arrangements have elicited the admiration of the most competent judges, and have had results without precedent in war.

We do not doubt, Sir, that you will modify the opinion you have expressed, and withdraw a statement as injurious as it is unfounded.

We are, Sir, your most obedient servants,
William Aitken, M.D., Professor of Pathology.
M. C. Maclean, M.D., Deputy Inspector-General,
Professor of Military Medicine.
E. Parkes, M.D., F.R.S., Professor of Hygiene.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 12, 1869.

Dr. E. Meryon, Vice-President, in the Chair.

A paper, by Drs. William W. Gull and Henry G. Sutton, was read, being

REMARKS ON THE NATURAL HISTORY OF RHEUMATIC FEVER.

The authors are desirous of bringing under the notice of the Profession a few more cases of rheumatic fever which have been treated by mint water, or, in other words, which have been allowed to run their natural course. They moreover desire to point out what appears to be the natural course of rheumatic fever with reference to the heart, and to show in what proportion of cases the heart became involved when rheumatic fever was treated by mint water. Lastly, to consider if there is any evidence to prove that the heart is more frequently involved when rheumatic fever is treated by mint water, or when treated by alkalies, by lemon-juice, or by blisters. This paper is based on twenty-five cases of rheumatic fever, twelve of which occurred in Guy's Hospital, most of them under the care of Dr. Gull, and thirteen occurred in the London Hospital, under the care of Dr. H. G. Sutton. The particulars of the twelve cases have been already recorded in the *Guy's Hospital Reports*, and the remaining thirteen cases are recorded in the present communication to the Society. Of these twenty-five cases, eighteen were females and seven were males. The averge age of the patients was nineteen years. All the patients were suffering from their first attack of rheumatic fever, and the disease was well marked. The temperature of the body during the acute symptoms reached in some cases 104° and 103°; in other patients it was 101° and 102°. Taking an average of all these cases, the temperature was about 102° during the acute stage. The average duration of the acute symptoms, as estimated by the thermometer and general symptoms, was ten days. Taking all the cases that have been recorded by the authors, the average duration was 9·1 days. The total duration of the acute symptoms from their commencement, including the time the patients were ill before coming into the Hospital, to their cessation, was on an average seventeen days. The authors next proceed to inquire if the duration of rheumatic fever is longer when treated on the expectant plan, or when treated by drugs; and they consider that no one plan of treatment has any great advantage as regards shortening the duration of the disease. Drs. Gull and Sutton agree with Dr. Barclay in considering that we are not yet in a position to say that alkalies exercise any influence in curtailing the duration of the disease. They are also of the same opinion respecting lemon-juice. With regard to Dr. Herbert Davies's blister treatment, they remark it relieves very much the pain and sufferings of the patients in some cases; but it does not appear to curtail the rheumatic process. And the authors remark, "Our cases appear to us to teach that the rheumatic process runs its course under the expectant treatment as favourably as under the treatment by drugs." Drs. Gull and Sutton next proceed to inquire what evidence there is to show that the drug treament prevents the heart becoming diseased, and they give a detailed account of the state of the heart in their twenty-five cases. Every one of these twenty-five patients was suffering from their first attack of rheumatic fever, and twelve of the number had organic disease of the heart when admitted into the Hospital; two had some, but not very well marked, evidence of organic disease of the heart when admitted; and in eleven there was no heart disease on admission. No organic disease of the heart supervened while under treatment, and the heart was healthy when these eleven patients left the Hospital. They remark the experience gained in these cases of rheumatic fever, which were allowed to run their natural course uninfluenced by drugs, tends to prove that, if patients are admitted into the Hospital suffering from a first attack of rheumatic fever, and the heart is not diseased on admission, it will very rarely become organically diseased while patients are under treatment. The opinions of Drs. Garrod, Dickinson, Hérbert Davies, George Owen Rees, and Basham are then quoted to show that the heart did not, or very rarely did, become diseased when rheumatic fever was treated in the Hospital by full doses of alkali, by blisters, by lemon juice, or by nitrate of potash, and they observe:—"It

appears to us that there is not sufficient evidence to prove that any of the advocated systems of treatment have power to prevent the heart becoming diseased. In concluding that the treatment has prevented the heart becoming diseased, we have overlooked the fact that there might be no tendency at the time the patients were under treatment for the heart to become diseased, and our cases show that the good results which have been attributed to the influence of the remedies also occurred when no special remedies were used. Our cases, therefore, tend to teach that these good results were due, not to the drugs, but to the natural course of the disease." The authors then endeavour to show that when the heart becomes diseased in rheumatic fever, it does so at an early stage of the disease; and if it does not become diseased during the first week of the rheumatic fever, it rarely does so afterwards; and they give abstracts from twenty-two cases of rheumatic fever to demonstrate this. Drs. Gull and Sutton's conclusions are as follows:—That when the patient's heart was healthy on admission into the Hospital, it was very rare for it to become organically diseased while the patients were under treatment by mint-water—or, in other words, when the rheumatic fever was allowed to run its natural course. That the evidence before the Profession shows that the heart very rarely became diseased while patients were under treatment in the Hospitals, and that this was the case when patients were treated by alkalies, lemon-juice, or by blisters to the joints. That there is not sufficient evidence before the Profession to prove that any of the advocated remedies have power to prevent the heart becoming diseased. That in rheumatic fever the tendency is for the heart to become diseased during the first few days of the fever; and, should it escape the early days of the disease, there is each day a lessening tendency to its implication. Hence the cases would appear to show that, if at the end of the first week of the rheumatic fever the heart is free from disease, then there is little or no tendency for it to become diseased during the later weeks. That the reason why the heart did not become diseased when rheumatic fever was treated by alkalies, blisters, and by lemon-juice is to be attributed, not to the influence of the drugs, but to the natural course of the disease; for the patients did not come under treatment until the rheumatic fever had been going on some days, and until the period when the heart was most liable to become diseased and passed over. The authors conclude by saying:—"Hitherto the investigation into the therapeutics of the rheumatic process has been rendered all but valueless by the deficiency in preliminary data. At present, therefore, as regards treatment, our cases seem to show that we are limited to a careful regimen of the patient. Rest, mechanical and physiological—rest in the very outset of the disease. We ought not to wait until the rheumatic process has become well developed in the joints. To regulate the temperature. To moderate excessive skin function by sponging the surface of the body. To allay pain, by placing the patient in an easy position, and sometimes by opiates. To sustain the organic nerve power by light diet, and occasionally by small doses of alcohol. To procure rest by the simplest means, especially avoiding such movements of the body as may excite the circulation. In fine, to place the patient in a physiological state of mean rest, if it may be so termed, of the nervous, the circulatory, the muscular, and digestive systems. To do this fully will often tax all our energies, and require often more consideration than is requisite for prescribing any supposed appropriate drug treatment. We are therefore, at present, advocates of the exactest treatment of the patient under acute rheumatism, though we may doubt the value of so-called specific drugs."

MEDICAL SOCIETY OF LONDON.

MONDAY, DECEMBER 21, 1868.

Dr. RICHARDSON, F.R.S., President, in the Chair.

MR. FRANCIS MASON exhibited a patient on whom two years ago he had performed Pirogoff's Operation for Partial Amputation of the Foot; the stump was very satisfactory. The patient was now accustomed to walk at least ten miles a day.

Mr. MAUNDER thought it doubtful whether, in cases of this operation performed for disease, the os calcis did not, in course of time, become carious.

Mr. ADAMS quoted a case in which the operation had been performed nine years ago upon a patient with incipient pulmonary tubercle; the reparative process was perfect, and the patient now had an excellent stump. The form of operation, provided the os calcis were not involved, was the best extant.

Mr. BRYANT said that this operation, which left Nature's own pad upon that portion of the stump subject to pressure, was the most convenient of all. The objection as to the tendency to return of the necrosis was equally applicable to all partial amputations.

Dr. GEORGE BUCHANAN read a paper on Local Conditions affecting the Distribution of Phthisis. The tables of the Registrar-General examined during twenty years seemed to indicate that in those towns where sanitary improvements had taken place, a decrease in the mortality from phthisis coincided with one kind of change, and one only—viz., when the works constructed for the removal of sewage had had the effect of draining away the moisture of the subsoil. The author exhibited two diagrammatic tables. The first showed the effect of the change indicated upon the death-rate from phthisis in the cases of urban populations. A included Salisbury, Ely, Rugby, Banbury, Worthing, Macclesfield, Croydon, and Cardiff; in all these towns there had been much drying of the subsoil, and phthisis had greatly decreased. B included Leicester, where improvement had been manifested in a greater degree at an early period, after completion of the works, than at a later period. C included Newport, Bristol, Down, Warwick, where evidence of drying had not been so complete; in them, though the general tendency to improvement was manifest, the results were less complete and more variable. D included Merthyr-Tydfil, Stratford, and Chelmsford, in which there had been a small degree of drying, with but slight improvement. E included cases in which there had been no change of soil. The second table showed the influence on rural populations. It indicated that there was less mortality in cases of dwellers upon pervious than upon impervious soils, and less upon high ground than upon low ground. The general inference from the whole was that wetness of soil was a cause of phthisis in regard to those residing upon it. Collateral evidence in support of the proposition was given in 1862 by Dr. Bowditch in America, and lately by the Registrar-General for Scotland in respect of certain townships in the north.

Dr. Gibbon, Dr. Anstie, Dr. Cholmeley, Mr. Whittaker, Dr. Symes Thompson, Dr. Rogers, and the President took part in the debate.

OBITUARY.

DR. WILLIAM PERRIN BRODRIBB.

THIS very estimable member of our Profession died suddenly, at his residence in Bloomsbury-square, on the night, or rather in the early morning, of the 8th inst. Dr. Brodribb had performed his usual duties as Secretary to the Court of Examiners of the Society of Apothecaries on the evening of the 7th, and appeared in his accustomed health. He retired to rest without exhibiting any symptoms of illness; but in the middle of the night he rang his bell, which was answered by the servant, who, perceiving her master in a dangerous state of collapse, sent for his friend and neighbour, Mr. Eyles, who, although attending immediately, arrived only in time to announce Dr. Brodribb's condition hopeless. The cause of his death seems to have been a sudden congestion of the lungs, from a previous attack of which he narrowly escaped in the early part of last summer, although he rapidly and apparently entirely recovered.

Dr. Brodribb was educated at St. Bartholomew's Hospital, having been a pupil of Abernethy, of whom he was in the habit of speaking in the eulogistic terms universally employed by the alumni of that great master when recalling his sayings and doings. Dr. Brodribb settled in private practice in London, in the house where he died; and he was one of the oldest inhabitants, if not the oldest inhabitant, of Bloomsbury-square. He held for many years the position of Surgeon to the Magdalen Hospital, and was also a member of the Court of Examiners of the Apothecaries' Society, becoming in rotation Chairman of that Court; but latterly he was appointed Secretary and Registrar to the Court, appointments which he filled to the satisfaction of all parties with whom he became associated. His sterling integrity, unfailing punctuality, and undeviating courtesy had endeared him to a large circle, who received with the deepest regret the intelligence of his sudden removal in the very midst of his active labours, and who now mourn for his loss as for that of a brother and a friend. Dr. Brodribb was twice married, and his second partner only very lately preceded him to the grave. She was previously Miss Aikin, a name well known in the annals of literature and science; and her own accomplishments fully sustained the reputation of her family.

NEW BOOKS, WITH SHORT CRITIQUES.

Half-yearly Abstract of the Medical Sciences. Vol. XLVIII. July to December, 1868. London: John Churchill and Sons. Pp. 372.

The Half-yearly Retrospect of Medicine. Edited by W. Braithwaite, M.D., late Leeturer on Midwifery and the Diseases of Women and Children in the Leeds School of Medicine; and James Braithwaite, M.D. Lond. Vol. LVIII., July to December, 1868. London: Simpkin. Pp. 408.

*** We need hardly do more than announce the appearance of these now well-known volumes, but we may be allowed to point out the superiority of the *Half-yearly Abstract* over the *Retrospect* in two particulars. First, it includes numerous extracts from books as well as from periodicals, which in itself is a matter of importance; further, it takes notice of foreign as well as British writings, which are almost exclusively followed in the *Retrospect*. Nevertheless, both fall considerably short of what we conceive a proper degree of excellence. We should like to see an English work equal to Virchow, Hirsch, and Gurlt's *Leistungen*, or even Schmitt's *Jahrbücher*.

The Economy of Life; or, Food, Repose, and Love. By George Mills. London: Trubner. Pp.

*** Mr. Mills discusses the philosophy of the three great inducements to exertion in man and the lower animals—the desire for food, and also for repose, in a certain way antagonistic, yet tending conjointly to separate one being from another, so as thereby to increase facilities for obtaining food, and subsequently, as well as consequently, lengthen the period available for rest. Sexual love, on the other hand, tends to unite beings in groups or families, and is thereby antagonistic to the other motives already mentioned. Still the strongest bond which can unite any group of people is mutual sympathy. The highest law of the Christian religion is, "Love one another."

The Practice of Medical Electricity. By G. Powell, M.D., L.R.C.S.I., etc. Dublin: Fannin. Pp. 65.

*** This little volume professes to be a guide to the Medical use of electricity. It contains, however, a good deal which relates to the several kinds of electricity and galvanic apparatus; 54 pages are so occupied, whilst 11 suffice for discussing the all-important question of electro-physiology. The diseases chiefly referred to are of the nervous class, and Dr. Powell would seem to favour the continuous rather than the interrupted current as a means of cure. The book is a sensible one, all too short to deal with such a subject, but it is neither quackish nor pedantic. Unfortunately it is disfigured with misprints.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in anatomy and physiology at a meeting of the Court of Examiners on the 12th inst., and when eligible will be admitted to the pass examination:—

Aitkens, L. E., St. George's Hospital.
Alahone, E. W., Guy's Hospital.
Bellamy, C. P., Middlesex Hospital.
Betts, J. O., University College Hospital.
Brodie, E. F., Dublin.
Cole, H. C., University College Hospital.
Cooper, T. H., King's College Hospital.
Gaun', J. P., Birmingham School.
Grayson, F. D., Guy's Hospital.
Herbert, S. L., King's College Hospital.
Hewitt, B. A., Guy's Hospital.
Hill, T. W., St. George's Hospital.
Hosford, T. S., London Hospital.
Johnson, W. J., Guy's Hospital.
Joy, F. W., University College Hospital.
Liston, J. R., St. Mary's Hospital.
Meredith, W. H., Birmingham School.
Norton, Herbert, St. Mary's Hospital.
Parker, W. A., St. George's Hospital.
Renwick, William, King's College Hospital.
Savary, H. D. T., King's College Hospital.
Smedley, Nathan, Liverpool Hospital.
Tattersall, Lord, St. Bartholomew's Hospital.
Tatum, Herbert, St. George's Hospital.
Thorpe, Lewis, Birmingham School.
Turner, W. M., Charing-cross Hospital.
Wadsworth, G. B., of University College Hospital.
Wright, Alfred, Charing-cross Hospital.

The following gentlemen passed on the 13th inst.:—

Allwork, Charles, Guy's Hospital.
Cass, S. T., King's College.
Cooke, W. W., Middlesex Hospital.
Dorin, A. F. L., St. Mary's Hospital.
Ewart, J. H., Guy's Hospital.
Hill, Thomas, St. Bartholomew's Hospital.
Humphreys, Robert, Liverpool.
Julius, S. A., King's College.
Kite, J. A., University College.
McAndrew, J. J., Charing-cross Hospital.
Morris, Malcolm, St. Mary's Hospital.
Pocock, E. W., St. Thomas's Hospital.
Pugh, E. J., University College.
Robinson, R. S., St. Bartholomew's Hospital.
Trenerry, A. F., Guy's Hospital.
Wagstaff, T. H., Middlesex Hospital.
Wharry, C. J., St. Bartholomew's Hospital.

At a meeting of the Council of the Royal College of Surgeons on the 14th inst., Mr. Henry James O'Donnell, of Albert-terrace, London-road, Surgeon to the Surrey Ophthalmic Hospital, was admitted a Fellow of the College, his diploma of Membership being dated August 16, 1839.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, January 7, 1869.

Harrison, Garland W. L., Park-place, Stoke, Devonport.
Howell, John Alexander, Wansey-street, Walworth-road.
Robinson, Rawdon Briggs, New Barnet.
Sanders, Edwin, St. Bartholomew's Hospital.

The following gentlemen also, on the same day, passed their First Examination:—

Lloyd, Robert Hodgens, Westminster Hospital.
Rowlands, Daniel George, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BOWKETT, T. E., jun., M.R.C.S.—Surgeon to Out-patients at the Poplar Hospital.

EDIS, ARTHUR W., M.D. Lond., M.R.C.P.—Assistant-Physician to Hospital for Diseases of Women, Soho-square.

HARDY, H. NELSON, M.R.C.S. Eng., Surgeon to the Royal South London Dispensary—Surgeon to the St. Marylebone Provident Dispensary, Duke-street, Portland-place, W.

TANNER, JOHN, M.D.—Physician-Accoucheur to the Farringdon General Dispensary and Lying-in Charity.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—The following appointments have been made:—Robert Edwardes, Surgeon, to the *Orontes*; G. Robertson, Assistant-Surgeon, to the *Victory*; Fleetwood Buckle, Assistant-Surgeon, to the *Orontes*.

BREVET.—George James Cooper, Apotheeary in charge of the civil station of Shoaygyeen, in British Burmah, to have the hon. rank of Assistant-Surgeon.

CORPS OF ROYAL ENGINEERS.—Staff-Assistant-Surgeon Joseph William Carter Neynoe Murphy, to be Assistant-Surgeon, *vice* Hector Ferguson, promoted to the Staff.

COUNTY OF WARWICK.—3rd Warwickshire Rifle Volunteer Corps: Robert Farquharson, Gent., to be Honorary Assistant-Surgeon, *vice* Bucknill, resigned; January 5.

8th HUSSARS.—Staff-Surgeon John Smith Chartres, to be Surgeon, *vice* Thomas Ligertwood, M.D., placed on the non-effective list, on appointment as Deputy-Surgeon, Chelsea Hospital.

MEDICAL DEPARTMENT.—Assistant-Surgeon Hector Ferguson, from the Royal Engineers, to be Staff-Surgeon, *vice* John Smith Chartres, appointed to the 8th Hussars.

WINN, ALGERNON W.—Acting Assistant-Surgeon to the *Cameleon*.

BIRTHS.

BRICE.—On January 4, at Barrington House, Southsea, the wife of F. A. Brice, M.D., Surgeon of H.M.S. *Cameleon*, of a daughter.

HILL.—On November 4, 1868, at Lambton, Newcastle, New South Wales, the wife of John James Hill, L.R.C.P. Edin., Surgeon, of a son.

LAWRENCE.—On December 29, 1868, at The Cedars, Chepstow, the wife of Dr. Arthur G. Lawrence, of a son.

PALMER.—On December 15, 1868, at Jerusalem, the wife of H. C. Palmer, Esq., of a daughter.

SERCOMBE.—On January 8, at 41, Brook-street, Grosvenor-square, W., the wife of Edwin Sercombe, M.R.C.S., etc., of a son.

MARRIAGES.

CHINNERY—THOMPSON.—On January 7, at H.B.M.'s Consulate, Paris, and afterwards at Marbeuf Church, Gerard Thomas, son of J. Fairfax Chinnery, of London, to Sarah Whitehead, eldest daughter of the late John Thompson, Surgeon, of Ripon, Yorkshire. No cards.

CRAWFORD—EDWARDS.—On January 7, at Charlton Kings, Thomas Crawford, M.D., Surgeon-Major, Head of the Medical Branch, Army Medical Department, to Mary Jane, eldest daughter of Major-General Clement Edwards, C.B.

DEATHS.

ALLDAY, F., M.R.C.S.E., of Merthyr-Tydfil, Glamorganshire, on December 28, 1868, aged 54.

BAYANT, SOPHIA, relict of the late Dr. Bryant, formerly of the Edgware-road, at her residence, Colebrook-villa, Finchley, on January 7, in her 81st year.

CAMPBELL, GEORGE MACIVER, M.B., M.A., Assistant-Surgeon 85th (King's) Light Infantry, eldest son of the Very Rev. P. C. Campbell, D.D., Principal of the University of Aberdeen, at Meean Meer, India, on December 6, aged 26.

COLBORNE, CHARLES ANTHONY, M.D., of 290, King's-road, late Surgeon on board the ship *Warrior Queen*, at the residence of his father, 53, Tachbrook-street, S.W., on January 9.

RHIND, JAMES, M.D., eldest son of the late William Rhind, Esq., of Stockport, in Cheshire, and Staff Surgeon in the Army of the Republic of Paraguay, at La Trinidad, Asecnsion, on October 1, 1868.

RHIND, WILLIAM, the infant son of John Rhind, M.D., at Knowle, Mirfield, on January 6, aged 5 weeks.

SANDERSON, WILLIAM ANDREW, youngest son of Henry Sanderson, Surgeon R.N., at Musselburgh, on January 1, aged 26.

WHITE, THOMAS EDWARD, L.R.C.S.I., youngest son of Thomas Warren White, Barrister-at-law, at Wahgunyah, colony of Victoria, Australia, on October 12, 1868, aged 20.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BRISTOL GENERAL HOSPITAL.—Assistant House-Surgeon; must possess a registered qualification. Applications to the Secretary at the Hospital on or before the 25th inst. Election on the 1st proximo.

"DREADNOUGHT" HOSPITAL SHIP.—Assistant-Surgeon; must be M.R.C.S. Lond., unmarried, and be between 21 and 40 years of age. Send testimonials to the Secretary, Seamen's Hospital Society 86, King William-street, E.C., on or before the 26th inst. Particulars of duty may be obtained on personal application only.

GLASGOW EYE INFIRMARY.—Assistant-Surgeon; must be a registered Practitioner of two years' standing. Application to be made to George Black, Esq., 46, West George-street, Glasgow.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon and Dispenser (one office); must be M.R.C.S. or L.S.A. Applications to the Secretary at the Hospital. The election at the Hospital on January 29.

KENT AND CANTERBURY HOSPITAL.—Physician; must have been practising as a Physician for two years, and be registered as a regular Graduate in Medicine of some University of Great Britain or Ireland or M.R.C.P.L. Application to the Secretary at the Hospital. The election at the Hospital on Friday, January 29.

LEICESTER BOROUGH LUNATIC ASYLUM.—Resident Medical Superintendent; must be qualified to practise Medicine and Surgery, and be legally registered under the Medical Act, 1858. Applications, enclosing testimonials and stating age and qualifications, to be sent to Mr. S. Stone, Town Clerk, Leicester, on or before March 11 next.

NOTTINGHAM DISPENSARY—Resident Surgeon and Assistant Resident Surgeon; must be M.R.C.S. or L.R.C.P. Send testimonials to Committee at the Dispensary on or before Monday, January 25. Election, February 8.

ROYAL HANTS COUNTY HOSPITAL, WINCHESTER.—House-Surgeon; must be M.R.C.S.E., or have the Surgical diploma of a Royal College or a University in Scotland or Ireland, and also either a licence from the Royal College of Physicians, London, or from the Apothecaries' Society. Applications, enclosing testimonials, to be sent to the Committee, under cover to the Secretary, before February 3 next.

STOKE NEWINGTON DISPENSARY.—Assistant Resident Medical Officer; one qualification required. Particulars upon personal application at the Institution, between 11 a.m. and 2 p.m.

WEST LONDON HOSPITAL.—Junior Physician; must be F. or M.R.C.P. Lond. Attend personally, with diplomas and testimonials, at the Hospital, Hammersmith, W., on Monday, the 18th inst., at 3 o'clock p.m.

WEST LONDON HOSPITAL.—Assistant House-Surgeon; must be M.R.C.S. Lond., Edinburgh, or Dublin, or L.R.C.P. Lond., and L.S.A. Lond. Attend with diplomas and testimonials at the Hospital, Hammersmith, W., on Monday, the 18th inst., at 3.30 p.m.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Melton Mowbray Union.—Mr. Thomas Leah has resigned the First District; area 15,037; population 5730; salary £40 per annum.

St. Mary Lambeth Parish.—Mr. John E. Chalmers, Resident Medical officer at the Workhouse, has resigned; salary £80 per annum.

St. Pancras Parish.—Mr. Claude C. Claremont has resigned the Third District; salary £150 per annum. Mr. Wm. Saul has resigned the Fifth District; salary £150 per annum.

Tadcaster Union.—Mr. Frederick C. G. Ellerton has resigned the Tadcaster District; area 12,925; population 3808; salary £35 per annum.

Tiverton Union.—Mr. Henry J. Edwards has resigned the Bampton East District; area 7851; population 1508; salary £27 per annum; also the Bampton West District; area 14,002; population 2131; salary £35 15s. per annum.

APPOINTMENTS.

Bourn Union.—William B. Deacon, M.R.C.S.E., L.S.A., to the Deeping District.

Easingwold Union.—Edward B. Hicks, L.R.C.P., M.R.C.S.E., to the Easingwold District and the Workhouse.

Forehoe Incorporation.—Boanerges R. Boast, L.R.C.P. Edin., L.F.P. and S. Glas., to the Fourth District; Caudell Clarke, jun., M.R.C.S.E., L.S.A., to the Workhouse.

THE Shepton Mallet Hospital was formally opened for the reception of patients on New Year's-day.

NAVAL MEDICAL SUPPLEMENTAL FUND.—At the quarterly meeting of the directors of the Naval Medical Compassionate Fund, held on the 12th instant, Sir E. Hilditch, Inspector-General, in the chair, the sum of 80*l.* was distributed among the various claimants.

COLLEGIATE EXAMINATIONS.—At the primary or anatomical and physiological examinations of candidates for the diploma of the Royal College of Surgeons, which have been going on during the last few days in that institution, it is stated that fourteen out of the sixty candidates failed to acquit themselves to the satisfaction of the Court, and were consequently referred to their studies for a period of three months. The names of the successful candidates are published in another column, and amongst those so distinguished are two gentlemen holding commissions as captains in her Majesty's army. The pass examinations in Surgery, Pathology, and Medicine commence this day (Saturday).

M. BROWN-SÉQUARD.—This distinguished physiologist is at last about to be attached to the Paris Medical Faculty. A chair under the name of not very obvious signification "Experimental Pathology," is to be created in lieu of that of "Comparative Medicine" (an infinitely better title, in our opinion), nominally held by the late M. Rayer, who, we believe, never delivered more than an introductory lecture.

PRESENTATION.—Dr. Beverley, the House-Surgeon of the Norwich and Norfolk Hospital, has received from the Marchioness Cholmondeley and Mrs. Watson a handsome silver salver, bearing the following inscription:—"Presented to Dr. Beverley by the nurses of the Norfolk and Norwich Hospital, in grateful acknowledgment of his unvarying kindness. Jan. 1, 1869." The presentation was made by the Mayor of Norwich at a Christmas treat given to the patients and attendants.

THE COST OF LUNATICS.—The weekly charge for the maintenance, lodging, clothing, and other expenses connected with the lunatics confined at the Colney-hatch County Lunatic Asylum has been reduced from 10s. 2½d. per head to 9s. 11d.; and for those at the Hanwell Lunatic Asylum from 10s. 9½d. to 10s. 2½d. per head for lunatics chargeable to the county or any parish in the county; for others the charge remains at 14s. per head per week.

GOITRE.—The Prefect of Haute Savoie reports in favour of the means recommended by the Academy of Medicine for the cure of goître. Of 5000 cases, 2000 were cured and as many relieved, but the remedy had to be abandoned, as people preferred goître to conscription. He therefore suggests that freedom from conscription be no longer allowed to goîtred persons.

UNIVERSITY OF CAMBRIDGE.—The Downing Professor of Medicine gives notice that he or his deputy will deliver a course of lectures on Materia Medica, Pharmacy, and Therapeutics during the ensuing Lent and Easter terms. The lectures will be delivered in Downing College, on Tuesdays, Thursdays, and Saturdays, at 12 o'clock, commencing on Tuesday, February 2. Fee for the course, £3 3s. Members of the class who are desirous of further assistance may also attend at the lecture room, on alternate Tuesdays, at 7.30 p.m., when examinations will be held on the subjects discussed in the previous lectures, and the student's knowledge of drugs and their adulterations will also be practically tested. The Museum, containing a full and complete collection of the various substances in the Materia Medica, is open daily.

HARVEIAN SOCIETY OF LONDON.—The annual meeting and *conversazione* took place on the 7th, when the retiring President, Mr. Ernest Hart, delivered an address, and reports from the Council and Treasurer were read, showing a very satisfactory progress of the Society. The following are the names of gentlemen elected as officers of the Society for the year 1869:—*President:* *E. Headlam Greenhow, M.D. *Vice-Presidents:* Frederick Cock, M.D.; E. S. Haviland, M.D.; *J. Z. Laurence, Esq.; H. G. Times, Esq. *Treasurer:* Henry William Fuller, M.D. *Hon. Secretaries:* J. Brendon Curgenven, Esq.; William Hickman, M.B. *Council:* H. F. Bate, M.D.; *W. Tilbury Fox, M.D.; R. Greenhalgh, M.D.; *M. Berkeley Hill, Esq.; J. Holmes Jephson, M.D.; R. S. Jeffs, Esq.; Newton B. Lee, Esq.; Duncan Menzies, M.R.C.P.; *Edmund Metcalf, Esq.; Gueneau de Mussy, M.D.; J. Rushforth, Esq.; *R. S. Sisson, M.D. An asterisk is prefixed to the names of those gentlemen who did not hold the same office the preceding year.

THE QUEEN'S HOSPITAL, BIRMINGHAM.—A special committee of the Queen's Hospital, Birmingham, have made an appeal to the working men of that town to assist the Governors of the Hospital in erecting a new out-patient an accident ward. A piece of ground adjoining the Hospital, on which the proposed new department can be erected, has been purchased by the Governors. The new building is to be constructed and arranged on the best principles of Hospital management, and is to include:—A Fever Hospital, freely available for all deserving patients; classification and isolation of contagious cases; the provision of proper means for the conveyance of persons injured by accidents, and of others stricken with infectious fevers, so as best to insure their recovery and the interests of the public health; the providing working men, whom accident has deprived of their limbs, with the best-made artificial substitutes, are amongst the objects which the promoters hope to attain. The Committee, in urging the claims of the Hospital on the working men, speak of their assistance as illustrative of "a manly spirit of independent self-help." Is this the right policy to proceed on? Surely a great charity

like the Queen's Hospital need not, and should not, become a self-supporting institution. A meeting to discuss the subject will be held in the Town Hall at 6 p.m. this day (Saturday).

SANATORIUM, BIRMINGHAM.—This institution, which was established some short time ago in connexion, we believe, with the General Hospital, is assuming considerable dimensions, and doing a proportionate amount of good amongst the poorer classes, for whose benefit it was originally established. The report of its financial condition, which has just been made public, shows that it has supplied a want, and is a great success, although on a limited scale as yet, and that its inmates reap to the utmost the advantages which it so charitably affords. The rules for the admission of patients can be easily complied with, and are framed in a spirit of true liberalism. The house is a commodious one, but not large enough for its prospective operations. It is situated about two miles out of the town—sufficiently far away from the smoke and turmoil of the busy midland metropolis to insure for the patients plenty of pure fresh air, and that peace of mind and repose which are so requisite to a speedy convalescence.

MONTHLY RETURN OF THE DEATHS REGISTERED IN THE EIGHT PRINCIPAL TOWNS OF SCOTLAND, DECEMBER, 1868.—The deaths of 2702 persons were recorded in the eight towns during the month, of whom 1321 were males, and 1381 females. This number, after allowing for increase of population, is 180 above the average number for December during the last ten years. Of the 2702 deaths, 1173, or 43 per cent., were of children under five years of age. In Aberdeen, 31 per cent. of the persons who died were under five years of age; in Edinburgh, 32 per cent.; in Paisley, 35 per cent.; in Perth, 36 per cent.; in Dundee, 42 per cent.; in Glasgow, 49 per cent.; and in Greenock and in Leith, 50 per cent. The zymotic (epidemic and contagious) class of diseases proved fatal to 685 persons, constituting 25 per cent. of the mortality of the eight towns. The prevalence of scarlatina in Glasgow and Greenock caused this rate to be exceeded in each of these towns. Scarlatina was the most fatal of the epidemics, having caused 263 deaths, or 9·7 per cent. of the mortality. The disease prevailed to a greater or less extent in each of the towns; 13·2 per cent. of the deaths in Glasgow were from that cause, and 8·2 per cent. of the deaths in Greenock.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

F.R.C.S. is desirous of knowing the experience of any of our readers who have used the bisulphide of carbon as a cure for headache. The preparation was recommended by the late Dr. Kennion.

A Vegetable Pill.—It is a recognised rule of Medical etiquette that a Medical Practitioner should have no secret remedies. The mode of preparing anything that is employed as a remedy for, or in the relief of, disease should be made public. We know that there are exceptions to this rule with respect to some medicines which are extensively employed; but that is no credit to us as a liberal Profession.

M.R.C.S.—The Medical Witnesses Act requires that the Practitioner should be subpœnaed in a certain form, which is set out in one of the clauses of the Act. He need not attend to a common summons or to a verbal request of the coroner. He cannot legally recover his fee for attendance and giving evidence unless he is subpœnaed in the proper form.

Sanitas suggests in a letter to a contemporary that the excessive light and heat which are general in our theatres are injurious to the sight and health. There is much truth in the suggestion, and in one or more of the London theatres the heat and light are modified.

M.R.C.S. writes: "I am Medical officer of an Odd Fellows' Club numbering from 100 to 120 members. It has been suggested that I should attend the families of the members for a stipulated monthly payment. If any of your readers have a club of this sort, I should be glad to be informed of the amount of the monthly contribution, and at what age the children should cease to have a claim on my attendance."

M.S.—The advertisements in the *Pall-Mall Gazette* of the 8th inst. are certainly anything but models of good taste. In some respects they are not creditable to the literature of our Profession. There is something sensational, no doubt, in "Order immediately of all booksellers and newsagents in town or country;" but it would involve a difficulty which few gentlemen would be inclined to meet. Sterne tells us the story of an extraordinary barber who recommended him to clean his wig "by dipping it into the ocean;" "an ordinary barber," says Sterne, "would not have got beyond a 'pail of water.'" An ordinary publisher would scarcely have ventured to recommend an order so extensive as the above.

Dr. James Tunstall, late of Bath, who was a well-known and respected Practitioner there, and the author of a work on the Bath waters, having been crippled by illness, is desirous of becoming a pensioner of the Royal Medical Benevolent College, to which he formerly contributed. His case is supported by Dr. Falconer, Mr. Lane, Dr. Paget (of Cambridge), Dr. Richardson, Dr. Symonds (of Bristol), Dr. James Watson (of Bath), Dr. Whitehead (of Manchester), Dr. Forbes Winslow, and Mr. Jabez Hogg.

Musical Pitch and "Change of Type."—It is the belief of some of our brethren that the human race is subject to periodic fluctuations of vigour—that during one series of years there will be a general condition of tone and sthenic excitement, well-braced nerves, firm plump muscles, and plenty of red blood; that then inflammatory diseases prevail, requiring copious bloodletting; whereas there are other periods marked by general flabbiness and apathy, when no man dares be bled, and the Physician's sole care is expended in devising tonics and stimulants. The organs of the voice, amongst other muscular organs, have been supposed to share in the fluctuation, and in one age to possess a tonicity capable of raising the pitch by one-eighth the number of vibrations. The pitch was raised at the Restoration; it fell during the first two Georges, and has risen since. Now it is felt that it cannot be sustained and must be lowered. This, however, is no consequence of fluctuation in the human frame, but of a pitched battle between makers of stringed instruments. The higher these are screwed up the more brilliant the tone, but the singers who attempt to raise their voices to the same pitch are simply killed. More than twenty years ago Mr. Richard Clark, of Westminster Abbey, published a remonstrance against the prevalent high pitch, and declared that Handel's music never could be properly sung till it was done at the pitch prevalent in Handel's time. Theoretically the A (second space in the G clef) should have 420 vibrations. In Paris, we are told it had only 409 in 1788, but has been raised in various continental operas to 460. Now it is proposed to reduce it to 435. Mr. Clark expressed his belief that they who do not fatigue their voice in the uppermost notes will have no difficulty in the production of the lowermost, and hence accounts for the frequency with which F and E below the bass stave are found in old church music, as "Gibbons in F." Even D is found in Purcell's famous anthem "They that go down." All singers, whether solo or chorus, who defy the wire and catgut interest, and clamour for a reduction of the pitch, ought to have the support of the Medical fraternity.

One of the Public.—There is, we are informed, some inaccuracy in the report of the inquest as published in the newspapers. It is brief, and of course all the circumstances connected with the melancholy case are not stated. We gather, however, from the facts recorded, that a poor woman suffering from chest disease was taken in premature labour, and in the absence of her regular Medical attendant another gentleman was called in, who, on the grounds of its being contrary to Medical etiquette to interfere with the patient of another, declined to act. He recommended the friends of the poor woman to send immediately for the gentleman who had been in attendance. Strangely enough, this gentleman refused to attend also, on the plea that it was a breach of etiquette for his patient to have called in another Practitioner. The patient died from hæmorrhage. The coroner, it is reported, said that there had been no neglect, but the patient had died from "Medical etiquette." Now, we contend that Medical etiquette had nothing to do with the fatal result. Medical etiquette consists of a code of laws framed by able and eminent men for the guidance of Medical Practitioners in their conduct to one another and to their patients. When properly understood and carried out, it is not only beneficial to the members of our Profession, but to the public at large. Its limits are defined, but not too strictly, and it certainly interferes with no rules of politeness or humanity. In the case cited above, the first principles of etiquette were not understood by the gentlemen engaged. In all cases of emergency, but more particularly where life is at stake, it is the bounden duty of a Medical Practitioner to make the saving of that life his first and only object. There is no rule of etiquette that prohibits the prompt attention of a Practitioner in the absence of another when there is necessity for such attendance, and that offence should be taken by any one at such a proceeding is a grievous mistake. Etiquette forbids unnecessary meddling with the patients of others, but it sanctions all acts which are humane and benevolent on the part of our Professional brethren.

"IRRITATIVE DYSPEPSIA."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—To fair, and even severe, criticism no author has a right to take exception, but I do protest against being harlequinised and falsified to gratify the cacoethic prochivities of a facetious reviewer. I ask you, then, Sir, in justice to myself, and as a matter of fairness to a member of your own Profession who has been greatly calumniated in your pages,(a) to give insertion to this letter.

Your reviewer says he failed to "find out some definition of this same irritative dyspepsia." Yet the symptoms, consequences, and treatment of that morbid affection are elaborately discussed throughout nearly the whole book, chapters on food and digestion being superadded in order to give clearness to the subject.

The reviewer, in exhibiting what he derisively calls my "scientific beauties," says—"The author tells us that starch, now converted into grape-sugar, is chiefly absorbed in the mouth and gullet; that uncooked farina is perfectly indigestible by man; that a large portion of the fat absorbed passes through the hepatic system."

(a) *Med. Times and Gazette*, January 2, 1869—review of Dr. Garrett on "Irritative Dyspepsia," etc.

Touching the first paragraph, I was speaking of the action of saliva on starch in the mouth. For an elucidation of the first "scientific beauty" I refer him to Dr. T. K. Chambers on "Digestion and its Derangements," who says, p. 75—"If sugar is indubitably formed from starch in the mouth, and yet is not found in the stomach, it is a natural question what becomes of it? . . . . In the first place, a good deal of sugar may be absorbed in the mouth, in the gullet, and in the stomach immediately that point is reached." Other authorities also concur in the statement I have made.

That uncooked farina is indigestible by man and carnivorous animals I have always been taught. But I must again take shelter under Dr. Chambers's wing. He says (*op. cit.* p. 68—"Raw starch is not affected by the saliva, nor, indeed, by any of the digestive juices." Let your reviewer try a meal of uncooked farina—say wheat-flour or arrowroot—and tell us how he feels a few hours afterwards.

"Beauty" 3rd is a perversion and misrepresentation of my whole argument. I was pointing out how irritative dyspepsia opposes the emulsification of fat, and consequently antagonises its admission into the system *by the lacteal route*.

Your reviewer proceeds: "He leads you to believe that milky chyle gradually becomes nascent blood-corpuscles, apparently by an aggregation of its particles merely." My observations on this subject were based wholly upon the writings of Dr. Hughes Bennett, whom I have extensively quoted, and named as my authority. The whole subject is elaborately treated in Dr. Bennett's work on "Pulmonary Consumption," especially at pp. 33, 36.

With regard to your reviewer's next "beauty" I must use rather strong language, and not to be discourteous I charge him with wilful falsification. At page 51 of my book I observe, "It has been suggested that its (gastric-juice acidulous property may be diminished by—1st, *rest* and *abstinence*, possibly neutralised by frequently swallowed saliva; 2nd, by *mental anguish*, supposed to be the consequence of swallowing tears and nasal mucus (Dr. Grünewald." Now mark! What says this ingenuous reviewer? "*He adopts the theory* that the *anorexia* caused by mental anguish depends on the swallowing of tears and nasal mucus." Compare my and his passages, and what does such a reviewer deserve—this *lucus a non lucendo?* "It has been suggested" are my words, and I append the name of my authority. Is that "adopting a theory?" Is anorexia the nosological appellation for the chemical neutralisation of an acid? The paragraph used by me is taken from Dr. Chambers (*op. cit.* p. 90), where a whole page is devoted to the subject.

The last good thing I shall trouble you with is really a "scientific beauty." I was illustrating the beautiful design of the Creator in turning to so useful an account as the propagation of voice the excreted products of the system from the lungs, and this our reviewer thus distorts—"He tells us that we exhale by the lungs nothing but carbonic acid and watery vapour."

To follow up this precious farrago would be but loss of time to me, and waste of space to you. I leave my brethren to form their own opinions as to the fairness and competence of this gifted individual. I give him a parting recommendation to improve his conversance with Medical literature, and to observe for the future his obligations to science and the Profession.

Hastings, January 9. I am, &c. C. B. Garrett, M.D.

COMMUNICATIONS have been received from—

Dr. Lionel S. Beale; Dr. Robert Barnes: Mr. J. Chatto; Dr. Edward Mackey; Dr. R. Douglas Powell; Deputy Inspector-General Gordon; Dr. Day; Dr. B. W. Richardson; Dr. J. Hancocke Wathen; Mr. T. M. Stone; Dr. Wilks; Dr. E. Symes Thompson; Mr. E. L. Fenn; Dr. Moriarty; Dr. A. N. Kidd; Dr. Arthur W. Edis: Dr. Radford; Dr. Garrett; M.S.; M.R.C.S.; Mr. H. W. H. Clough; Mr. J. B. Curgenven; Mr. A. W. Fonblanque; Dr. Latham; Mr. Matthew Dodd; Dr. Campbell.

BOOKS RECEIVED—

American Journal of Obstetrics, November, 1868.—Philipson's Health and Meteorology of Newcastle and Gateshead—Quarterly Journal of Psychological Medicine, January, 1869—Fayrer on Tracheotomy—St. George's Hospital Reports, vol iii., 1868—Agricultural Returns of Great Britain, with Abstract Returns for the United Kingdom, British Possessions, and Foreign Countries, 1868.

NEWSPAPERS RECEIVED—

Indian Medical Gazette—Norwich Mercury—European Mail—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 9, 1869.

BIRTHS.

Births of Boys, 1243; Girls, 1166; Total, 2409.
Average of 10 corresponding weeks, 1858-67, 2050·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	732	769	1501
Average of the ten years 1858-67 . . .	763·2	765·3	1528·5
Average corrected to increased population .	...	...	1681
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West .	463388	1	3	14	4	6	13	3	...
North .	618210	1	9	21	...	19	20	4	...
Central	378058	...	5	6	1	6	6	...	...
East .	571158	...	3	15	...	13	8	1	...
South .	773175	4	4	13	3	18	13	4	...
Total .	2803989	6	24	69	8	62	60	12	...

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, January 9, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending Jan. 9.	Deaths. (Corrected Average Weekly Number.)	Deaths. Registered during the week ending Jan. 9.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London Metropolis*	3170754	40·7	2409	1462	1501	53·8	37·3	45·7	1·15	116
Bristol City* . .	169423	36·1	133	76	*71	54·0	34·2	45·0	2·25	227
Birmingham Boro'*	396546	46·1	227	175	153	54·4	36·0	44·3	0·82	83
Liverpool Boro'* .	508052	99·7	393	295	288	53.0	34·6	45·8	0·27	27
Manchester City* .	370892	82·7	277	210	*252	53·5	30·0	41·6	0·38	38
Salford (Borough) .	119350	23·1	102	60	67	53·5	29·0	42·0	0·39	39
Sheffield Borough* .	239752	10·5	213	126	105	54·0	31·0	43·2	0·48	48
Bradford Borough	138522	21·0	87	71	73	...	...	...	...	...
Leeds Borough .	253110	11·7	125	129	145	55·0	37·0	45·7	0·42	42
Hull Borough .	126682	35·6	105	59	58	52·0	28·0	38·9	0·39	39
Nwestl-on-Tyne, do.	130503	24·5	80	69	83	50·0	32·0	40·7	0·67	68
Edinburgh City) .	178092	40·2	147	86	137	51·7	31·0	42·5	0·30	30
Glasgow City* .	458937	90·6	430	268	306	51·6	37·3	43·1	0·55	56
Dublin City and some suburbs* .	329762	32·9	143	158	165	53·4	27.0	43·0	0·41	41
Total of 14 large Towns . . .	6546587	35·5	4871	3244	3404	55·0	27·0	43·2	0·65	66
					Week ending Jan. 2.	Week ending Jan. 2.				
Vienna (City) . .	1863 560000	...	...	...	307	...	...	44·0		...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·984 in. The barometrical reading increased from 29·42 in. on Sunday, January 3, to 30·38 in. on Saturday, January 9.

The general direction of the wind was S.W.

Note.—The population of Cities and Boroughs in 1868 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

January 16. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Metropolitan Association of Medical Officers of Health. 7½ p.m. Dr. Gavin Milroy, "On the Medical Topography of the Metropolis."

Royal Institution, 3 p.m. Prof. Odling, "Hydrogen and its Analogues."

18. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London, 8 p.m. "Report on Mr. Hainworth's Specimens of Disease of the Pancreas and Mesenteric Glands, with Obstruction of the Gall and Pancreatic Ducts," by Drs. Thorowgood and Sedgewick, Messrs. Adams and R. Dunn. Mr. Hunt, "On the External Use of Chloric Ether." Mr. Victor De Mèric, "How Syphilis begins and ends."

19. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Anthropological Society, 4 p.m. General Anniversary Meeting.

Pathological Society, 8 p.m. Meeting.

Royal Institution, 3 p.m. Mr. Westmacott, "Fine Art."

20. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

21. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Harveian Society, 8 p.m. Mr. Ernest Hart, "On the Ophthalmoscopic Evidence of Inherited Disease."

Royal Institution, 3 p.m. Mr. Rupert Jones, "Entozoa."

22. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Clinical Society, 8½ p.m. Mr. T. Holmes, "Case of Lithotomy, in which the Stone was not found." Drs. H. Greenhow and Hall Davies, "Chorea treated by Bromide of Potassium." Mr. Hinton, "Removal of Solid Mass from Tympanum by Incision of the Membrane."

Royal Institution, 8 p.m. Prof. Herschell, "The Last Eclipse of the Sun."

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ANNUAL CONSUMPTION EXCEEDS 5,000,000 lb.

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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

EPILEPSY.

(*Concluded from page 60.*)

THERE are many other conditions somewhat resembling the epileptic state. Thus patients who have strange feelings in their heads constantly fear that they may be the subject of fits. There is such a thing, no doubt, as epileptic vertigo, and it may be that when a giddiness comes on in paroxysms it is a precursor of a more serious malady. There is, however, a disease to which the term simple vertigo must be applied where it constitutes the sole malady from which the patient suffers. A French Physician has found the cause in more than one case to be in the internal ear. Then there is a giddiness connected with organic disease of the brain and a rigid state of the blood-vessels, also a functional variety in connexion with indigestion and its accompaniments. I have observed a very striking difference in one respect between the dyspeptic vertigo and that arising from real cerebral disease. In the latter the patient, when he feels the sensation coming over him, immediately stops if walking, or if standing lies down, whilst in the former the person feels well whilst walking or in the upright position, but immediately he stoops the giddiness comes on. The dyspeptic person lays his head on his pillow at night, and immediately the "room goes round with him;" he jumps up, and the vertigo passes off; this again and again occurs until it is only by the most cautious and gradual descent he is enabled to repose himself to sleep.

As regards the nature or pathology of epilepsy I can say nothing very positive, although no disease, owing to its very striking nature, has received more attention in the attempt to unravel its mysteries. Many have placed the seat of the disease in various parts of the brain, as the centre or the medulla oblongata, but I think every consideration of the subject must show that the brain as a whole is affected; it is true that epileptiform fits may accompany local tumours in the brain, but they must be regarded only as exciting the paroxysms. The conditions which produce fits are those which imply that the brain as a whole is involved, as, for instance, when the blood is poisoned by urea, alcohol, or other matters. Then, again, the want of blood, as in hæmorrhage, will produce an epileptiform fit. I might also refer to the case of the young man I mentioned, where sudden fear was sufficient to provoke the paroxysm. Again, the fact of convulsions being excited by a distant irritant tends to corroborate the idea that the seat of epilepsy is not in one small spot in the cerebro-spinal centres. A few years ago an American visited Europe for the purpose of having his testes removed in the hopes of finding a cure for his epilepsy; the operation was performed, but with no good result. This was because he had heard it stated that epilepsy had its seat in the genital organs. Dr. Marshall Hall had a notion that the disease was caused by a spasm of the glottis, and therefore that tracheotomy would prevent the occurrence of the fits. The warranty of his great name favoured the performance of the operation in a few cases, but with no success. Then, again, the post-mortem appearances of the brains of epileptics display but very slight changes, although the organ may be found wasted as a whole or the membranes thickened. If again we consider what is the nature of the paroxysm, we shall be led to the conviction that the fit is due to a commotion of the brain as a whole.

It is a circumstance worthy of remark that an epileptic fit can be closely imitated. An eminent French Physician was thus purposely deceived by a Medical student, and mistook a feigned for the real disease. The process by which this is induced is by the person making use of his voluntary powers, or putting his cerebral hemispheres into action in order to excite the ganglia below which rule over the limbs and muscles of the body. He can thus produce a paroxysm resembling that of a true fit—nay more, he might, if on the stage of a theatre, work himself up to such a pitch of excitement that the mind would almost lose its balance, and a corresponding exhaustion ensue. We have only then to suppose the cineritious surface of the brain to be unduly excited in order to conceive how it might induce a corresponding action in the ganglia below (which rule over the limbs), whilst, itself being overwrought, all mental processes would cease. As the older writers expressed it, there is coma associated with excitement of the spinal cord. Now, if the upper portion of the latter be none other than the central ganglia of the brain, we believe that the doctrine was correct. These must be therefore healthy, and by no means structurally diseased. At the same time, the function of the surface, which is associated with the intellectual processes, is lowered in tone.

As a matter of fact, we find the mind failing until imbecility results, and our naked eye discovers often structural change in the surface of the brain. The epilepsy accompanying the general paralysis of the insane is confirmatory of the view I have taken. It so happens, also, that if epilepsy, or a disease approaching to it in character, does present any positive post-mortem appearances, they are always of one kind—an adhesion of a patch of dura mater to the surface of the brain, arising from injury to the skull, or syphilis, or other disease. I say in cases which may be called true epilepsy, judging not only from the symptoms, but from the general history and duration of the complaint, very little definite change is discovered in the brain; but if the case be of shorter duration and fatal, indicative of disease, then invariably there is found a change of the surface. Why a condition which is permanent should excite occasional disturbances of the organ does not constitute a difficulty peculiar to epilepsy; but there is no more difficulty in supposing that the whole cineritious surface of the brain should be occasionally excited from a local cause in the organ itself than it should be from some altogether unknown cause at a distance. Moreover, there are certain peculiarities about these fatal cases which, at the same time as they may be considered by some to militate against the idea of their being representatives of true epilepsy, yet, on the other hand, tend to corroborate the idea that the first disturbing causes of epilepsy originate in the cineritious structure—for instance, as before said, it so happens that in some of those epileptiform cases where consciousness was not altogether absent, a local disease was found, showing that irritation of one spot was sufficient to produce the fit. Then again it is well known that one side of the body is often more affected that the other in epilepsy, more convulsed during the paroxysm, and remaining after its subsidence. Now, this has been more often observed in the cases where a local change has been found on the surface of the brain. It would seem in such cases that instead of the disturbance being propagated throughout the surface, it was confined to one part of it, and thus the ganglion on one side and immediately beneath that part was especially stimulated to action.

I think, therefore, that in cases where such local disease exists, the frequent occurrence of the fits, the consciousness sometimes remaining, and the temporary hemiplegia being more marked, all tend to show that the symptoms are produced by local irritation of the surface acting on the ganglia below. In the truer forms of epilepsy, also, I cannot but think that the morbid processes are the same, only the whole cineritious surface is disturbed at once, as well as both pairs of ganglia beneath. All the phenomena of the disease confirm this view, as well as the causes, as those resulting from blood-poisoning or mental shock, which usually produce eclampsia. It may be that through the nervous system the blood-vessels are altered in calibre for the time, and thus the immediate cause for the phenomena. The opinion of Dr. Radcliffe has always been in favour of convulsive movements being due to a lowering or diminution of nervous power, rather than to an excessive action, and he would illustrate this by the epileptic seizure which is often a result of severe hæmorrhage. The difficulty in such explanation in the case of an ordinary fit is that, while one portion of the nervous centres is apparently for the time dead, another is in full activity, and yet the amount of blood in both would be the same. It might be said that as the cerebral hemispheres, as already explained, have a restraining force over the ganglia below, that immediately the function of the former is in abeyance that of the latter comes into play, but I have no facts to prove such an opinion. It may be true that, thus unrestrained by the brain proper, the spinal system is more excitable on application of stimuli, but I am not aware that it would under these circumstances spontaneously let loose its inherent forces. I would, therefore, rather believe that these ganglia, which communicate directly with the medulla, are excited by the deranged condition of the hemispheres above them, the latter undergoing such changes in their cineritious structure that a true mental alienation is produced, ending shortly in insensibility. The exact condition in which that grey matter may be is a question, but at present we may adopt in part the theory of Brown-Séquard that loss of consciousness is due to a contraction of the vessels of the brain, brought about by irritation of the sym-

pathetic nerve; but whether due immediately, as this physiologist thinks, to the subsequent circulation of black blood after this contraction has ceased, must at present be regarded as doubtful.

As regards the treatment of epilepsy, it must be considered entirely empirical. The term rational can scarcely be introduced even in the minor questions of diet, air, etc. I have certainly known patients reduce their amount of food and drink, especially in the article of meat, and with a corresponding diminution in the number and severity of fits; but, on the other hand, I know other cases where a generous diet has been equally necessitated. It is just one of those cases where particular drugs may be of service, and beyond their administration we can do little. If any old woman had the possession of a herb or a salt which could antagonise the disease, her knowledge would be worth more than that of the whole College of Physicians. I am happy to say that this does not apply to many other diseases where the knowledge you have acquired of their nature will serve you far more than all the medicines in the Pharmacopœia. The remedies, then, are empirical; those that have hitherto been most in vogue have been the metallic tonics. It is remarkable that such class of drugs seem to have more efficiency in morbid states of the nervous system than those which have a more direct physiological effect. In the whole range of nervous affections you will find this to be the case. In my own experience the only remedies of this kind which I have seen useful have been belladonna and nux vomica—drugs having different physiological actions. I have had cases where both remedies have been apparently beneficial. The metals have been used with a certain amount of success from time immemorial, such as arsenic, silver, iron, and zinc. Some years ago I used all these remedies largely amongst the out-patients, and should certainly give the preference to zinc; I know now more than one case of epilepsy where the patient is always better on the resumption of this remedy. If you suspect any local cause in the brain, you may adopt other measures; thus I have seen a case apparently cured by mercury. Those which were benefited by iodide of potassium had no doubt a syphilitic origin.

It was whilst I was examining the effects of the various remedies that I discovered the very superior value of the bromide of potassium. I was at that time trying this remedy against the iodide in bronchocele and some other disorders, and being in the habit of often using the iodide in epilepsy, I substituted the bromide for it. I was at first under the impression that it was acting as an absorbent, and was picking out for its operations those cases where the disease had a syphilitic or local origin; but when the cures came to be numerous, the explanation would not apply, and it was evident that a very valuable specific remedy had been obtained. Various writers had certainly mentioned the drug with a host of others, but only to again lay it on the shelf with them. I was not aware at that time that Sir C. Locock had recommended its use, for it does not appear that his observations had been specially brought before the Profession, much less been confirmed by others. As far as I know it was when Sir C. Locock was President of the Royal Medical and Chirurgical Society, on the occasion of Dr. Sieveking reading a paper on epilepsy, that he made the following remarks, and which I quote from the *Lancet* of May, 1857:—"Some years since he had read in the *British and Foreign Medical Review* an account of some experiments performed by a German on himself with bromide of potassium. The experimenter had found that when he took ten grains of the preparation three times a day for fourteen days it produced temporary impotency, the virile powers returning after leaving off the medicine. He (Dr. Locock) determined to try this remedy in cases of hysteria in young women unaccompanied by epilepsy. He had found it, in doses of from five to ten grains three times a day, of the greatest service. In a case of hysterical epilepsy which had occurred every month for nine years, and had resisted every kind of treatment, he had administered the bromide of potassium. He commenced this treatment about fourteen months since. For three months he gave ten grains of the potassium three times a day. He then reduced the amount, and the patient had no epilepsy since the commencement of the potassium. Out of fourteen or fifteen cases treated by this medicine only one had failed." It was in the early part of 1860 that I commenced to use it; in the following year about a dozen cases were published in the *Medical Times and Gazette*, being the first series of cases systematically described (that I can find) in which the remedy had been found eminently successful. It was thus evident that the bromide was not simply supplanting the iodide in the cure of some special form of the complaint, but that the drug had some remarkable influence over the pure and simple form of epilepsy. This has now been confirmed by others, and even by those who had previously merely administered the bromide, as they had done many other remedies, without sufficient trial, and had discarded it. Of course, like every other remedy, its success has been overrated, and thus the disappointment which naturally accompanied the reaction of opinion, more especially when it was employed for almost every disease in the nosology. As regards drugs, then, I should say that zinc and the bromide are the most important; but you will have no lack of opportunity of trying the effects of remedies, for epileptics often insist on being physicked year after year when absolutely nothing is being done for them.

I ought to mention the occasional value of counter-irritants to the back of the neck and of setons. I well remember two men who some years ago attended at the Hospital, and whilst the seton was open the fits were absent; when this dried up they returned. I have seen other cases of the kind since this time. I have already mentioned the case of a man whose life we saved by bleeding. I do not know that it is a remedy against the disease, but that it acts in the most beneficial manner if the paroxysm is long-continued I have no doubt. In the case I referred to the man had had a succession of fits for some hours, had swallowed nothing, and must shortly have died from congestion of the lungs, had not the lancet relieved his circulation and almost immediately restored him to consciousness. I think it very probable that in those cases in former times which were considered apoplectic, and in which recovery rapidly took place after bleeding, epilepsy was the real disease. I am convinced that I have seen several such, and therefore think they cannot be uncommon. A man, for example, is seized with a fit; you are called to him, and find him comatose, with stertor and apparent paralysis of one side; you consider it to be a case of apoplexy, and recommend bleeding; he soon afterwards recovers his consciousness, and after a few hours the weakness of the limb has passed, and the patient is comparatively well. Whatever the diagnosis, the remedy has succeeded, and thus, in a severe fit of epilepsy which becomes protracted, I have no hesitation at all in recommending you to open a vein. It might appear strange, after declaring that an epileptiform fit may be induced by loss of blood, immediately to recommend venesection as a remedy, but it does not follow that the theory and the treatment are antagonistic, for whatever may be the immediate cause of the seizure the result is a spasm of the chest, which, ending in congestion of the lungs, is best relieved by liberating the blood from the overcharged venous system.

I ought not to forget to mention the remarkable circumstance of our capability of arresting the attack by acting on the spot whence the aura proceeds. If the attacks were due directly to an irritation reflected from one spot, then the removal of this cause would stop the fit, as in the case of the child I mentioned, whose father assured me that the application of laudanum to a sore spot on the face would arrest or mitigate the paroxysm. But when the sensation on the surface is altogether subjective, a great difficulty in the explanation arises; unless we are content with supposing that as one portion of the brain must be more especially involved in order for the sensation to be felt in one part of the body rather than another, so some external application to that part may cause a corresponding reflection backwards, and arrest the process that had already commenced.

LECTURE ON THE

EXPOSURE OF ANIMAL SUBSTANCES TO WATER GAS AT A HIGH TEMPERATURE—340° FAHRENHEIT.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

(*Concluded from page* 30.)

After exposing the body of a dead fish to heat in plaster of Paris as described in the last experiment, I made two comparative experiments. In the first of these I placed another similar fish above the water in the iron chamber simply—not encasing it, that is to say, in any substance. The heat was then raised to 340° Fahr., and sustained for an hour and a half. Twelve hours afterwards, on opening the chamber, the

fish was found to have been entirely destroyed, with the exception of some small portions of the scaly covering. In the second comparative experiment, by means of a rod, I plunged the body of a dead fish suddenly under molten lead. The whole of the structure of the animal was immediately reduced to a charred mass, the carbon alone remaining undestroyed. I noticed that a portion of the charred mass, spongy in character and light, retained the form of the animal as it floated to the surface of the lead; from which I infer that it would be possible to obtain what might be called a carbon skeleton of an animal—a skeleton, that is, of the base on which all the organic structures were formed during life. From the first of these two experiments it is clear that exposure of an animal body direct to water gas at a high temperature is rapidly destructive. From the second experiment we learn that the sudden exposure of an animal to intense heat without moisture destroys by a different, or, at all events, by a modified process. This may be due to rapidity of action from the greater heat, the lead while in the molten state having a temperature of 604° Fahr.

The Eyeball in Plaster of Paris.

The eyeball of an ox was placed in the iron flask surrounded by plaster of Paris in the fluid state. When the plaster had set the flask was placed in the iron chamber with six ounces of water, and the heat was raised to 340° Fahr., and was sustained at that degree for an hour and a half. Twelve hours afterwards, on opening the flask, a very perfect mould of the eyeball was found in the plaster, but all the structures were resolved and removed except the pigment. At the bottom of the mould there lay a dark thin membranous substance, perforated in the centre, and being, I think, the posterior part of the iris, with a portion of the choroid.

Sponge in Plaster of Paris.

A portion of fresh clean sponge was placed in the iron flask, and was surrounded with plaster of Paris in the fluid state. The flask was closed with gentle pressure, and when the plaster it contained was firmly set it was put into the iron chamber with six ounces of water. The heat was raised to 340°, and was sustained at that degree for two hours. When the apparatus was quite cold, the flask was removed and opened. On breaking across the plaster of Paris block, a beautiful cast of the structure of the sponge was presented. The appearance of the cast is attempted to be depicted below. The sponge was not

Fig. 3.

entirely destroyed, there being left in the mould a sort of fine webwork, which stretched from one raised point to another. This webwork resembled spider's web in lightness and structure; it absorbed water from the air.

Body of a Frog in Chalk.

The iron flask was filled with finely powdered chalk in which the body of a frog recently dead was buried. Water was now poured on the chalk until it was brought to a soft mass; then the flask was placed in the iron chamber with six ounces of water, and for the space of an hour and a half was exposed to a heat of 340° Fahr. On opening the flask after cooling, the chalk was found nearly as firm as it is in natural cliffs. The body of the frog was nearly all destroyed, but a flattened mould of it remained; the markings were less clearly defined than in previous specimens.

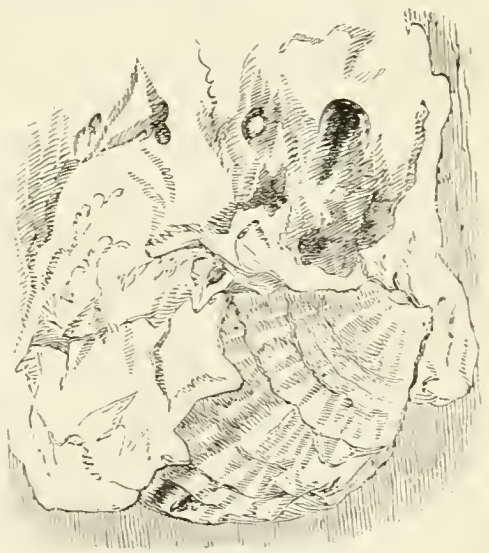
Body of a Fish in Portland Stone.

A portion of Portland stone was reduced to a fine powder, and was poured into the iron flask; a fish was buried in the powder, and water was added until the mass was made of the consistency of good mortar. The upper lid of the flask was then put on, the binding screws were applied so as to produce firm pressure, and the whole was placed in the iron chamber with six ounces of water. The heat was raised to 340° and sustained at that degree for one hour and a half. Next day the flask was opened, and the powdered stone was found making a solid mass. The body of the fish had been destroyed, but there remained a very perfect marking of the body. The mould of the animal in this case was shallow—in fact, almost flat—and as the block dried the mouldings of the body crumbled rapidly away.

Bodies of Animals in Silicates with Lime.

Mr. Hockin, of Duke-street, supplied me with a solution of silicate of soda and potassa, which he prepares for the purpose of hardening stone. This solution, made into a paste with carbonate of lime, produces a very firm even stone. I made a paste of this kind, and filled the iron flask with it, interposing in layers several animal substances, viz.—two fishes, an oyster, two cockles, some prawns, and a piece of the lung of the sheep. While the paste was still soft, the lid of the flask was put on, and very firm pressure was applied with the compressing screws. The flask was then dropped into the iron chamber, with six ounces of water, and the temperature, raised to 340° Fahr., was kept up for two hours. Twelve hours later the flask, which had cooled to the temperature of the day, was opened, and was found to enclose a fine solid stone. The stone was cut out and broken with a hammer. The piece of lung was destroyed altogether, but the markings of its structure were delineated, and I shall take advantage of the observation to get a perfect mould of the interior surface of the lung. The organic structures of all the other animals were removed, but the outer hard coverings of the prawns, cockles, and oysters remained so imbedded and blended with the stone that they seemed to form a part of it. The block, indeed, would easily pass for a natural product amongst the large majority of people; and one of my friends suggests that the fact may open a new business, "the manufacture of artificial fossil remains." In the drawing below the artist has endeavoured to show the appearance of a fragment of this artificial stone.

Fig. 4.



The Leaf of a Plant in Carbon.

The iron flask was filled with finely powdered carbon; in the middle was placed a bunch of parsley, the stem of the leaf and the leaf itself. The carbon was wetted, and then firmly compressed in the flask. The flask was next placed in the iron chamber, with six ounces of water, and the heat, raised to 340°,

was maintained at that degree for two hours. After cooling the flask was opened, and on breaking across the block of carbon a beautiful tracing of the leaf was found. A portion of the stem remained in a filamentous form.

It is worthy of notice in respect to the mouldings of animals left in substances in a state of semi-fluidity, that a moulding may sometimes be obtained in relief. This occurs from position and from pressure, at a certain degree of heat, in the process of hardening of the surrounding material. Thus in one experiment a frog was placed within a flask in plaster of Paris, and while the plaster was wet the lid of the flask was firmly screwed down upon the plaster. Here the upper part of the mould of the animal was found (after the exposure to water gas at 340° for two hours) depressed so that the markings stood out boldly, giving an indistinct idea of parts of the body in relief. The imitation was precisely like what is often seen in soft stone in nature.

Oyster in Plaster of Paris and Common Salt.

Plaster of Paris made into a fluid state with solution of common salt having a specific gravity of 1160, was poured into an iron flask so as to fill it in part: an oyster in its shell was laid in the plaster, and the flask was then filled up with the plaster. The whole was placed in the iron chamber, with six ounces of water, and exposed to heat at 340° for an hour and a half. On opening the flask some hours afterwards, when the chamber was quite cold, the oyster-shell was seen firmly embedded in the concrete, and on opening the shell the oyster itself was found to be removed. The shell, forming, as it were, a part of a soft limestone, was strikingly like to shells found naturally in soft stone. For the sake of comparison, another oyster, enclosed in its shell, was plunged under molten lead, and held there until the lead had become solid. Then the lead was melted once more, and the oyster was removed. This shell was charred at the edges, and the valves were loosely adherent, but the enclosed oyster remained, hard in structure, and resembling much, in external appearance, a roasted chestnut when the external covering is removed.

Albumen with Phosphorus.

An egg was embedded within the iron flask in plaster of Paris, except for a small space on the upper part. An opening was drilled through the shell, and into the opening one grain of pure phosphorus was passed, and was pushed with a thin glass rod into the centre of the yolk of the egg. The opening into the egg was covered, and the flask was filled with the plaster. After the plaster was well set the whole was placed in the iron chamber, with six ounces of water, and the temperature was raised to 340° Fahr., which temperature was kept up for two hours. When the flask was opened some hours afterwards, and the plaster was cut through to the egg, the shell of the egg was found to contain a brownish red-coloured paste, looking much like the marrow of bone. When the smallest part of this paste was rubbed, there was combustion of phosphorus, showing that this element, although so finely diffused through the mass, was in the free state. The paste was partly soluble in ether, in alcohol, and in water.

Albumen with Sulphur.

An egg was placed in plaster of Paris, as in last experiment. The shell of the egg was perforated, and into the centre three grains of sulphur were passed in small fragments. The opening in the egg was closed, and the flask, filled up with the plaster, was put into the iron chamber, when the plaster was set, with six ounces of water. The heat was raised to 340° Fahr., and kept up to that degree for two hours. Some hours later, the apparatus having cooled, the flask was removed and opened. The albumen was found in the form of a paste of brown colour and moderately firm.

Blood with Sulphur.

Some clot of blood was mixed with sulphur, in proportion of fifty parts of blood to one of sulphur. The mixture was placed in a porcelain crucible, and put into the iron chamber over six ounces of water. It was exposed for two hours to a temperature of 340° in the water gas. On removing it, after cooling, it was found in the same condition as the blood that had been subjected to the same degree of heat without sulphur—*i.e.*, it was firm and felt like caoutchouc, but broke with a fracture having a bright surface. In a second experiment, blood clot and sulphur were enclosed in plaster of Paris within an iron flask, and were subjected, with six ounces of water, to heat at 340° for two hours. The result was the same as in last experiment.

A Portion of an Artery with Sulphur.

A piece of artery, from the arch of the aorta, measuring one inch long and one inch wide, was laid on a bed of moist plaster of Paris within a small iron flask. Beneath and above the piece of artery was placed a thin layer of finely powdered sulphur. The flask was filled with plaster, closed, and, with six ounces of water, was put into the iron chamber, where for an hour and a half it was exposed to a heat of 340°. After cooling, on opening the flask, the piece of artery, reduced in size and not thicker in structure than tissue paper, was found: it was elastic, and so like a portion of very fine dark india-rubber sheeting, it would easily have been mistaken for that substance. In a few hours it grew hard, and broke with a bright, almost glassy, surface, like vulcanite base.

Commentary.

It will be seen that in these experiments I have recorded only the results obtained at a temperature of 340° Fahr., and over a period of time ranging from one hour and a half to two hours. What differences would occur from exposure at higher temperatures or lower, over longer or shorter periods of time, remain yet to be determined.

From what has already been done we may learn, however, something that is of interest, and, indeed, I doubt not that, were the inclination indulged, a great deal of curious speculative argument of analogical character might be put forward. I have no intention myself of gratifying such inclination, and shall confine the comments I make to narrow bounds.

Let me say, then, as a first commentary on what I have seen, that the process of producing changes in organic animal substances by the means pointed out in this lecture is not likely to be given up if it be once fairly tried by the physical inquirer. It is simple in principle, easy in accomplishment, and in many ways likely to be useful.

It will be observed from our experiments that, on exposing some animal substances, especially blood, to so high a degree of heat as 340° in water gas, there is no destruction of matter, but very distinct change of character. It will also be observed that the pigmentary matter of the eyeball that was exposed to the same high degree of heat was not destroyed. It will be further observed that when the body of the frog buried in plaster of Paris was removed by the heat, a little dark substance, evidently blood, remained. We see, I think, in these facts the persistent character of the pigmentary structures of animal substances. These seem not merely to be themselves resistant, but, in the case of blood, to hold together other substances with which they are immediately surrounded.

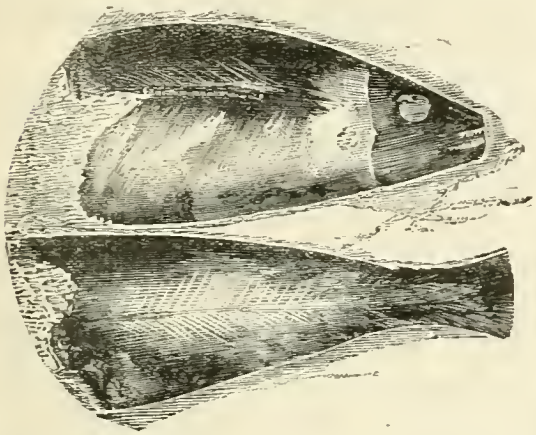
After the blood the bones seem most resistant, and, in the case of fish, the scaly covering of the body. The shells of the oyster, the cockle, and periwinkle are resistant at 340°, but the enclosed animal is destroyed. The outer covering of the prawn is resistant.

It will be gathered further from our experiments that animal bodies buried in moist substances and exposed to a heat of 340° Fahr., although almost destroyed, leave more or less evidence of the fact that they have been in existence, the evidence varying according to the character of the bed in which the destruction has taken place. Destruction in vegetable carbon is extremely rapid and complete in respect to all the soft structures of animals: destruction of the same in sand, in carbonate of lime, and in sulphate of lime, is also rapid.

Under certain circumstances this destruction of animal matter while embedded in moist substance is attended with the formation of a cast or mould of the animal, with or without the remaining portions of the more resistant structures. This was well marked in the fish that was encased in plaster of Paris and alum, the body of the animal being destroyed, but a good mould being left, as shown in the accompanying sketch (Fig. 5). The soft and most highly organised structures of animals are, it is clear, readily removable in water vapour at the temperature of 340° F.; the pigmentary matter and also those structures of animals which contain most earthy or inorganic substance are not, however, so easily resolvable, but have a tendency, in some instances, mechanically to combine with the matter in which they are embedded. In these results we see much that resembles what is found in the earth as indication of animal remains; for in the earth we find casts of animal bodies, outer coverings of animal bodies embedded in stone, and bony structures fixed in stone. But to make the analogy of the artificial and natural perfect, we require one other factor in our research—I mean continued and intense pressure while the process of removal of the soft structure of the body is in progress. Then the surrounding material while in the moist state would be forced into the space previously filled by the easily destructible parts of the animal, while the less destructible parts of the animal, such as the skeleton or the horny covering, would become, as it were, a portion of the concrete, and would undergo subsequent solidification with the concrete.

In relation to this seeming analogy—and I am not prepared to refer to it as anything more at this moment—the most singular fact is that relating to the rapidity with which, in experiment, the changes are effected. What is done in the iron chamber charged with water gas at 340° F. in the course of

FIG. 3.



from one to two hours, might, if the facts were not known to us, pass for the work of a long period of time. At this point the argument from analogy of the artificial with the natural must be suspended until experiments at a lower temperature have been carried out. We are, in fact, limited at this moment to one inference—viz., that if, by any commotion or other physical accident, a bed of loose earth, covered with living animals, were suddenly to subside under water, so as to bury all the living things on it, and if, from motion or other cause, the temperature of the mass were raised to 340° F. for the space of from one to two hours, the truly organised parts of all the animals embedded would be removed, and the indications of the animals having existed would be left either as mere moulds, or as incrustations, or as animal remains from which the organic substance had been removed by the heat and had been replaced by the surrounding inorganic matter which formed the bed.

There is a difference in the character of the substance which surrounds organic matter in respect to its power to hasten destruction. Carbon, as the surrounding bed, is specially favourable to the destructive change. This is due, I should think, to the capacity of the carbon to absorb the gases of decomposition. But here it is all open ground for research, and, as Dr. Thudichum has pointed out to me, it will be a fine study to learn the manner in which the resolution of the organic matter occurs during this process of destruction, and what are the products.

Lastly, when we brought organic substances into direct contact with inorganic, and subjected them to the raised temperature in water-gas, we observed certain changes of matter and modifications which require to be reconsidered by the light of further experiment. We may get an advance in this direction in the mode of research by synthesis.

I have written this lecture as apart from my course on "Experimental and Practical Medicine." It is a waif, nothing more, in my hands. Perchance some worker in science, with more leisure and the same inclination, may found upon it something better.

CHOREA AFTER ACUTE ARTICULAR RHEUMATISM.—Dr. Paulicky relates an interesting case exemplifying the now well-ascertained fact that chorea must be regarded as one of the sequelæ of acute rheumatism. It occurred in the person of a joiner's apprentice, fifteen years of age, who suffered from acute rheumatism, which attacked most of the large joints as well as the jaws. The articular affections and fever had entirely disappeared, when choreic movements set in, which increased in intensity, implicating, besides the muscles of the limbs and trunk, especially those of the face and the tongue. Slight mental disturbance also occurred. The chorea continued in all its intensity for five weeks, when it gradually disappeared, as did the pallid appearance of the patient, under good diet and appropriate treatment.—*Wien. Med. Woch.*, October 21.

ORIGINAL COMMUNICATIONS.

CASE OF LARVAL TAPEWORMS IN THE HUMAN BRAIN.

By C. LAWRENCE BRADLEY, F.R.C.S.,
Surgeon to the Pentonville Prison.

CASES in which the larval forms of *Tænia solium*—namely, the *Cysticercus cellulosæ*—have been found in the human brain are sufficiently rare to make the following case worth recording, and especially as the patient had afforded an opportunity for observation for many months previous to his death.

J. C., aged 34, a farm labourer, who had led a hard life, oftentimes destitute and oftentimes in prison, was received into Pentonville on January 28, 1868. Though out of condition on reception, he appeared in tolerable health. In September he first complained of diarrhœa, soon followed by cough with expectoration. Phthisical symptoms subsequently became more marked, and the diarrhœa recurred more or less frequently until December 3, when death took place from exhaustion.

The post-mortem examination gave the following results:—Body emaciated. Head: Pacchionian glands considerably developed, thinning the dura mater and indenting the calvarium in the mesian line. Subarachnoid effusion upon the surface of the hemispheres. On removing the pia mater numerous cysticerci were discovered packed separately between the convolutions of the hemispheres. They appeared as bladders distended with fluid, the size of filberts, some transparent, others more or less opaque. There was one in the meshes of the choroid plexus in each lateral ventricle, and one in the third ventricle, smaller ones also between the laminæ of the cerebellum. Altogether, I estimated their number at twenty. There were none found in other organs. The lungs were tuberculous, but without vomicæ. The mesenteric glands enlarged, and tuberculous. There was extensive ulceration of lower portion of ileum, cæcum, and several inches of colon; in some places the ulceration extended nearly through the intestinal walls. Here the intestines were glued together by recently effused yellow lymph. A microscopic examination showed the worms to have a head armed with a double coronet of hooks, placed upon a black pigmentary disc, surrounded with four suckers. A strongly plicated neck was coiled spirally round the head, and the whole retracted within the expanded sac-like extremity of the creature. Similar appearances to those I have described are beautifully drawn in Dr. Cobbold's magnificent work on "Entozoa," plate 12, figure 13.

The case is interesting from the number of the entozoa, their size, and the length of time they must have existed in the brain; for it is not likely that they should have been introduced into the "host's" body subsequent to his entrance into Pentonville—a period of ten months. It is also interesting from the entire absence of cerebral symptoms, for during the period referred to the prisoner never complained of pain in the head, giddiness, or other symptom of cerebral irritation, and he retained his mental faculties unimpaired until just before his death.

A CASE OF TRAUMATIC STRICTURE OF THE ŒSOPHAGUS, WITH REMARKS.

By EDWARD MACKEY, M.B. Lond., etc.

J. W., a healthy lad of 4½ years of age, swallowed by mistake a mouthful of "soap-lees" on July 22, 1868. He was brought to my house within a few minutes, when his mouth and lips were excoriated; he was retching violently, and was pale and cold. The acute symptoms subsided in a few days, and the sore places healed within a week.(a)

From this time he ate ordinary solid food with little or no difficulty for a fortnight, but for no longer. Then, however, he took liquids pretty well; he vomited sometimes, and complained of pain in the stomach, but was relieved by bismuth.

At the end of a month from date of accident he was evidently weaker and thinner; he was very thirsty, and would call in

(a) This was attributed to his mouth being "charmed," which was done by an old woman wetting with saliva the second finger of the right hand, and passing it nine times round the lips, mumbling certain words; the said old woman has a great reputation in her village for charming, and her operations are principally upon burns and scalds.

turn for every liquid of which he knew the name; sometimes he would just take it into his mouth and reject it; sometimes he would seem to swallow and retain it for twenty or thirty seconds, and then bring it all back; sometimes he would be able to swallow completely for a day.

At this time there was no pus brought up, and I thought it well to begin (on August 25) the use of an elastic bougie. A No. 12 was stopped about six inches from its end, but after the second or third trial it passed further, and the child seemed to improve in power of swallowing and in appearance.

He was now seen by my friend, Mr. F. Jordan, who advised the passage of the bougie every third day, and counter-irritation between the shoulders. This was carried out, and no blood or matter followed the introduction of the instrument; but it was very distressing to the little patient, and caused vomiting always. On September 7 my friend, Mr. Harmar (in my absence from town), was suddenly sent for, as the child was supposed to be choking, but he vomited a quantity of pus and blood, with immediate and so great relief as to be able to swallow straightway half a pint of milk. No instrument had been passed for three days before this occurrence. Soon afterwards the dysphagia became as bad as ever, to be relieved by another vomiting of matter, and from this time the bougie was, I consider, inadmissible. Matter was frequently brought up afterwards, but in small quantities. The thirst and the emaciation became now the prominent symptoms, with, at times, uncontrollable restlessness and fits of violent passion; constipation was obstinate; nutrient injections were found impracticable. In the course of September cough and hurried breathing set in with more pyrexia and foul breath; no other marked change till diarrhœa in the early part of November; a night of extreme restlessness, and then quiet death on the morning of the 10th —three and a half months from date of accident.

Post-mortem, November 11.—The body was extremely emaciated. On removing the heart and lungs, the œsophagus was seen dilated so as to form a pouch from the level of the cricoid cartilage to first rib, thence narrowing gradually to the sixth dorsal vertebra, where there was the greatest constriction, and a gristly feel for a space of half an inch. Below this the tube was of rather less than usual size; there was no sign of abscess near it, nor of perforation. On opening the œsophagus, the pouch was found filled with a white pultaceous mass of food, and this tapered down to seat of stricture, below which there was none. The mucous membrane underneath this food was in a natural condition; at the stricture it was dark brown in colour, and thinned, and from that point to near the stomach it was dark red, but there was no suppurating surface, and no mark of cicatrix. The narrowest part would admit a No. 7 catheter; the widest would close over a little finger.(b) The stomach was contracted and empty; its mucous membrane healthy. The pericardium contained about two ounces of clear fluid: the heart cavities were contracted and empty. The pleuræ, especially on left side, were coated with thick, tenacious, greenish lymph. Both lungs presented appearances characteristic of pyæmic suppuration—the bright red colour in patches, with protruding yellow lumps, containing pus. The left lung was completely disorganised. The bronchial glands were large and hard. There was no abscess in the liver.

Remarks.—(*a*) The fact of swallowing of liquids being possible on some days even near the end of the case, is to be explained partly by the pouched condition of the upper part of the œsophagus, partly by a varying amount of spasm. As to the former circumstance, it is evident that some little solid food, being retained there and obstructing the passage of more, would cause regurgitation even of liquids, when suddenly a free vomiting might empty said pouch, and for some hours liquid might find its way through the stricture.

(*b*) The vomiting of matter (witnessed by Mr. Harmar), followed immediately by ability to swallow, indicated an abscess in or near the tube, and yet it is remarkable how little ground for suspecting this there was in its condition at the time of death.

(*c*) As to cause of death. The end was peaceful and without the ordinary signs of suffocation; so I did not attribute it to the mass of food in the gullet, but to exhaustion, and this to the want of food and to the pyæmic suppuration. But what is the cause or reason of this last fact? It is one of extreme interest, and, I believe, unusual, for I find no mention of a similar one in recorded cases to which I have access.

In one, a child, aged one year and a half (*Guy's Hospital Reports*, 1859, p. 134), who died twelve hours after swallowing soap lees, the lungs showed "some lobules in the first stage of inflammation"—the only case I know in which the state of the lungs is recorded as other than normal.

There was no apparent circumstance in this boy's history or his mode or place of living which would be thought to generate a tendency to pyæmia, beyond, perhaps, this one—that he was only a fortnight convalescent from scarlatina, during which the throat had been ulcerated; still he was quite convalescent.

The sequence, then, of facts I presume to be this:—

1. Injury to œsophagus.
2. Abscess of its wall.
3. Depression of vitality from pyæmia and from partial starvation.
4. Pyæmia, having for its predisposing cause No. 3; for its exciting cause, No. 2.

It will be observed that the stricture was not so narrow as to be likely to cause death from starvation; were it not for the pyæmia, the child might have survived longer.

(*d*) As to treatment. At first warm bland fluids were pressed upon the child, but very little could be taken. A few small doses of antimony and opium relieved the pyrexia and the pain, and chlorate of potash helped the healing of the sore mouth; but the question that presented itself here, and will present itself in every such case, is—Is the use of bougies desirable? Is the benefit to be expected from them sufficient to warrant the pain and, I may add, the risk to which the sufferer is exposed? Authorities differ. Dr. Basham (*Med. Chir. Transactions*, vol. xxxiii. p. 106) recommends them; Gray also (Holmes's System, vol. ii. p. 334). Erichsen scarcely does so; while Pollock (Holmes's System, vol. iv. p. 148) decidedly discountenances their use. What I have seen leads me to say this:—They may be, nay, they have been, the means of cure in the adult; I fear they cannot be in a child, and yet, as they are the only means of attempting to avert what has proved an almost invariably fatal termination, I cannot regret making the trial, and should do so again, but with this caution, which I earnestly commend to my readers—have a fixed hour and day for the use of the instrument, and let no food be taken for some hours before; for it is apt to accumulate in the pouch, and prevent the passage of the bougie to the stricture, so causing great pain to the patient, and disappointing the attendant.

Newhall-street, Birmingham.

(b) The specimen is now in the Museum of Queen's College, thanks to the care of Mr. C. J. Bracey.

ON THE EXCRETION OF UREA IN EXANTHEMATOUS TYPHUS, IN ITS RELATION TO THE FEVER.

By Professor S. ROSENSTEIN, of Groningen.

Translated from the *Nederlandsch Archief voor Genees en Natuurkunde*, IV. Deel, I. Aflevering,

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(*Continued from Vol. II.* 1868, *page* 722.)

Case 5.—John Zijlstra, aged 21, journeyman smith.

Day of Illness.	Mean Temperature.	Quantity of Urine.	Sp. grav.	Percentage of NaCl.	Percentage of Urea.	Quantity in twenty-four hours of NaCl.	Quantity in twenty-four hours of Urea.
7th to 8th day.							
12 noon to 12 midnight	103·46	245	1·030	0·50	5·2	1·22	12·25
12 midnight to 12 noon		500	1·030	0·60	5·0	3·00	25·00
		745				4·22	37·25
8th to 9th day.	104·72	300	1·019	0·62	4·5	1·86	13·50
		310	1·020	0·42	4·5	1·30	13·95
		610				3·16	27·45
9th to 10th day.	104·9	260	1·029	0·26	6·3	0·67	16·38
		500	1·028	0·20	3·5	1·00	17·33
		760				1·67	33·71
10th to 11th day.	104·36	370	1·029	0·26	4·5	0·96	15·90
		260	1·028	0·20	4·5	0·52	10·70
		630				1·48	26·60

Day of Illness.	Mean Temperature.	Quantity of Urine.	Sp. grav.	Percentage of		Quantity in twenty-four hours of	
				NaCl.	Urea.	NaCl.	Urea.
11th to 12th day.	104·145	330	1·022	0·22	4·5	0·72	14·85
		120	1·029	0·16	4·5	0·19	5·40
		450				0·91	20·25
12th to 13th day.	104·018	700	1·024	0·16	3·5	1·12	24·50
		340	1·018	0·12	3·0	0·40	10·20
		1040				1·52	34·70
13th to 14th day.	103·28	230	1·020	0·22	4·0	0·50	9·20
		535	1·015	0·16	2·9	0·85	15·51
		765				1·35	24·71
14th to 15th day.	104	260	1·020	0·18	3·43	0·46	8·91
		710	1·015	0·14	2·67	0·99	19·59
		970				1·45	28·50
15th to 16th day. The patient uses milk and rice water.	103·1	1110	1·009	0·16	1·60	1·77	17·76
		600	1·012	0·12	1·85	1·72	10·10
		1710				3·49	27·86
16th to 17th day.	101·84	580	1·012	0·16	2·1	0·92	12·18
		610	1·013	1·00	2·0	6·10	12·20
		1190				7·02	24·38
20th to 21st day. Soup and half a pound of meat.	99·14	625	1·020	1·28	2·25	8·00	14·06
		645	1·020	1·24	2·39	7·99	15·41
		1270				15·99	29·47

This patient has, during the whole course of his illness from the thirteenth day, notwithstanding his fever, always used liquid nourishment, as milk and rice water.

Case 6.—Anna Fransen, aged 26. Bodily weight 65 kilogrammes 7 ounces.

Day of Illness.	Hour.	Temperature.	Quantity of Urine.	Sp. grav.	Percentage of			Total amount of		
					NaCl.	Urea.	PO_5.	NaCl.	Urea.	PO_5.
5th to 6th day.	3 p.m.	103·46	280	1·021	0·92	2·30	0·136	2·57	6·44	0·350
	9.30 ,,	104·9	370	1·017	0·60	2·00	0·100	2·22	7·40	0·370
	9 a.m.	104·18	310	1·025	0·64	2·68	0·09	1·98	8·30	0·279
	12 noon	103·82	130	1·025	0·84	4·40	0·14	1·09	5·72	0·140
Mean temperature	...	104·09	1090					7·86	27·86	1·139
6th to 7th day.	3 p.m.	104·18	100	1·028	0·60	4·15	0·15	0·60	4·15	0·15
	6.30 ,,	105·38	120	1·025	0·48	4·0	0·114	0·57	4·80	0·136
	10 ,,	102·56	240	1·022	0·44	3·75	0·17	1·05	9·00	0·408
	9 a.m.	102·56	100	1·026	0·64	4·3	0·20	0·64	4·3	0·200
	12.30 noon	105·26	140	1·027	0·40	3·97	0·23	0·56	5·55	0·322
Mean temperature	...	103·988	700					3·42	27·80	1·216
7th to 8th day.	3 p.m.	102·38	90	1·025	0·40	3·8	0·23	0·36	3·42	0·207
	6 ,,	104·72	120	1·024	0·56	3·7	0·18	0·67	4·44	0·216
	9 ,,	104·72	200	1·026	0·52	4·0	0·13	1·04	8·00	0·260
	9 a.m.	104·	290	1·026	0·42	3·95	0·19	1·21	11·45	0·551
	12 noon	104·54	55	?	0·36	?	?	0·19		
Mean temperature	...	104·072	755					3·47	27·31	1·234
8th to 9th day.	3 p.m.	104·36	160	1·025	0·24	4·3	0·20	0·38	6·88	0·320
	6 ,,	104·54	130	1·026	0·48	3·9	0·04	0·62	5·07	0·052
	9 ,,	104·9	100	1·028	0·48	4·1	0·15	0·76	6·56	0·320
	9 a.m.	104·18	300	1·025	0·53	3·75	0·20	1·50	11·25	0·69
	12 noon	104	95	1·024	0·40	4·1	0·15	0·38	3·89	0·142
Mean temperature	...	104·396	785					3·64	33·65	1·524
9th to 10th day.	3 p.m.	104·54	120	1·024	0·38	4·0	0·13	0·46	4·80	0·156
	6 ,,	104·9	110	1·020	0·39	4·2	0·13	0·42	4·62	0·143
	9.30 ,,	105·08	200	1·026	0·32	4·3	0·26	0·64	8·60	0·52
	9 a.m.	104	180	1·025	0·48	4·0	0·35	1·51	7·20	0·63
	12 noon	103·64	220	1·025	0·40	4·6	0·35	0·88	10·12	0·55
Mean temperature	...	104·432	830					3·91	35·34	1·999
10th to 11th day.	3 p.m.	104·18	90	1·025	0·40	4·25	0·19	0·36	3·82	0·17
	6.30 ,,	104·72	40	?	?	4·4			1·76	
	9.30 ,,	104	160	1·026	0·28	4·5	0·25	0·44	7·20	0·40
	9 a.m.	103·28	305	1·024	0·46	3·9	0·29	1·40	11·89	0·88
	1 p.m.	103·64	160	1·025	0·42	4·1	0·20	0·67	6·56	0·32
Mean temperature	...	103·964	755					2·87	31·23	1·77

Day of Illness.	Hour.	Temperature.	Quantity of Urine.	Sp. grav.	Percentage of			Total amount of		
					NaCl.	Urea.	PO_5.	NaCl.	Urea.	PO_5.
11th to 12th day.	4 p.m.	104·18	100	1·026	0·40	4·16	0·20	0·4	4·10	0·20
	6 ,,	104	220	1·023	0·20	4·00	0·208	0·44	8·80	0·45
	9.30 ,,	104·72	145	1·020	0·30	3·30	0·21	0·43	4·78	0·30
	9 a.m.	102·56	125	1·018	0·42	2·72	0·18	0·52	3·69	0·22
	1 p.m.	102·74	65	?	0·12	2·80	?	0·07	1·82	
Mean temperature.	...	103·64	655					1·86	23·19	1·17
12th to 13th day.	5 p.m.	103·1	110	1·015	0·20	2·90	0·16	0·22	3·19	0·17
	7 ,,	103·28	160	1·016	0·20	2·79	0·19	0·32	4·46	0·30
	10 ,,	102·2	220	1·016	0·16	2·70	0·194	0·39	5·94	0·41
	9 a.m.	101·84	210	1·016	0·20	2·35	0·18	0·42	4·93	0·37
	1 p.m.	101·48	260	1·016	0·22	2·48	0·168	0·57	6·44	0·43
Mean temperature.	...	102·38	960					1·92	24·96	1·68
13th to 14th day.	7 p.m.	102·56	95	1·016	0·19	2·29	0·15	0·18	2·18	0·14
	10 ,,	102·56	280	1·015	0·20	2·75	0·19	0·56	7·70	0·53
	9 a.m.	100·58	140	1·020	0·20	2·48	0·26	0·28	3·47	0·36
	1 p.m.	99·5	90	1·020	0·20	2·90	0·16	0·18	2·61	0·14
Mean temperature.	...	101·3	605					1·20	15·96	1·17
14th to 15th day.	4 p.m.	99·5	145	1·019	0·22	3·50	0·17	0·31	5·07	0·24
	10 ,,	99·68	100	?	0·24	2·95	0·21	0·24	2·95	0·21
	9 a.m.	98·42	220	1·020	0·24	2·70	0·19	0·52	5·94	0·41
Mean temperature.	...	99·2	465					1·07	13·96	0·86
15th-16th day	7 p.m.	99·68	310	1·022	0·52	3·47	0·198	1·61	10·75	0·58
Patient begins to take broth.	10 a.m.	99·68	220	1·022	0·5	3·00	0·20	1·10	6·60	0·44
	12 noon	98·24	300	1·016	0·6	1·70	0·14	1·80	5·10	0·42
Mean temp.	...	99·2	830					4·51	22·45	1·44

The following determinations, made three weeks later, give the measure of the normal excretions in this individual:—

	Quantity of Urine.	Specific Gravity.	Percentage of			Total amount of		
			NaCl.	Urea.	PO_5.	NaCl.	Urea.	PO_5.
Day	900	1·014	0·68	1·26	0·07	6·12	13·4	0·63
Night	940	1·014	0·80	1·55	0·085	7·52	14·66	0·79
	1840					13·64	28·06	1·42

These determinations show that in exanthematous typhus the excretion of urine takes place not so irregularly as would appear from the scanty data heretofore existing (Griesinger), but that rather a regularity is met with more distinctly than in many other febrile diseases.

The quantity of urine is, at the height of the disease—that is, towards the end of the first and in the course of the second week—much less than in the normal state, though it always bears a relation to the quantity of fluid drunk. This last could be determined only approximately, not by special measurement, as it is very difficult to investigate it accurately in a long illness. An estimation is, however, in this instance, sufficient to justify one in assuming such a relation, especially in those cases where very large quantities of urine are excreted.

The specific gravity is, for the most part, precisely proportionate to the quantity of urine and the degree of concentration connected therewith. At the moment, however, when the excretion of urea diminishes, we find with small quantities of urine a descent of the specific gravity—namely, to between 1·010 and 1·015.

The colouring matter of the urine is increased, unless the patient is very anæmic. In these cases we may, even with the highest fever, obtain light-coloured urine.

The chloride of sodium exhibits, in this instance, the same behaviour as in all feverish states. Its amount is very much diminished by the fever, but is otherwise proportionate to the quantity in which it is taken with the food, and to the quantity of drink. We consequently see it in the urine in the commencement, while a moderate ingestion of food still goes on, very much diminished in proportion to the quantity of urine; but it is not until the acme of the disease, when the fever is highest and the ingestion of food has almost completely ceased, that it falls to minimal quantities. Its total disappearance, as stated by Murchison, I have never observed.

We may invariably perceive the influence of increased drink in the augmented quantity of chloride of sodium, with reference to the urine. While in other diseases, as pneumonia, pleuritis, ileo-typhus, etc., the diminution of the excretion of chloride of sodium may be placed partly to the account of the simultaneous ex- and trans-udations, in the present instance only the relation between the diet and the fever remains to explain it. The diminished ingestion of food cannot be the

sole cause of it, for my patients always took sufficient common salt in the use of milk and barley-water to enable them to excrete more than half a gramme daily, which, however, did not take place in Cases 1, 2, and 3. An influence must therefore be attributed to the fever itself through the altered metamorphosis of matter.

The excretion of phosphoric acid is, according to the four cases in which I have determined it, influenced by the diet and the amount of fluid drunk. With increase of the urine the quantity of phosphoric acid is remarkably increased. In Case 2 for example, in 720 c.c. of urine, 0·72 gramme (rather more than 11 grains) of phosphoric acid is excreted; and in 2190 c.c. of urine, 2·29 grammes; in 380 c.c. of urine, 0·69 grammes of PO^5; and in 1310 c.c. of urine, 1·83 grammes of the same are met with. In like manner, with the increased alvine action caused by the food the excretion increases, and *vice versâ*, the quantity of PO^5 sinking remarkably at the period of inanition, and rising again immediately when the patient begins to take food. I was unable to prove that the fever had influence on the excretion of this substance, either in those cases where it was determined at periods of only some hours, or in quantities of twenty-four hours, which is the more remarkable, as much has been said of the increase of PO^5 in this disease. The peculiar phenomenon, that, at a certain period, with considerable sinking of the amount of common salt and urea at the height of the fever, the quantity of phosphoric acid also becomes less, is not ascribable to the influence of the fever, but to the inanition, of which I shall presently speak.

The state of the *excretion of urea* is, of course, of the greatest importance, and this must, in fact, exhibit itself in the present case more distinctly than in other febrile diseases, because the whole affection (so to speak) runs its course in the blood—that is, without special exudations or transudations; and, therefore, peculiar results may be expected from its *relation to the fever*, to which all theories of fever attach so much importance. Hence it is that, with the usually tardy defecation and slight ingestion of food in this disease, the excretion of nitrogen through the fæces may be excluded, so that almost all the nitrogen excreted is precipitated by Liebig's volumetric test fluid, and we can in this way obtain a clear idea of the metamorphosis of albumen.

The state of the excretion of urea is constantly this (of the apparent exception I shall hereafter speak)—that, in the commencement, the quantity eliminated with the urine is remarkably increased, and then, according to the previous mode of living of the individual, sooner or later sinks, with simultaneous increase of the fever, to far beneath the normal standard, to rise again with the augmented ingestion of food. The quantity of drink used always manifests its influence most distinctly; yet at the height of the morbid process, with a considerable quantity of urine, in spite of the higher fever, such great quantities are never excreted as at the commencement. If we compare at shorter intervals, as has been done in Cases 4 and 6, the temperature and the amount of urea, we shall no more be able to draw any distinct parallel between the two than is usually the case for greater periods. Of course, the question will suggest itself, in what manner the phenomenon is to be explained that the quantity can undergo a diminution to far beneath the normal, which, for example, we saw in Case 1 to amount at 103·1° on the sixth day to 13·06, at 103·28° on the ninth day to 6·82 grammes; in Case 2 at 103·1° on the twelfth day to 12·06; at 103·46° on the thirteenth day to 17·07, while the same individual normally excretes at 99·14°-44·4 grammes of urea; in Case 3, on the thirteenth day, at a temperature of 103·712°, 14·06 of urea; on the fourteenth day, at 103·586°, 13·0 of urea. An accurate consideration shows, moreover, in the several cases that this sinking of the excretion of urea in one individual, in Case 1, occurs even on the sixth day, in another, in Case 5, not until the fourteenth day, and in Case 5 (an apparent exception) the sinking takes place only in a slight degree, but so that, although very trifling, it is quite unmistakable, for there were excreted, for example, on the tenth day, at a temperature of 104·36°, and in a quantity of urine amounting to 630 c.c., only 26·6 grammes of urea; while still on the seventh day, at a temperature of 103·46°, and in a quantity of urine amounting to 745 c.c., 37·25 grammes, and on the thirteenth day, with an increased flow of urine of 1040 c.c., and at a temperature of 104·018°, 34·719 grammes—that is, less than five days earlier, with a quantity of urine diminished by 300 c.c.—were excreted.

(*To be continued.*)

CHOLERA has broken out at St. Louis on the Senegal River.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

WESTMINSTER HOSPITAL.

THE following cases of hernia which have occurred at the Westminster Hospital all present some special features of interest.

Case 1.—*Inguinal Hernia complicated with an Undescended Testicle.*

(Under the care of Mr. HOLTHOUSE.)

Charles P., aged 21, a strong, stout, sunburnt man, was admitted into the Westminster Hospital on the evening of May 29, 1868, suffering from a large inguinal hernia on the left side, which had made its appearance for the first time three weeks previously after the patient had jumped from a cart. In the afternoon preceding his admission, it had become much larger and more painful, in consequence of his having lifted a heavy flagstone into his cart. At 9 p.m. Mr. Holthouse was called to see the patient, as the House-Surgeon was in doubt as to the nature and condition of the hernia. On examination he found a large, oblong, prominent tumour of the size of a goose's egg, divided in its long axis, and lying parallel with Poupart's ligament, and somewhat above it; the skin covering it was not in the least tense, red, or hot; the swelling was movable, highly elastic, and resonant on percussion, indicating that the greater part was intestinal. There was no testicle in the scrotum on the left side, and the latter was so far undeveloped that it might be said to be wanting. The testis could, however, be felt in the inguinal canal, and formed the upper part of the hernial protrusion. On introducing the finger through the external abdominal ring, the margins of this opening were felt to be rounded and obscured by a fold of bowel which had escaped through the ring, and, finding no scrotum in which to descend, had passed outwards and upwards, and lay immediately beneath the skin and superficial fascia and the aponeurosis of the external oblique. On pressing upon the tumour in the groin a small portion of intestine, or of the vaginal process of peritoneum, could be made to descend into the upper part of the scrotum, forming a projection about as large as a marble. The patient suffered much pain when the part was manipulated, and therefore, as there was no evidence of strangulation, reduction by the taxis was not attempted. Ice was directed to be applied to the tumour, and two grains of opium in a pill were ordered to be taken every three hours until the pain subsided. On the following day the tumour had almost entirely disappeared, and there remained only a fulness due to the presence of the testis, which occupied a large adventitious pouch between the skin and the aponeurosis, and could be pushed about from one part to another with the greatest freedom, and without producing any pain; the finger could also be passed well into the canal through the external ring without causing pain. The ring on the right side was small and tense, and would only admit the point of the finger, the introduction of which was painful.

Remarks.—Mr. Holthouse subsequently drew attention to the points of interest in this case, and stated that, although in the present instance he had applied ice to the tumour with most satisfactory results, yet he had usually found that hot applications, especially linseed-meal poultices, gave more speedy relief to the patient than cold ones. The chief reliance must, however, be placed in full doses of opium, which not only relieved the present pain, but diminished the peristaltic action of the bowel, and lessened the tendency to peritoneal inflammation. The case illustrates well the unusual course taken by an inguinal hernia under such circumstances as the present, where there is no scrotal pouch to receive the bowel after its escape through the external abdominal ring. The chief difficulty in the subsequent treatment of these cases depends on the danger of exciting inflammation in the testis by the pressure of the truss, which requires to be very carefully fitted, so as to control the descent of the bowel without pressing unduly upon this organ.

Case 2.—*Strangulated Hernia—Vomiting—Treated without Operation.*

(Under the care of Mr. HOLTHOUSE.)

George P., aged 20, labourer, a dark-complexioned healthy young man, was admitted about 10 a.m. on October 19, 1868,

with all the symptoms of strangulated hernia. He was pale, and almost "doubled up" by the pain in the abdomen, which was felt most severely in the umbilical and left hypochondriac regions, and was of a severe dragging character. His pulse was small and feeble; his countenance expressed both pain and anxiety; he felt sick, and had vomited three times on his way to the Hospital. A recently descended hernia filled up the right inguinal canal and the upper two-thirds of the scrotum, the testicle being felt immediately below the tumour, which was tense and very sensitive to touch.

History.—Patient had never had a rupture before the present one. Between 8 and 9 o'clock on the morning of his admission, he was engaged in lifting sacks of oats into a bin, when he felt a sudden pain, and perceived something give way in the right inguinal region. He was immediately incapacitated from further work, but was able to walk to the Hospital, a distance of more than two miles, vomiting, however, on his way thither. Mr. Holthouse saw him shortly after his admission, and proceeded to attempt reduction by the taxis, the patient being placed on the bed with his head down and his buttocks raised; the thigh was flexed and rotated inwards, whilst a persevering attempt was made for about twenty minutes to reduce the rupture, during which the patient had a severe and prolonged fit of vomiting. All further attempts at the taxis were therefore abandoned. A large hot linseed-meal poultice was then placed over the groin and the scrotum, and one grain of solid opium was given in the form of a pill. At 1.30 p.m. there had been no return of the vomiting, but the pain continued; the face was flushed, the skin hot, and the tongue dry. The opium and poultices were continued. At 10.30 p.m. there had been no more sickness; the abdominal pain is less severe, and tenderness is diminished. Tumour remains of the same size. Treatment continued.

At 10 a.m. on the following morning the tumour has disappeared, and with it all the symptoms. Patient has eaten a hearty breakfast of milk and bread and butter, and complains only of feeling hungry.

On the fourth day the patient's bowels acted freely. There is some soreness in the region of the groin. He gets up regularly, and is troubled with a cough; the hernia usually descends whilst the patient is up, but remains soft and easily reducible.

Patient was discharged to obtain a truss, and being unwilling to submit to an operation for the radical cure.

Remarks.—This case is of great interest, as showing how even very severe and acute symptoms of strangulation may subside under the influence of treatment, provided they are of recent occurrence. In all cases of recent hernia in which the bowel has descended during some violent exertion, and in which it appears to be simultaneously strangulated, it is desirable to give the patient the benefit of a short period of delay before proceeding to operative interference. If no improvement takes place under the influence of rest and opium, no further delay can be admitted, and the Surgeon must proceed at once to relieve the stricture; there is far greater danger in delaying too long than in operating too soon.

Case 3.—*Strangulated Femoral Hernia—Patient in a State of Collapse on Admission—Operation—Death.*

(Under the care of Mr. FRANCIS MASON.)

Matilda D., aged 56, was admitted in the Westminster Hospital at 2.30 p.m. on Jan. 14 in a state of extreme collapse. The patient's lips were blue, pulse feeble, surface and extremities almost cold. She was suffering extreme pain in her abdomen, and on examination was found to have a very tense femoral hernia on the left side. From the history it appeared that symptoms of strangulation had commenced on the 9th, or five days previous to her admission, but the existence of the hernia does not seem to have attracted attention. Mr. Mason considered that although the case appeared to be a hopeless one, it was his duty to give the patient the only chance of recovery; he therefore proceeded to operate, opening the sac and dividing the stricture at its neck. The bowel, though very deeply congested and much inflamed, did not appear gangrenous; it was therefore returned, whilst a portion of the omentum which accompanied it was removed, a whipcord ligature having been applied above the point at which it was divided. No hæmorrhage occurred. The patient hardly rallied after the operation, and died on the same evening at 11 p.m. At the post-mortem examination it was found that the bowel had been very tightly strangulated, but although very much inflamed it was still perfectly sound. There was no great amount of general peritonitis. The other organs seemed healthy.

Remarks.—In this case there can be no doubt that the patient died simply from delay in applying for relief, as there was no reason to suppose that the operation would not have been successful if it had been performed within a reasonable period after the commencement of the acute symptoms. The habit of the poorer classes of applying to chemists and other unqualified persons for relief of constipation and abdominal pains is too often followed by dangerous consequences, especially in cases of hernia.

Case 4.—*Strangulated Femoral Hernia in a Woman aged* 97—*Operation—Death.*

(Under the care of Mr. BRUCE.)

Mr. Bruce having been requested by Dr. Thomas to examine an old woman with a strangulated femoral hernia, visited the house, and found the patient lying in a miserably furnished and very dark room, entirely dependent upon the good offices of her neighbours; he therefore, at once, directed that she should be taken to the Westminster Hospital, when the following history was obtained (Thursday, December 24, 1868):—

Mary Ann L., aged 97, of very active habits and usually enjoying good health, is the mother of several children, and has three great grandchildren; she has lived in her present quarters for upwards of fifty years, and retains most of her faculties but slightly impaired. She has never had a rupture before the present one. About a week ago she "had pains in her bowels, but did not take any particular notice of them;" on Saturday last she attempted to lift a saucepan, and felt much worse afterwards, and seems to have kept to her bed for the next two days. On Monday her bowels acted. On Tuesday she vomited and felt pain in her right groin, and for the first time noticed a lump there. On the following day she was again sick and unable to take any food; bowels remained confined. When seen on the Thursday she was somewhat exhausted in consequence of not having taken any food for three days; the sickness had not continued, the bowels remained constipated. The hernia was very tense, evidently much constricted at the neck, and of the size of a large walnut.

A fair trial was made to reduce the hernia by the taxis; but this having failed, it was felt to be unsafe to allow strangulation to continue, and the consent of the patient and her friends having been obtained, chloroform was administered. Mr. Bruce having again attempted reduction whilst the patient was under the influence of chloroform, and failing to make any impression on the hernia, proceeded to operate, with the consent and assistance of his colleagues, Drs. Anstie and Sturges, Dr. Thomas, and Mr. Haynes. The integumental structures and deeper coverings of the hernia were so very thin that great care was required in dividing them. A very thin layer of subperitoneal fat indicated the proximity of the sac. A director was then, with some difficulty, passed under Gimbernat's ligament, which was divided in the usual manner, but without apparently relieving the stricture. This was found to be due to some tense fibres of the deep crural arch, which crossed the neck of the sac. After these had been divided, the hernia was readily reduced without opening the sac, which would not have been an easy matter to accomplish in consequence of the extreme tenseness of its walls. There was no hæmorrhage of importance, and, after the application of three wire sutures, the wound was covered with a pad of lint soaked in carbolised oil, and a compress placed externally. A suppository, containing five grains of pil. saponis co., was at once administered. At 10 p.m. her pulse was feeble; tongue dry. She had not vomited since the operation, and did not feel in much pain. Brandy was ordered to be given in small quantities through the night, and tinct. opii ɱx. was administered in some brandy and water.

December 25.—Patient had some sleep during the night, and felt much better; had no pain, and but slight tenderness over right inguinal region; tongue moist, furred; pulse 96, regular. Food was ordered to be given in small quantities at a time, consisting of milk, beef-tea, and eggs, beaten up in brandy or tea. A very thin linseed-meal poultice was applied over the abdomen. Small doses of opium were administered, but it was found that the patient slept very constantly under the influence of two grains in the twenty-four hours; it was therefore considered undesirable to push it further.

On the following day the patient had improved, took her food better; tongue cleaner; pulse 96, stronger, but with some hardness; no vomiting. The compress was removed, and the wound looked healthy.

27th.—Patient continued to do well; passed a motion early this morning, and passed flatus at intervals since; some slight distension of the abdomen in the right inguinal region. Opium continued as before.

28th.—The patient complained of some cough, and diffi-

culty in breathing; the opium was therefore discontinued, and a mixture containing ammoniæ sesquicarb. and chloric ether was ordered. The poultices were continued, and an ointment of belladonna and glycerine was smeared over the abdomen. Brand's essence of beef was given in small quantities dissolved in a little wine or brandy; this was the only form of nourishment which she fancied.

On the following day, as the patient was more distressed with flatus, an enema of soap and water and oil was administered cautiously; it was noticed that there was some difficulty in passing the pipe into the bowel, and that the greater part of the enema returned at once; however, a considerable motion was passed immediately afterwards. Patient felt relieved; pulse rather more feeble than hitherto. The patient gradually became more feeble during the two following days, and the pulse more rapid, varying from 100 to 130, whilst the respirations were short and rapid, amounting towards the last to 50 per minute. She complained chiefly of pain and distension in the right iliac and lumbar regions and across the epigastrium. She sank very slowly, and died on December 31, exactly a week after the date of the operation.

At the autopsy the abdomen was found to be somewhat distended, more so on the right side, where it was highly tympanitic. There was some general vascularity of the peritoneal surfaces of the intestines and of the parietes, and a small quantity of flaky lymph was noticed between the coils of the former. The portion of intestine which had been strangulated could be readily distinguished by its dark colour and by the defined border which indicated the line of constriction; it was partially adherent to a portion of the sac, which had been inverted into the cavity of the abdomen; it had, however, otherwise perfectly recovered its natural appearance. The cæcum was found to be greatly distended with gas; the ascending and transverse colons were loaded with fæcal matter; the descending colon, sigmoid flexure, and rectum were remarkably contracted, and the latter presented a most anomalous appearance, being sacculated as well as greatly contracted. There were several other abnormal conditions present, which have been presented to the Pathological Society; these, however, although interesting in themselves, have no bearing upon the clinical history of the case.

Remarks.—This is probably the oldest case on record in which an operation for the relief of a strangulated hernia has been performed. It is rare to meet with people of such an advanced age as ninety-seven, and they are usually too infirm to exert themselves sufficiently to cause a hernia to descend. Although the liability to hernia increases very rapidly as age advances, the liability to strangulation does not increase in a similar manner; the bowel may become incarcerated, but it is undoubtedly rare to find a tightly strangulated recent hernia in a person of very advanced age. With regard to the treatment, there was but one thing to be done after the taxis had been fairly tried. In that tense form of femoral hernia in which the symptoms have come on acutely, the less time that is lost before the performance of the operation the better, as every hour that is wasted diminishes the patient's chance of recovery. In the present case, had the operation been performed a day earlier, the chances of recovery would have been far greater. Delay in the performance of operations for strangulated hernia is unfortunately only too common an occurrence, especially in cases occurring in old people, when the Surgeon feels a natural disinclination to resort to any active measures. Such an argument cannot be too strongly discountenanced as contrary in every way to the interests of the patient and to all rules of Surgical practice: the condition being of itself almost necessarily fatal, the operation not only offers the sole prospect of escape, but does not add materially to the danger of the patient's situation. In the present case, in spite of her great age, and in spite of the long period (more than fifty-five hours) during which strangulation had existed, the patient survived the operation a week, and progressed most satisfactorily until the close of the fifth day. Of the pathological conditions which presented themselves after death, that of the rectum was the most important; the extreme contraction of this portion of the gut, which at a distance of two inches from the anus with difficulty admitted the tip of the little finger, necessarily presented a considerable obstacle to the passage of fæcal matter from the ascending and transverse colon, and fully accounted for the accumulations which existed within it, and for the great distension of the cæcum with flatus. There can be no doubt that much of the distress experienced by the patient during life in these regions of the abdomen may be explained by this condition of the great bowel.

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Medical Times and Gazette.

SATURDAY, JANUARY 23, 1869.

LIEBIG'S EXTRACT OF MEAT.

A few weeks ago our talented contemporary *Once a Week* published a paragraph with the heading "A Word of Warning to Cooks," in which a reference was made to the results of Dr. Kemmerich, which would tend (if trustworthy) to show that while Liebig's extract, when given in small doses, increases the number and strength of the heart's contractions, it acts in large doses as *a poison*, and kills with all the symptoms of cardiac paralysis. These experiments were published in the first part of Pflüger's *Archiv f. Physiologie* for 1868, and likewise appeared in the author's Graduation Thesis, which we have not had an opportunity of seeing, and a notice of them appeared in *The Practitioner* and other scientific periodicals; but till the subject acquired the wide circulation afforded by the pages of a popular journal like *Once a Week*, it excited no general attention. Then, however, the manager of one of the principal companies for preparing the extract of meat took alarm, and wrote to consult Professor Liebig regarding Dr. Kemmerich's views. We may mention that on reading the article in the *Archiv*, we found two distinct reasons why no serious weight should be attached to this Physician's conclusion that Liebig's extract, in large doses, is poisonous. In the first place, the material with which he experimented was not Liebig's extract, but an extract of horse-flesh prepared by himself; and, secondly, the animals on which he experimented were rabbits, which have not the power of vomiting, and whose digestive process, as purely herbivorous animals, differs materially from that of man. Professor Liebig, apparently not acquainted with the article in the *Archiv* in which these experiments are recorded, does not notice these fatal objections, nor does he institute any counter-experiments, but merely contents himself and his correspondent with the following consolatory extract from Dr. Kemmerich's thesis:—"I do not think it possible that beef-tea, in the form in which it is used for household purposes, can be poisonous." ("Thesis," p. 3.) And here we should have left the subject with the feeling that, notwithstanding Dr. Kemmerich's experiments, the public may take their soup without the fear that there was "death in the pot," provided their cooks used the extract in a moderate quantity, had we not met with a remarkable attack upon this same substance, made in a different direction, by a Lyons Physician, Dr. de Beaumont. In an elaborate memoir *De la Viande Crue et des Extraits de Viande en Hygiène et en Thérapeutique*, the author begins by noticing the substances analogous to the extract which, after finding high favour for a time, have relapsed (as he says) into deserved obscurity—as, "tablettes de viande, d'osmazôme, de

gélatine, de bouillon réduit, les extraits de viande," etc.—and mentions the fact (which, however, Liebig himself fully recognises) that the *extractum carnis* is no new invention, but was prepared nearly on Liebig's plan more than thirty years ago by Proust and Parmentier.

After a few remarks upon Dr. Weisse's happy idea of treating the sick children in the Infants' Hospital at St. Petersburg with raw meat, instead of with laboratory preparations made with the agency of heat—a mode of treatment which was speedily adopted in France by Recamier, Piorry, Trousseau, and other Physicians, and which led to the preparation of the *soupes de viande faites à froid* (Reveil's formula), still in use at *l'Hôpital des Enfants*, and other modes of disguising the pulp of raw flesh—he proceeds to make a most savage attack upon Liebig's extract, "manufactured in one of the provinces of South America, and regarded by modern philanthropists as one of the grandest conquests of industrial chemistry." He tells us, much to our astonishment, that "this new commercial product has already become an article of diet amongst the poorer classes in Germany and in England—that *pays chronique de la misère*—but in France we happily possess the reputation of being somewhat more delicate and discriminating in our tastes, and the extract has met with comparatively little success." He denounces this "new and audacious product" which claims "to dethrone the classic *pot-au-feu* of our households, and to relegate to the position of antiquated formulæ preparations of raw meat from which therapeutics derive such advantages."

In the second section of his memoir, which is devoted to a sketch of *digestion*, *assimilation*, and *disassimilation* or *disintegration of the tissues*, the three great processes which are included in the function of *nutrition*, Dr. de Beaumont lucidly explains that, according to the accepted doctrines of modern physiological chemistry, fibrin, albumen, and albuminose, which are coagulable and uncrystallisable substances, are, so to speak, the essential blood-forming and flesh-forming foods, while the crystallisable substances, such as creatin, creatinin, inosite, lencin, etc., which are found in the flesh and in other tissues, are mere products of *interstitial exertion*, just as urea has long been known to be. Indeed, that they are unfit for serving as food is (he thinks) sufficiently evidenced by their occurrence in the urine.

We will now briefly describe the mode of formation of Liebig's extract as prepared in the great South American establishment at Fray Bentos, which, as we learn from a letter in the *Buenos Ayres Standard* of September 3, 1868, covers 20,000 square feet, has two tanks holding at once 10,000 lbs. of crude extract, and "works off" 400 oxen daily. There are four processes in the manufacture, which are described by Mr. Hutchinson in "The Parana and South American Recollections," just published. The first is the chopping of the flesh into mince-meat. The second is the digestive process, in which the chopped meat is exposed to the action of steam in monstrous iron digesters each capable of holding 12,000 lbs. of meat. The fat, albumen, and fibrin are then separated by straining through wire gauze and clarifying; while the last process is that of evaporation, which is marvellously accelerated by the rapid rotatory action of numerous thin circular steel plates, by means of which more than two millions of square feet of a thin layer of extract are exposed to the air in one minute. By this process it is obvious that the extract loses all the albumen, fibrin, and fat of the meat, while it retains the crystallisable matters, which we have shown are almost certainly non-nutritious in the best sense of the word, and the salts of the meat, to which we ascribe the main value of the extract. Liebig himself admits these deficiencies, and suggests the vegetable additions that may be used to replace the albumen and fat.

If the composition of the extract were constant or nearly so, there would be no difficulty in following Liebig's directions of diluting it with water in the proportions calculated to make the best beef-tea—namely, 1 part of extract to 100 of water. But this is far from being the case. Thus Mr. Ford states that 33 lbs. of meat yield 1 lb. of extract, while Professors Payen and Poggioli fix the ratio at 40 to 1, Hutchinson at 45 to 1, and the Parisian agent to the company, objecting to Payen's statement (given in the *Revue des deux Mondes*, December, 1867) gives the ratio as 57 to 1. As both Ford and Hutchinson obtained their information from the manager of the American Company on visiting the establishment in two successive years (1866 and 1867), and the Paris agent may be regarded as speaking with authority, it is clear that there is no fixed ratio, which doubtless depends on the condition of the oxen. Moreover, Dr. Letheby has made the discovery that the specimens of extract which he analysed contained on an average 45 per cent. (in one case 49) of water, which would reduce the above ratios to about 90 to 1; and if we tried to follow Liebig's directions with such specimens, the beef-tea would be only half as strong as was intended.

Even if we have genuine extract, Dr. de Beaumont, to whom we are indebted for the preceding figures, shows that *un bouillon de cuisine* or *un pot-au-feu ordinaire*, independent of its possessing valuable nutritive ingredients, which are removed from the extract, yields on evaporation considerably more of the ingredients contained in the extract than Liebig's beef-tea contains, even on the highest estimate.

Even the strongest advocates in favour of the extract admit that the South American preparation has not been altogether satisfactory. For example, a writer in the *Popular Science Review* (January, 1869) states that some "samples of his improved extract, prepared by the Fray Bentos Company," have been received, which "in point of flavour is a great improvement on the previous preparation." The causes of inferiority of the American preparation are explained by Mr. Latham, an English merchant who has passed more than a quarter of a century in Buenos Ayres, and would be naturally inclined to speak well of the products of his adopted country. In his work entitled "The States of the River Plate," second edition, 1868, he shows the fallacy of advocating "the wholesomeness of the herds, untainted by artificial feeding, that live on virgin pastures," and points out that the wandering life of wild cattle in search of a coarse grass very different from the produce of our English meadows, the long journeys they are driven immediately before they are slaughtered, and many other conditions, must injuriously affect the character of the meat, and consequently that of the extract; and he very forcibly adds "that until the cattle are domesticated, and better fed and kept, no really sound wholesome food will be exported from these districts."

From what we know of Australian farming, we should suppose that the cattle are brought to the slaughter in a far better condition than seems to be the case in the Argentine Republic; but we are unable to obtain any details of the mode of working of Mr. Tooth's establishment at Sydney. The stopper for excluding the air with which the jars of Tooth's extract are provided is an undoubted improvement.

It would be well for science if the staff of one of our large London Hospitals would give the South American and the Australian extracts a comparative trial on a large scale, and then compare the better of the two with ordinary beef-tea. They should have the specimens submitted to chemical analysis(a) previous to using them, in order to know the relative quantities of creatin, creatinin, inosite, sarcin, lactates, etc., that they

(a) All that seems known regarding the composition of the extract is included in the following remarks:—1. It appears that 100 kilogrammes of meat yield 963 grammes of residue or of the extract. 2. According to Liebig (as quoted by Poggiale), the dry extract contains 25 per cent. of inorganic salts; so that the 963 grammes of extract (corresponding to 100 kilogrammes of meat) should contain 240 grammes of these salts. (This is perhaps too high a figure, as some of the salts are crystallised out in the manufacture.) 3. Liebig has found that the flesh of the ox contains 0·7 per cent. of creatin, so that the 963 grammes of extract should contain 700 grammes of this ingredient. 4. If, then, the salts and creatin form 940 of the 963 parts of extract, only 23 parts are left for the lactic and inosic acids, sarcin, inosite, etc. 5. If the creatin, which, according to (3), forms 97 per cent. of the extract, is the active ingredient, poultry would yield an extract seven times the value of beef, for the flesh of the common fowl yields 3·7 per cent. of creatin.

were prescribing; and, finally, by trying the action of these substances individually and then in groups, they might confer an immense boon on Medical science. At present, in plain truth, we do not know what we are prescribing. A pot of evaporated urine bears a painfully close resemblance to a pot of extract of meat, and both extracts have many constituents in common.(b) By a little chemical care, it might be obtained with the urea unchanged, with that ingredient converted into carbonate of ammonia, or without either of these ingredients. If we are not mistaken, the late Dr. Todd saw no impropriety in testing the physiological and therapeutic action of urea on his patients; and with such a precedent no one need hesitate testing—at all events, on dogs—the relative action of these extracts and that of meat.

Dr. Fonssagrives apparently agrees with Dr. de Beaumont in his low estimate of Liebig's South American extract, for he closes a section on the subject of extracts with the remark—"Malgré les promesses analeptiques de l'extractum carnis, il ne saurait jamais remplacer, ni pour digestibilité, ni pour saveur, le bouillon classique." (*Hygiène Alimentaire*, second edition, page 134.)

We believe in the value of Liebig's food as a stimulant and flavourer, but it is often misapplied; it is a good thing often put to a wrong use.

As we stated at the commencement of this article, Dr. de Beaumont began his memoir with a reference to the value of raw meat as a remedy. He concludes with strongly advocating a new preparation possessing all the advantages of that effective but disagreeable mode of treatment. A substance has been prepared by a Lyons pharmacien, named Guichon, without the agency of heat, which he describes—"L'aliment *plastique* par excellence, le type des analeptiques fibrineux, et qui surpasse toutes les préparations qui ont pour base la viande et même la viande crue." This is prepared in tablets containing, according to his view, 75 per cent. of the most assimilable organised matter—namely, pure *musculine* or muscular fibre freed from a large proportion (55 to 58 per cent.) of meat elements, as fat, aponeuroses, tendons, vessels, and nerves. Each tablet contains 1·50 grammes, or about 23 grains of musculine, equal to 3·50 grammes, or rather more than 9ijss. of the pulp of fresh raw meat, which, on data we do not quite comprehend, are said to be equivalents of 157 grammes of the best cooked food.

The 25 per cent. of the tablets not composed of musculine consists of a jelly of refreshing fruits which conceals as much as possible the appearance and the taste of the pulp of raw flesh.

From the name of its manufacturer it is known as *Musculine Guichon*. It is sold in boxes containing on an average forty-five tablets. We trust that a substance said to present such rare qualities will at once meet with a fair trial in this country.

THE PRACTITIONER OF THE FUTURE.

The Medical Teachers' Association met again on Friday evening, January 15, in the rooms of the Medical Society of London, for the purpose of receiving the report which had been sent back to the Council for revision. The report was received and adopted with the exception of the seventh section—that portion which deals with the proposed curriculum, over which in all probability a determined battle will be fought. A certain modification having been proposed by Dr. Sibson, Mr. Heath thought himself equally justified in making an onslaught on the amount of the sciences introduced into a Medical man's education. In this he was supported by several eminent men, notably the President Sir W. Jenner, and Mr. T. Holmes. Still, it was considered unfair that a matter which had already been discussed and apparently settled when the attendance was full should be reversed in a meeting but slenderly attended, and it was determined to adjourn the question for a fortnight, in order that it might be fully and fairly considered. The whole affair is of such importance that we cannot regret the length of time spent in discussing this document, even although its publication is thereby postponed. The disputed section as it now stands is as follows:—

"If, then, we assume that the knowledges to be required from the candidate for minimum qualification in the Profession are still to be, in kind, those which the present London regulations purport to require, our curriculum, briefly stated, and subject to reasonable provision for exceptional cases, would be this. The examinations to be passed by the candidate would in all be at least four in number:—First, in common preliminary education, which should include elementary chemistry, physics, and botany; second, in preliminary scientific education—that is, chemistry, physics, botany, and zoology, of the present system, and also the rudiments of anatomy; third, in anatomy and physiology, and materia medica; fourth (which might perhaps have to be subdivided), Medical and Surgical anatomy, pathology, state Medicine, and the several departments of practice. To the fourth examination he would not be admissible till at least two years after the third, nor to the third till at least one year after the second, nor to the second till at least one year after the first. Thus his four years would have been used methodically. To the first and second examinations he would be admissible on the principle of 'free studentship'—*i.e.*, without being required to adduce evidence of having learnt in any particular way, or in any particular establishment. Chemistry and physics, botany and zoology, would in this respect be on the same footing as English and Latin and arithmetic. For admissibility to the third examination he would have to produce a certificate from 'recognised' teachers that he had for at least one year, since the date of his second pass, studied anatomy and physiology under their direction, according to the method of their school, and had done so to their satisfaction. Similarly, for admissibility to the fourth examination, he would have to produce a certificate from 'recognised' teachers that he had for two years, since his third pass, studied the subjects included in the examination under their direction, according to the method of their school, and had done so to their satisfaction; and for this examination he would also have to show that he had attained the age for legal responsibility. Whether the final examination should, to complete it, involve some sort of recapitulatory examination in matters of previous passes, is *à priori* doubtful; but we incline to recommend that at any rate it should not generally do so with the minuteness of the original examinations."

In the original draft of the report presented to the Association, no science whatever was included in the first, or, as we might term it, the matriculation examination, the whole being left for study during the first year of student life; and as this was to be a period of free studentship, the sciences might still have been considered no part of the strictly Medical curriculum. It was, however, contended on the one side that too little time was allowed, according to the schedule, for really Medical and clinical work, and on the other that purely scientific subjects had better be debarred from the Medical curriculum, strictly so called, altogether. Hence the proposition was made and carried that elementary chemistry, elementary physics, and elementary botany should be studied and be the subjects of examination before a man could enter on the study of his proposed profession. We believe that the authors of this proposition were anxious that the whole of these "knowledges"—to use the peculiar phrase of the report—should be acquired before entering upon the study of the Medical Profession; but, dreading the opposition of many, contented themselves with the milder demand we have given above. Mr. Heath now steps forward, and proposes to do away with that portion of the preliminary scientific or second examination which relates to physics, botany, and zoology, contenting himself with the matriculation examination on the two former, and altogether expunging the latter from the list of requirements. The proposition deserves every consideration, and must be thoroughly discussed, for it is one of no ordinary importance or significance. The immediate objects desired by the advocates of this proposition are plain enough: they desire to lessen the burden of the student, to diminish the expense of

(b) It is worthy of notice that patients sometimes object to taking beef-tea made with the extract, on the ground that it sometimes bears an unpleasant urinous odour. This has occurred in our own experience.

a Medical education, and to admit of more really Medical and Surgical bedside work being done. The first thing, however, which strikes us is that they will be content with a very small amount of physics and botany if these are to be taken, as they ought to be, before the student enters on his Medical studies; otherwise the proposition entails the addition of another year or portion of a year to the proposed curriculum, extending it from four to nearly five years, the more especially as there are now but scanty means of teaching or acquiring these subjects outside a Medical school.

Still a knowledge of certain of the sciences, however desirable, is not absolutely necessary for every Medical man; and it must be remembered that this document refers to ordinary or poll, not to honours or prize examinations—it deals with the minimum of acquirements deemed necessary to entitle a man to practise. It is all very well to insist upon a thorough education for every practitioner of the art of Medicine, but beyond this we are not entitled to inflict expense and loss of time on a man who aims at nothing beyond a country practice of say £600 a year. A Medical education implies the investment of a large sum of money; to increase this beyond necessary limits is to inflict a hardship on men whose lives are passed in toil, and whose remuneration is too often inadequate to their labours, to say nothing of repaying the money invested in their education.

THE WEEK.

TOPICS OF THE DAY.

A FULL meeting of the members of the Pathological Society welcomed their new President on Tuesday last. We entertain both hope and belief that the accession of Dr. Quain to the chair of the Society will inaugurate those reforms in the management of the Society's proceedings, the necessity for which has been repeatedly urged in these columns. We are encouraged in our expectation by an announcement made by Dr. Quain in his opening address that already a committee had been appointed by the Council to consider and report upon some method of improving the mode of conducting the Society's business, whether by permitting the exhibition only of duplicate specimens or by some other mode of reform. We gladly await the publication of the conclusions of the committee; in the meanwhile we urge upon the consideration of the Society the well-timed and thoroughly true remarks of Dr. Quain to the effect that the success of any effort for reform must depend in a great measure upon the good sense and feeling of individual members. If specimens had been brought before the Society only on account of their possessing real interest and intrinsic worth, much of recent hostile criticism would never have been aroused. One of the matters of interest in Tuesday evening's proceedings was the broaching of a theory by Dr. Moxon that there was a pathological connexion between the condition of leucocythæmia, in which the nuclear elements of the blood are enormously increased, and which he was inclined to regard as "cancer of the blood," and that form of universal enlargement of and deposit in the lymphatic glands which was described by Drs. Hodgkin and Wilks. Another matter of interest was the exhibition of a specimen by Mr. Callender showing extension of sloughing from a syphilitic bubo through the coats of the femoral artery and vein. Death had resulted from hæmorrhage. Mr. Callender said, on the authority of Mr. Paget, that there had been formerly a tradition amongst the House-Surgeons of St. Bartholomew's that such accidents were at one time common, but that no similar case had occurred in the Hospital for at least thirty years. He seemed inclined to attribute the recent rarity of such cases to an abandonment of the abuse of mercury. Others might be inclined to refer it to a modification of the type of the disease.

It will be seen from a communication which we publish in another column that, in case of the resignation of Dr. Burrows, Mr. Syme, of Edinburgh, will probably be proposed to the members of the General Medical Council as a fitting successor to the retiring President. In publishing that communication we must not be supposed to prejudge any of the questions which would necessarily arise out of such a proposal. We cannot but think that on the part of Mr. Syme's friends the movement in his favour is somewhat premature. If, as all will think unfortunately for the interests of the Profession, the present President of the Council should find himself compelled, by the pressure of other business, to vacate the chair which he has occupied so wisely and so courteously, it would be time enough, on his announcing his determination, to choose his successor. We very much regret that Mr. Syme has been excluded from the Medical Council, where he has been a most useful member. We are also sure as chairman of the Council he would direct its deliberations most ably and well. But, on the other hand, there are many reasons why the President of the Medical Council should reside in London. It is to the interest of the Council that he should be here to communicate with the Government and other public bodies, and with the Executive Committee. We conceive that these considerations ought to be allowed full weight in determining the choice of the Council. But we cannot but think that the discussion of the whole matter is at present, as we have said, premature. We hope and believe that Dr. Burrows has no intention of resigning the Presidency, at all events until the annual meeting of the Council. The Council will then have ample opportunity to discuss the question of his successor, who, it must be remembered, is not merely the Chairman to preside at their meetings, but the accredited representative of the Medical Profession in all matters involving relations with the public and the Government of the country.

We fear the Medical evidence in the Norwich murder case will necessarily fail to assure the public mind on the important question of the age of the person to whom the portions of the body found in 1851 belonged. In the first place, it seems impossible to prove the identity of the remains produced now with those found in 1851. It appears that the portions of the body found in 1851 were for a time kept in some preservative fluid—whether brine or spirits of wine seems doubtful—that after a time the superintendent of the Norwich police, who has since died, directed that they should be "disposed of." They were accordingly buried by Inspector Peck in a cellar, and a bushel of lime was thrown on them. They have been exhumed, but Dr. Dalrymple deposed that they are in such a condition that he cannot swear that all the bones belong to one and the same subject; and, although he believes in the identity of the vertebræ, the pelvis, and the sacrum, he cannot affirm that the other bones are identical with those he examined in 1851. He further said that the entire disappearance of all ligament, cartilage, and other guides for recognising age, prevented his forming any precise opinion as to the age of the subject. His examination of the remains in 1851, when the cartilage was still on the bones, led him to the belief that they were the remains of a youngish woman, but he would not undertake to fix the age within ten years. He had no doubt that the bones belonged to a female subject, and he conjectured that in height she would measure five feet or five feet and an inch. It is clear that this evidence is not, from the circumstances of the case, of very much value. As far as it goes, however, it tends to establish a conclusion that the remains found were not those of an old woman.

Mr. P. Le Neve Foster, who, we believe, is a great advocate for education, has given the world the clearest proof that a little knowledge is a dangerous thing. Last week he wrote a letter to the *Times* newspaper, recommending the following as a specific for scarlatina and typhus:—Concentrated medicinal carbolic acid one part; water ten parts. Of this a teaspoonful should be given every three hours to children and every two hours to adults. Such a remarkable prescription drew letters remonstrating from Professor Lionel Beale and Dr. Fuller, of St. George's. Dr. Beale said, very rightly, that one part of

acid in 200 parts of water would be strong enough for administration, and that Mr. Foster's dose would probably be fatal. Dr. Fuller said that it would prove little less than a poison to children. In answer, Mr. Le Neve Foster writes that by concentrated medicinal carbolic acid he intended "solution of best medicinal carbolic acid," "that this requires dilution with ten times its quantity of water, and that not more than three doses should be given to children." Dr. Fuller, however, completely disposes of this lame explanation. He writes:—

"One of the principal manufacturers of carbolic acid is Mr. Calvert, of Manchester. I have obtained from one of our leading chemists three samples of Messrs. Calvert's carbolic acid. The first is the pure acid in a crystalline form, and labelled 'carbolic acid for medicinal use;' the second is a solution consisting of nine parts of pure carbolic acid and one part of water, and is labelled 'carbolic acid for medicinal use;' the third is also a solution, containing one part of pure carbolic acid and twenty-four parts of water, and is labelled 'solution of best medicinal carbolic acid.' The only recognised officinal solution of carbolic acid contains one part of carbolic acid to four of glycerine. I am informed that comparatively few chemists keep Calvert's weakest solution, and that, in the country especially, any person sending to a chemist for a 'solution of best medicinal carbolic acid' would probably be furnished with one of the stronger solutions—probably with the last-named solution, which is contained in the Pharmacopœia, and contains one part in four of pure acid. Certainly this is the only solution which any chemist would be justified in dispensing as the 'solution of best medicinal carbolic acid,' and the dose of such a solution recommended by Mr. Foster, if administered to young children, could scarcely fail to prove fatal."

Mr. Le Neve Foster dates his letters from the Society of Arts, Manufactures, and Commerce. Surely, in the centre of so many departments of human knowledge, he might select one which, for the amateur, involves less dangers to the lives of others than practical Medicine.

The Poor-law Board has issued a new general order for the regulation of out-door relief in the metropolitan parishes lying beyond the boundaries of the City of London, from which we gather that every able-bodied male person relieved out of the workhouse will have to work, and that the guardians will have to find work for him under the superintendence of the Poor-law Board. This, at least, is a step in the right direction. We only hope that the work provided will be sufficiently remunerative to diminish, in some degree, the enormous burdens of the ratepayers.

The Metropolitan Asylum Board have passed a resolution requesting the Poor-law Board to "promote a measure for remedying the inequalities of assessment prevailing within the Metropolitan Asylum District." It is to be hoped that if such a measure is introduced, it will not be made to apply to the metropolitan district only. If the principle of equalisation be a just one—which we take the liberty to doubt—it should certainly be made to apply to the whole country.

The case of Roberts and another *v.* Arnold, which was recently decided, was one in which a firm of Medical men at South Norwood sued for a bill of £58 for medicine and attendance. The defence was that the amount was an overcharge, and an attempt was made to support it by the plea that only a single visit on each occasion ought to have been charged for, although Mrs. Arnold and two children were ill with hooping-cough, and under the care of the plaintiffs. We are glad to say that the jury found a verdict for the full amount claimed.

We call the attention of our readers to an announcement, which we publish in another column, of the coming meeting of the Poor-law Medical Officers' Association, which is to take place on the 29th inst. The meeting will be unusually important, as it will be the last occasion on which the tactics of the Association in the coming Parliamentary campaign can be discussed.

MIDLAND MEDICAL SOCIETY.

The first meeting of the Midland Medical Society since its reconstruction was held in the Council-room of the Birmingham and Midland Institute at 3 o'clock on Wednesday, January 20. The new laws and the change of time in holding the meetings—viz., in the afternoons and evenings alternately at 3 and 8 instead of in the evenings at 7 o'clock—seem to have increased the popularity of the Society, as there was a large number of gentlemen present, and the Hon. Secretary, Mr. J. St. S. Wilders. Dr. Hickinbotham, and Mr. Gamgee, gave notice of their intention to propose fourteen new fellows and members at the next meeting to be held on February 3 at 8 o'clock. Several very interesting pathological specimens were exhibited by Dr. Sawyer and Mr. Gamgee. Mr. Furneaux Jordan read a most able and original paper entitled "New Surgical Remedies," fuller details of which will appear in an early number. The Midland Medical Society has two chief objects:—1. To promote the study of Medicine and Surgery amongst Practitioners by the communication of clinical and therapeutical facts, and by the exhibition of pathological specimens and discussion thereon. 2. To provide a reading-room well supplied with Professional and general periodicals, and with the latest works published in Medicine and Surgery and allied branches of science. The first object is secured by the fortnightly meetings, which henceforward will be held from October to May. For the more thorough study of pathological specimens the Society has purchased a good microscope; and the example of the Pathological Society of London has been followed in the appointment of a committee to investigate and report upon pathological specimens of special interest.

THE CONVERSAZIONE AT KING'S COLLEGE, LONDON

It is now nearly ten years since the Principal and Professors of King's College, London, offered their friends an evening's entertainment in any respect so brilliant and successful as the one at which we had the pleasure of "assisting" on Thursday last. On the former occasion it was thought desirable, in order to receive and accommodate as large a number of guests as possible, to keep open the entertainment during two consecutive evenings, and some of the students, taking offence at receiving cards for the second night, acted on somewhat the same principle as that we have heard to be adopted by the minor canons in one of our cathedral cities, who, when invited to tea by the great people of the close, adopt for their motto, "No dinner, no struggle," and decline the invitation.

On the present occasion it was determined that the students of the College, at any rate, should have no cause of complaint, and an invitation was placed at the disposal of every matriculated student, and of every old student or associate of the College, as well as all old pupils of the School. Every person at all familiar with King's College who saw it on Thursday evening last, must have been struck with astonishment at the transformation the whole of the inside of the building had undergone. The entrance-hall, flanked as it is by two massive stone staircases, presents unusual advantages for the exercise of the decorative art, and these advantages were most effectively made use of. In the centre was a miniature lake, with a lofty fountain casting its spray over an abundance of tropical flowers and evergreens. Amidst the dark and sombre foliage of the latter the bright uniforms of the band of the Grenadier Guards formed a graceful contrast. The large reception-hall presented a mass of attractive objects, making us regret that we had not two or three days to examine them instead of but one short evening. The walls were hung with some of the most famous pictures that our English school of painting has produced, while costly and curious specimens of every branch of decorative art were exhibited in profusion. Two lecture-rooms, one on each side of the large hall, were converted into drawing-rooms for the occasion, and the walls hung with pictures—an arrangement which afforded great comfort to those who wished to withdraw for a short time into a quiet and cool resting-place where they could still listen to the music of the Grenadiers' band or the choice

vocal pieces, which were exquisitely rendered by the members of the Civil Service Musical Association. While the lower part of the building was given up to music and the fine arts, the libraries, the new laboratories, lecture-rooms, and museums on the upper floor were devoted to the exhibition of objects of scientific interest.

In this part of the building is the College chapel, the doors of which were thrown open, but access to the interior prevented by barriers, so that the visitors could see what Gilbert Scott, under great structural difficulties, has been able to do for the new chapel. In the new physical laboratory were exhibited Bashforth's chronograph, Wheatstone's reacting magnet, the electric thermometer, electric coronet, a new form of printing telegraph, etc., etc. In an adjoining room Mr. Woodward's experiments and Mr. Tomlinson's illuminated cohesion figures of drops of oil in water excited considerable interest. The physical apparatus and the mechanical models in the museum of George III. always possess an historical as well as a scientific interest. In the libraries a large collection of microscopes were provided by the kindness of the Royal Microscopic Society. In other rooms there were photographs kindly contributed by the Autotype Company, architectural interiors, photographic illustrations, with the oxyhydrogen microscope, Gassiot's vacuum tubes, large induction coils at work, etc., etc. Indeed, there was something to interest everybody, however various their tastes might be. Last, but by no means least, there were three rooms devoted to refreshments, in which tea, coffee, and ices were procurable.

The Principal, the Rev. Dr. Barry (who is evidently infusing a new vitality into the College), surrounded by members of the Council and College staff, received the visitors as they arrived. These, we understand, numbered between three and four thousand. All the arrangements for the accommodation and entertainment of the visitors were perfect, and reflect very great credit on the Principal of the College and the committee of management. There appeared to be little disposition on the part of the guests to leave the brilliant scene presented by the halls and corridors of the College, and many lingered to a much later hour than is usual in entertainments of this kind, and the band of the Grenadier Guards continued playing till nearly one o'clock. There were the usual number of celebrities present; amongst others we noticed the Lord Chancellor, Sir W. Bovill, the Dean of Westminster, Sir C. Trevelyan, Mr. Millais, etc. Of distinguished Medical men, besides the members of the staff of King's College Hospital, we observed Sir T. Watson, Dr. Owen Rees, Mr. Bowman, Dr. Druitt, Mr. Henry Lee, Dr. Sansom, Mr. C. Heath, Dr. F. C. Webb, Dr. Anstie, Mr. Fairlie Clarke.

FROM ABROAD.—M. CLAUDE BERNARD ON EXPERIMENTAL MEDICINE —M. BROWN-SÉQUARD ON INDUCED EPILEPSY.

CHANGES have recently been made in the disposition of the physiological chairs at the Muséum and Faculté des Sciences, one of the results of which has been the establishing M. Claude Bernard as Professor of General Physiology at the Muséum. At the Sorbonne, owing to the deficiency of space, it was impossible to provide him with the necessary appliances, and he declared that he would accept no "chamber Professorship," or any which had not the means in this respect of rivalling those of the celebrated German Institutes. It was therefore determined to transport his chair to the Muséum, where space abounds, and where it is intended to form a laboratory which shall leave nothing to be envied in the most famous German establishments. The Minister of Public Instruction is about to ask for a vote of near half a million francs in order to provide it with every instrument of labour known to the most advanced science. The *Revue des Cours* believes this change of chairs very judicious, inasmuch as the Muséum and Collége de France ought to be occupied in the investigation and extension of science rather than the mere teaching what is already known, which is the proper business of the Faculties. General physiology, too, is the newest of all the sciences, scarcely, indeed, as yet developed, and its demonstration is also for this reason more appropriately placed at the Muséum than the Faculty. Claude Bernard, too, is essentially an investigator, and his occupation should naturally be the research for the new and amidst the unknown rather than the exposition of ascertained facts. Hence it is a matter of congratulation that he holds so important a chair in an institution of which ere long he will probably be made the director.

With this increased sphere of activity before him, it is a matter of gratification to learn that M. Claude Bernard's health, which has been so bad during the last three years as to prevent his lecturing, has materially improved, so that he has recommenced the lectures which formerly proved so attractive. In his introductory address, he tells us that he has employed his forced leisure in meditating upon the subjects which have heretofore so much engaged his attention, and that it is his intention to present a methodical exposition of the results of his researches now prolonged over so many years. He sees also the necessity of establishing indications for the guidance of future investigators; for, although no one would ever think of undertaking experiments in physics or chemistry without an exact knowledge of the details of these sciences, experiments in Medicine are believed to be accessible to everybody, notwithstanding their greater complexity and consequent greater difficulty. Medicine, in fact, like all other sciences, passes through the two stages of observation and experiment. That of observation has become more and more perfect from the time of Hippocrates to our own; but of experimental Medicine we are only in possession of the merest rudiments, and it is to its future development we are to look in order to constitute Medicine a complete science. Observation, with the resulting Natural History of Diseases, is insufficient to this end, and we have to call in the aid of experiment in order to obtain the intimate analysis of the phenomena of the living economy and their explanation or physiology.

These investigations belong properly to the Collége de France, and whenever a discovery becomes established and classical, it is passed on to the Schools of Medicine. In one of its chairs, Laennec propounded auscultation, but as soon as the importance of this means of investigation was established, the duty of teaching it devolved on the Faculty of Medicine. At the present time, it is evident that the scientific tendency of Medicine is to base itself on experimental physiology; and M. Bernard has taught, during twenty-two years, this experimental physiology, which is to be carefully distinguished from the so-called physiological Medicine of the beginning of this century. That was not science, but a mere physiological system of Medicine. We have not now to do with these physiological and theoretical systems which explain disease by a uniform formula, and which have always obliterated and obstructed all true science. In experimental Medicine we proceed from fact to fact, from conquest to conquest—in fact, just in the same way as we do in other experimental sciences. M. Bernard devoted the first twelve years of his professorship exclusively to experimental physiology, and it was not until 1859 he published in the *Medical Times and Gazette* (and there only) his first course on experimental Medicine. The production of diseases in animals, sacrificing them at varied periods, according to the requisites of the experiments, and the modification of the phenomena by certain determinate agents, were the means by which he sought the union of physiology, pathology, and therapeutics, bringing these three branches of the science into closer contact, supporting each by the other, and ranging all under the same laws.

Two recent meetings of the Académie de Médecine have been occupied in the consideration of a paper laid before it by M. Brown-Séquard on "Induced Epilepsy." It consisted, in fact, of a repetition, with some modifications, of his views upon the subject delivered in London some years since, these being founded on experiments made by dividing in guinea-pigs one of

the lateral halves of the spinal marrow near the tenth dorsal vertebra. In three or four weeks, "epileptic" convulsions are producible in these animals by irritating the skin of the face or neck; and later still, the convulsions appear spontaneously several times a day. In his later experiments M. Brown-Séquard has found that the same results follow the section of the spinal marrow much higher up than the tenth vertebra. He has also seen these crises appear after a double section, the convulsions exhibiting themselves in the muscles "innervated" by the segment of the medulla comprised between the two sections; these latter experiments showing that the seat of epilepsy is not so limited as he deemed it to be from his first experiments, the greater portion of the medulla, in fact, taking an active part in the production of this convulsive affection. As to the brain, it seems to have nothing to do with its production; for in guinea-pigs rendered epileptic by the partial section of the medulla, after the brain, cerebellum, and the protuberance had been removed, as long as life was maintained by means of artificial respiration, the epileptic convulsions continued to be producible.

M. Brown-Séquard met with several opponents to his views in the Academy, the general tenor of whose objections was that, although convulsions might be produced by these experiments, there is no reason to consider them as identical with true epilepsy. This identity he maintains that he has established, for there are the regular three stages of short tetanic or clonic spasm, irregular clonic convulsions, and torpidity. Moreover, these attacks become hereditary, being observed in the young of guinea-pigs the subjects of this artificial epilepsy. M. Hardy pointed out how ill these views accorded with those deducible from human pathology, for how rare is it to find lesions of the spinal marrow accompanied by epileptiform convulsions, and these never assume the condition of true epilepsy. On the other hand, epileptiform attacks are by no means rare in cerebral lesions, especially when these consist of tumours at the posterior part or base of the brain. M. Brown-Séquard observed that he had analysed hundreds of cases of cerebral disease, and that he had never found that diseases of the substance of the brain were capable of inducing true epileptic attacks. This character did not even attach to the convulsive paroxysms observed in meningeal affections. M. Bouillaud, while agreeing to this view of the operation of disease of the cerebral lobes, had found, in his experiments on pigeons, that violent irritation at the base of the brain and of the protuberance or its vicinity has given rise to true epileptic attacks. Irritation or section of the spinal cord only gives rise to irregular convulsions, devoid of any special character. M. Chauffard, while recognising the fact of epileptiform convulsions being producible by these sections of the medulla, could not admit their identity with epilepsy as observed in man. The true characteristic of this is not, in fact, the existence of convulsive movements, for we may have epilepsy without any such movements. The utter loss of consciousness and sensibility is a far more essential character. Hereditary transmission is no proof of such identity; for there are numerous observations on record of functional disturbances due to material lesions being transmitted hereditarily as mere functional derangements. M. Brown-Séquard admitted that he had himself long doubted as to the epileptic nature of the accidents determined by these experiments, and that it has only been after a comparative study of epilepsy as observed in the human subject that he has arrived at a conviction of the identity. Loss of consciousness and sensibility is also met with in animals rendered epileptic by experiment, for they may be pricked, pinched, or burned during the paroxysm without any other effects being produced than such as are due to reflex action. Such reflex movements have also been amply demonstrated in human subjects of epilepsy. M. Gubler attaches considerable weight to the hereditary transmission, and although M. Chauffard regards this as a mere syndrome rather than the establishment of the existence of a morbid entity, yet it is to be remembered that there is not only an epilepsy, but epilepsies. Some are unaccompanied by any material lesion, while others are dependent upon such lesions; and as there may be different kinds of epilepsy, we may now add to their number this form induced by experiment. M. Chauffard explained that he was not alluding to mere symptomatic epilepsy, but to true epilepsy without material lesion—a morbid entity, in fact, which should not be confounded with a syndrome. To the other characters of this entity we have to add the evolution of the disease, which entails upon its victims the most absolute physical degradation, and moral and intellectual privation, even in cases in which no convulsive paroxysms have ever occurred.

SIR JAMES SIMPSON ON THE MORTALITY OF SURGICAL HOSPITALS.

(*From a Correspondent.*)

As your last week's remarks have shown, the Profession cordially applaud the zeal in the cause of Medical philanthropy which prompts Sir James Simpson to inquire into the usefulness of large Surgical Hospitals. It is in no unfriendly or critical spirit that I also remark that the inquiry is one of extreme difficulty. It requires not only energy and ability, but knowledge of a very special kind, and it demands also great patience and candour. Otherwise the conclusions may easily be most fallacious. At any rate it may be hoped that Sir James will submit his inferences to Professional scrutiny before making strong statements in the public press. If comparisons are made, let honest care be taken that the data consist of materials really similar in kind, and therefore susceptible of being legitimately put in contrast. As an illustration let me take his first proposition (see last week's journal, page 72), that "three times as many patients die after limb-amputations in our large Hospitals as from the same operations in private and country practice." Before receiving this statement the Profession may reasonably wish to know from what sources the 1000 cases from "private and country practice" have been obtained. The results of amputations in our large Hospitals may be had from sources of unexceptionable character. They have been recorded (as, for instance, during many years in your own pages by your own reporter) by those who had no interest in showing chiefly the bright side, and the successful and the unsuccessful have been given with equal care. If, however, I had wished to compare these reports with similar ones from private practice, I should not have known in the least where to turn for the facts. From what source can the record of 1000 amputations in private practice or country practice be obtained (for we are not sure that Sir James excludes small provincial Hospitals) with a guarantee, or anything like a guarantee, that *all* have been given? Amputations "in the habitations and cottages of the poor" are not matters of every-day occurrence, and the collection of reliable facts as to their results would be a most difficult task. To pick up stray cases from the journals for such a purpose would be worse than childish, nor would the plan of taking a few years' report from one institution or one Surgeon, and a few from another, be much better. The natural tendencies of the Surgical mind must not be ignored; we dwell with greater pleasure on our successes than on our failures, and are far more ready to recollect and to record them.

If Sir James can tell the Profession clearly how he has got these 1000 cases, and show us that the aggregate is really from trustworthy statistical sources, we have then another question to put. Were the individual cases of a tolerably similar kind to those submitted to operations in Hospitals? For obvious reasons the worst class of cases, under ordinary circumstances, gravitate towards our public institutions. The private Surgeon feels indisposed, excepting under compelling circumstances, to undertake an operation, the probably fatal event of which will do him no credit. He may amputate in a case of old-standing disease of a joint; but if a case of railway smash occurs he is perhaps only too happy to accept the suggestion of the patient's friends that the man "had better be taken to the Hospital." We all know how very different are the results of amputations for injuries, whether primary or secondary, and of amputations for disease. Is Sir James Simpson prepared to show that these two classes of cases were in equal proportion in the two series of cases which he compares? Lastly, I may just

ask his attention to the unquestioned fact that the modern and now general practice of excision of joints in a vast number of cases which would otherwise have been submitted to amputation, must tend to increase the mortality from amputations. It eliminates all the best cases, and leaves precisely those in which the risk is greatest. It is possible, perhaps probable, that the ratio of excisions has of late been in relation with the size of the Hospital.

PRESIDENT OF THE MEDICAL COUNCIL.

(*From a Correspondent.*)

It is generally understood that Dr. Burrows, the President of the Medical Council, is anxious to retire from his honourable and distinguished position, and only consented, very reluctantly, to serve during last session. It is probable, then, that his resignation will be the first business which the new Council will have to consider. The time is not inopportune, as it is the commencement of the third *lustrum* of the Council, the Act of Parliament limiting the period for which any member can be elected to five years; two of these five-year periods have now elapsed since its institution.

A short time ago it was announced that the Universities of Aberdeen and Edinburgh, which are jointly entitled to return a member, had differed in their selection. Aberdeen naturally claiming the privilege of returning one of its Professors, while Edinburgh was desirous of continuing to avail itself of the services of Mr. Syme. The Privy Council decided in favour of Professor Macrobin, of Aberdeen.

Mr. Syme has been from the first a most useful member of Council, and during last session moved for the appointment of a committee to consider the whole subject of Professional education. Of that committee he was made chairman, and it is well known that there is a general feeling of regret that the Council should be deprived of his services, especially at the present juncture. To obviate this, a movement has been set on foot to elevate Mr. Syme to the chair about to become vacant, and it has already met with considerable support. There is now no doubt that Mr. Syme will be proposed for the high office, to which he is entitled from his high position as a Surgeon, and also (although still young, corporally and mentally) from his being one of the oldest teachers, if not the oldest, in Europe. The only possible objection to Mr. Syme might arise from his not being resident in London; but in these days of telegraphs and railways Mr. Syme's presence could be secured whenever required, and, from his not being liable to Professional calls when in London, he would be able to preside over the deliberations of the Council with even more regularity than a London Physician or Surgeon. It is a gratifying fact that among the foremost to recognise Mr. Syme's claims have been some of those between whom and the Edinburgh Surgeon some of those little passages of arms have occurred which, although they enliven the meetings of Council, and seem very warlike when read in the reports, are seldom, if ever, carried beyond the walls of the Council, or suffered to interrupt private friendship.

ADDRESS DELIVERED AT THE MEETING OF THE MEDICAL TEACHERS' ASSOCIATION

By Sir WILLIAM JENNER, Bart., M.D., President.

Friday, January 15, 1869.

The present tendency, it seems to me, is to educate the student too widely in the collateral branches of science, and too little in the practical; and not only to educate him too little in the practical, but—and this is the essence of the matter—to examine him imperfectly in the practical branches. The licence of the special licensing bodies ought to insure to the public (for whose interest, and not for that of the Profession, they have charters) a supply of men competent to treat them in sickness. The object and end for which they enjoy privileges are that they may send forth clinical Physicians and clinical Surgeons. Now, as a teacher of clinical Medicine, I doubt if their regulations are so framed as to tend to attain this end in regard to my department; and I doubt still more if their examinations are so conducted as to ascertain if the student has attained this end. Clinical Medicine can be learned only by those who attend regularly in the wards of the Hospital; because in the wards only has the student an opportunity of witnessing the daily progress of acute illness, of watching the effect of remedies, and of seeing the relation between the symptoms during life and the changes after death on which those symptoms depend. The practice of the Physician to the out-patient department affords to the student valuable supplemental clinical instruction.

Our Hospitals yield abundant materials for clinical teaching, and the Physicians to those Hospitals are a body willing and competent to give the best clinical instruction; but the students who should profit by these opportunities, comparatively rarely visit the Medical wards. It is said, "It is easy to take a horse to the water; the difficulty is to make him drink." Now, speaking as clinical teachers, I think most of us could say that the difficulty is to get the horse to the water. Once get him there, and we could soon make him drink. Let the licensing bodies make the student attend the wards of the Hospital, and then, with rare exceptions, he will leave with a fair amount of clinical knowledge, and such kind of clinical knowledge as will enable him to add to his stock with every case he sees. Now I doubt if any regulations as to the time, order, or method of the student's studies will secure his attendance in the wards—his diligent attendance—his regular attendance; will ever, in fact, succeed in forcing him to do that which it is essential for him to do if he is to be a clinical—that is, a practical—Physician. All school rules and regulations, however successful they may be for ordinary attendance in the theatre, break down when applied for the same purpose in the wards.

There are two things which it is essential for the licensing bodies to do, if they are to fulfil the end for which the public created them—viz.: 1. So to dispose of the collateral studies that the student shall have time to devote to clinical study; I mean the student who desires to complete his education within the shortest possible time allowed, and so at the least possible expense. 2. So to conduct examinations as to give a marked, an unmistakable prominence to the importance they attach to the student possessing clinical knowledge.

For my part, after long reflection, and after talking over the subject with many practical men, teachers and examiners, I see but one mode of attaining this object, and that one would be, I believe, effectual. It is this—namely, to test the candidate's clinical knowledge before submitting him to examination. Thus I would have the student made to understand that he must know, and must show to the examiners practically that he knows, how to percuss, how to palpate the abdomen, how to examine by auscultation the heart and lungs, how to test for albumen or for sugar, how to examine a heart, a lung, or a kidney after death; that he must show that he knows solidly how to diagnose a largely hypertrophied heart, a solid lung, a pleura filled with fluid, a big liver, ascites, psoriasis, purpura, and such like simple things. To learn practically these things, he must go into the wards and the dead-house of the Hospital; and the horse being once at the water, it would be the fault of his teachers if he were not forced to drink deeper than the shallow. The student must, however, if the end of forcing him into the wards is to be attained, be fully satisfied that he will be rejected if he is not a clinical Physician; and the only way, I say, in my opinion, to impress this on his mind, is to reject him *at once* for ignorance of practical knowledge. It must be made clear to him and to his Hospital fellows who are to follow after him, that this knowledge is that without which he will not be admitted to the written or *viva voce* examination proper. Fail in this, and no amount of book or lecture knowledge will save him; for he will have no opportunity for displaying his learning. Knowledge would then take its proper place in relation to learning in his mind; and the Medical wards of the Hospital be as much frequented—as regularly frequented—as are the more popular lecture-theatres.

No statistics of pneumonia can help us to judge of the nature of the malady, or the success of treatment. It is not unreasonable to believe that the treatment of morbid conditions so completely distinct must be very different, and under any treatment the mortality will be much greater in such forms as I have alluded to than in less complicated states. It must not be forgotten also that even when the pneumonia is what we may call simple, the fatality varies immensely according to age. In my practice, although I cannot state the exact proportion, I am pretty sure that simple single pneumonia, rarely fatal in adults, is a much more dangerous affection in children.—*Dr. Davidson's Report of the Antananarivo Dispensary for* 1865-6.

REVIEWS.

Plastics: A New Classification and a Brief Exposition of Plastic Surgery. By David Prince, M.D. Philadelphia: Lindsay and Blakiston. 1868.

The object of the present essay is, as stated in the preface, "to reduce the subject of Plastic Surgery to such a classification as to give it an intelligible language, in which each division may be readily designated by a name having an invariable signification;" and this the author attempts to accomplish by adopting an arrangement of the subject under six general heads, with minor subdivisions, viz.:—

1. Sliding in a direct line.
2. Sliding in a curved line.
3. Jumping (Indian method).
4. Inversion, or eversion.
5. Taliacotian, the new part being obtained from a distance.
6. Grafting.

The various modifications of these six types are briefly considered and illustrated by examples or cases. The greater part of the work is, however, devoted to a consideration of the special means to be adopted in the various special deformities which present themselves. Many of the suggestions are sufficiently practical and useful, but are for the most part described in too concise a manner to be readily understood. Numerous woodcuts are introduced, some of which are, however, far too small and too imperfect in their execution to be of much value in enabling the reader to follow the descriptions in the text, in which latter we regret to notice not a few inelegant expressions, and an unusual number of typographical blunders.

The author has, however, succeeded in producing a useful summary of the most approved methods of operation in these very difficult cases, and has evidently gleaned his facts from a large number of authors, although it seems to us that he does but scant justice to some of the most distinguished plastic operators in this country, especially when, in treating of operations upon the palate, he mentions, almost incidentally as it were, the claims of Sir W. Fergusson to the credit of having indicated the true principles involved in the successful performance of this operation. In fact, the subject of cleft palate is treated altogether too briefly, and without that minuteness of detail which plays so important a part in determining the success or failure of such operations.

GENERAL CORRESPONDENCE.

THE EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS, DUBLIN.

Letter from Mr. William Hargrave.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the number of your journal for January 9, page 38, there is a communication headed "Specimens of the Examining Art," to which my attention has been called. The paragraph is as follows:—

"But the most amazing, and, we should hope, unique, method of examining is that practised at the Royal College of Surgeons in Ireland. The candidates are examined by four examiners; these hand their voting-papers to the senior examiner. The vote was 'yes' or 'no,' and in case there was an equality of votes—two 'yes' and two 'no'—the candidate is passed. No conference takes place between the examiners."

I have quoted in full this statement, that there should be no mistake on my part. All this report by your contributor is entirely contrary to fact, and proves what little attention the writer of it has paid to the reports and proceedings of the General Council of Medical Education and Registration. For the information of your readers, the examinations of the Royal College of Surgeons in Ireland are conducted in the following manner:—Each candidate is examined by four examiners who are attended by a member of Council as an assessor, and is examined on two days for one hour each day. His answering is adjudicated by marks which are given to the attending Councillor after the examination is ended. He and the examiners proceed to the chairman, who deliberately and carefully takes the number of marks; then decides on the candidate having passed or failed in his examination. I may remark that if any examiner finds the candidate so ignorant as to give him an 0 or a cipher, that alone rejects him. Your reporter states that "no conference takes place," which is also contrary to fact. It is occasionally done when the Councillor and examiners are before the chairman recording the marks of the candidate. The General Council of Medical Education and Registration are fully aware of this manner of examination pursued by the Royal College of Surgeons in Ireland.

Requesting you will give this communication admission into your journal, I am, &c.

William Hargrave,
Representative for the Royal College of Surgeons in Ireland on the General Council of Medical Education and Registration.

56, Upper Mount-street, Dublin, January 16.

*** If Mr. Hargrave had referred to the fifth volume of the "Minutes of the Medical Council," and to page 170 of that volume, he would probably *not* have written the above letter, since he would have seen there the following paragraph in Dr. Aquilla Smith's report of his visitation of the examination referred to. We copy it *verbatim*. "When the *four* candidates had been examined by the *four* examiners, the latter handed in their voting papers to the senior examiner. The vote was 'yes' or 'no,' and in case there was an equality of votes, the candidate was passed. No conference between the examiners took place before the voting papers were handed in." But further, let Mr. Hargrave read Dr. Aquilla Smith's observations on the opposite page (171), and he will meet with the following, which we also copy *verbatim*:—"The mode of voting appears to be objectionable, because each examiner is obliged to give in his vote, 'yes' or 'no,' written on a slip of paper, to which his name is added; and, as *no conference takes place between the examiners*, a candidate who may have answered pre-eminently well is not distinguished from a candidate who barely satisfies his examiners, or a candidate who has failed to answer every question put to him by one examiner may be passed by the three other examiners. In the case of an equality of votes—two 'yes' and two 'no'—the candidate is passed, the chairman for the time being not having a casting vote." It will be seen, therefore, that our contributor's statement was perfectly accurate, and based literally on Dr. A. Smith's report.

EXCISION OF THE KNEE-JOINT.

Letter from Mr. W. P. Swain.

[To the Editor of the Medical Times and Gazette.]

Sir,—It is with no small diffidence that I venture to cross swords with so strong and skilful an opponent as Mr. Bryant. If I get the worst of the battle, I shall have the satisfaction at least of having yielded to the prowess of one whose achievements in the world of literature and Surgery have won our respect and esteem. All that falls from Mr. Bryant's pen is deserving of, and always obtains, so much attention from the Profession, that it is the more needful for us carefully to examine his conclusions and the grounds on which they are based, lest he, like other fallible men, being led astray, should lead us into error also.

I venture to think that, in the matter of excision of the knee-joint, Mr. Bryant is likely to mislead us, and, with your permission, I will attempt to criticise his paper in your impression of the 2nd inst.

All he writes upon the fact that he has seen articular extremities exhibiting few traces of disease which have been excised, and which if let alone would no doubt have got well, I quite agree with. I have seen such specimens myself, but not after excision only. I have certainly seen—and no doubt has Mr. Bryant, in his much larger experience—joints examined after amputation of the thigh over which one might have shed "tears of sorrow." These amputations were mistakes, just as the excisions were mistakes. The difference was that in the one case the mistake cost nearly the whole of one lower extremity, whilst in the other it cost a flexible joint.

Throughout, too, his process of exclusion I can see nothing in which the most ardent excisionist cannot agree, except that I think he is rather hard upon them in saying that, as a rule, they do not attempt to obtain anchylosis. This is really not the case. The fact is, that patients come to have their joints excised after every possible plan has been exhausted to cure

them by other means, and they have been informed that amputation is their only resource. They then leave the non-excision institution and go to an Hospital where it is more fashionable to excise. Speaking from my own experience of one of these latter Hospitals, I can safely affirm that, in my time, as House-Surgeon, the most careful and persistent efforts were made to cure knee-joints in cases where such efforts had not been made before in some other institution.

With regard to the length of time to be expended in seeking to bring about a cure, Mr. Bryant seems to overlook the very potent argument that six or eight months' "giving up of daily occupation" is a matter of serious consideration for the patient, especially if it is to be followed by another six or eight months' convalescence after excision of the knee. I am no favourer of excision without previous attempts at cure, but I think six months' trial is just twice too long, unless some very decided improvement in the joint takes place; and when that period is sometimes prolonged, as we know it is, to as many years of suffering and confinement, it becomes a serious question as to how far we are justified in countenancing such "expectancy."

A word with regard to convalescence after excision. Hodges, I know, puts down the average duration at 225 days. But, if I remember rightly (for I have not his pamphlet by me), this average is taken only from 48 cases where the patella was stated to have been removed, not from the whole 208 cases recorded in his table. Be that as it may, I am convinced that the experience of Surgeons who extensively practise excision of the knee will be found to give a much shorter period of convalescence than this. Remembering the various accidents which delay the actual cure of a stump in the thigh, it will be found that a patient, after excision of the knee, will get to work as soon, or nearly so, as one after amputation. In the latter case no patient can be said to be cured until the stump is permanently healed and a wooden leg can be borne without pain, and we all know how frequently this result is long deferred.

Lastly, I beg to demur entirely to the manner in which Mr. Bryant has conducted his statistical inquiry. To deduce any fair conclusions from the tables he has laid before us is really impossible. In the first place, he takes 1168 amputations, showing a mortality of 21·7 per cent. These he compares by implication with 178(!) cases of excision of the knee. He then takes 506 cases of amputation of the thigh for chronic disease, and compares them with the above 178 cases of excision, the former showing a mortality of 17·7 per cent., the latter of 39 per cent. "From these facts alone," he says, "the greater mortality of excision of the knee over amputation is very clearly shown—indeed, it is at least twice as great." It occurs to my mind, as it will perhaps to the minds of many of your readers, that to take 178 cases of excision and compare them with very nearly three times the number of cases of amputation, is so absurd, that any deductions made from such a comparison must be useless.

Much fairer is the comparison between the 188 cases of amputation for chronic disease of the joint and the 178 cases of excision. But we must remember that these cases are much too few to form any data upon. A run of good or bad luck makes all the difference. For instance, I happen to have in my possession a record of excisions at three provincial Hospitals—viz., Exeter, Plymouth, and Devonport—comprising forty-three cases with only five deaths, and I have also tabulated from various sources eighty-two cases of excision with only fifteen deaths, over 18 per cent. I do not believe that the mortality after excision is less than that after amputation. It is, I believe, rather more. Taking the whole range of excisions from the very first up to the present time, I believe I shall show in my forthcoming book on excision of the knee that the mortality is a little over 21 per cent., not quite so bad as Mr. Bryant's statistics lead us to believe. In conclusion I would remark that at Mr. Bryant's Hospital the Surgical staff have had no great means of testing the value of the operation of excision of the knee-joint, for I understand that the operation has only been thrice performed, amputation following in each case.

I am, &c.

W. P. Swain.

20, Ker-street, Devonport.

General Pruritus in Pregnancy.—M. Léon Gros relates an interesting case in which a general pruritus of excessive severity affected a patient in two successive pregnancies, and resisted every variety of remedies until the patient, being induced on account of accompanying neuralgia to smoke a cigar, found herself completely relieved. On the second occasion she endeavoured to do without this remedy, but could get no relief from the intense and generalised irritation until she resorted to it.—*Bull. de Thérap.*, December 15.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, January 5, 1869.

J. Simon, F.R.S., President, in the Chair.

The annual meeting of the Pathological Society was held on January 5, when the officers already mentioned in these columns were elected. Dr. Kelly and Mr. Vernon were appointed scrutineers. The treasurer's report was read and adopted, as was also that of the Council. In the latter document an expression was given to the fear that the existence of the Committee of Morbid Growths caused a certain amount of neglect on the part of exhibitors, who did not now always take sufficient care about the examination of their specimens. It was stated that the members now amounted to 438, and members attached to schools might do much for the Society by urging upon their pupils the propriety of joining the body. The question of the alteration of bylaws, necessitated by the increased expense of the *Transactions*, was discussed at some length. Ultimately it was resolved that all non-resident members should henceforward pay an entrance fee of three guineas, and be entitled to purchase the *Transactions* at cost price; also that resident members entering after January 1, 1869, should be allowed to compound their annual fees for the sum of fifteen guineas, not ten, as was formerly fixed; whilst the question of a sliding scale applicable to all was referred back to the Council for consideration.

Reports were then read from the Committee of Morbid Growths—1st. On Mr. Heath's specimen of Encephaloid Cancer of the Tongue; it was found to be composed of cell elements, muscular fibres, gland elements, and fibrous tissue. 2nd. On Dr. Kelly's specimen of Malignant Disease of the Femur; the majority of the elements were white fibrous tissue, round, elongated, or fusiform cells, in some parts myeloid, in some like those of the periosteum. The mass was pronounced to be fibro-plastic. 3rd. On Mr. Adams's specimen of Syphilitic Tumours of the Leg; these were pronounced to be ordinary syphilitic gummata, mixed with fat cells.

Dr. Peacock then showed a specimen of Malformed Heart presenting obliteration of the pulmonary artery by adhesion of its valves. This was removed from a child aged 13 years, and was very rare at such an age. Unfortunately there existed no means of making known the mode of effecting the pulmonary circulation, the heart having been cut short off. In such cases the lungs, as well as the heart, should be examined, the main interest lying in the mode of effecting the pulmonary circulation. In most it was secured by the ductus arteriosus remaining patent on or by branches from the aorta.

Mr. Payne exhibited some Multiple Vascular Tumours of the Liver removed from the body of a married woman, aged 25. She came into St. Mary's Hospital for polypi of the uterus. These were removed, but she gradually became weaker. Her liver was large, and there was hæmorrhage from the rectum, which ultimately caused death. Her liver weighed 6 lbs., the whole body not weighing more than 100 lbs. It was pale in colour, but contained many dark-red tumours, some of them projecting from its free surfaces. Near each kidney there was a similar small tumour, so also was there in each ovary. Nothing was found in the uterus. She had suffered from piles and prolapse of the rectum, and sloughing of the latter had caused the hæmorrhage. All the tumours were really masses of coagulated blood. In the liver they appeared to be connected with the portal system; those near the kidney could be injected from the renal artery. Small tumours of this kind had been found in the liver; none that he knew of had been so large. They probably arose from dilatations of the veins.

Dr. C. Bastian exhibited some microscopic specimens of minute Emboli in the grey matter of the Brain, as illustrative of the pathology of delirium. The specimens were taken from a strong man who fell and injured his head. Erysipelas set in, and he was brought to University College Hospital. He did not live long after admission. His head was much swollen, and there was much purulent lymph below the scalp, but there was none below the pericranium or calvarium. There was much congestion of the pia-mater, and the vessels of the brain were generally full. The lungs and kidneys were congested. Many of the small vessels of the brain contained masses of white corpuscles, some completely fused into a single mass, others tolerably distinct, but connected one with another, whilst in other masses there were signs of incipient degradation. The

vessels of the kidney and liver were also blocked in the same way. In many cases of acute disease he had observed that the number of white corpuscles was increased, and that they apparently had a tendency to join together into masses, as well as to present more active amœboid movements than in health. The fusion of these corpuscles might give rise to embolism of the minute arteries of the brain in such acute diseases as pneumonia and rheumatism, where they were unusually abundant, and so produce the delirium so commonly observed. In leucocythemia the number of white blood-corpuscles was also greatly increased; but the disease was not an acute one, and the corpuscles did not present those irritative characteristics which caused them to cohere and change their shape. As similar accumulations were observed in the kidney, he thought these might also be the cause of temporary albuminuria.

Mr. BARWELL thought these masses could scarcely be called emboli, as they appeared to be formed at the place; he thought them rather the result of inflammatory action, which would also cause the delirium.

Dr. MURCHISON thought Dr. Bastian had not shown that these masses had existed during life.

Dr. BASTIAN contended that there was no appearance of inflammation. The masses existed in all parts of the body, but were only infarcted in the small vessels. As to their existence during life, some of the masses presented complete fusion, some even incipient degeneration.

After a vote of thanks to the retiring office-bearers proposed by Dr. Langdon Down, and seconded by Dr. Peacock, Mr. Simon, the retiring President, took leave of the Society in a short and appropriate address, alluding especially to the great help he had received from the co-operation of the office-bearers, especially the Medical Secretary, now Treasurer, Dr. Murchison. He also spoke in feeling terms of the loss the Society and the Profession in general had sustained by the untimely death of Dr. Hillier.

CLINICAL SOCIETY.

FRIDAY, JANUARY 8.

Sir THOMAS WATSON, President, in the Chair.

THE following gentlemen were elected members of the Society:—Mr. J. Walker, Dr. Oldfield, Mr. J. Wyatt, Mr. A. Wolff. The following were elected as officers of the Society for the ensuing year:—*President:* James Paget, F.R.S. *Vice-Presidents:* Henry Wentworth Acland, M.D., F.R.S.; George Burrows, M.D., F.R.S.; William Withey Gull, M.D.; Sir William Jenner, F.R.S; Thomas Bevill Peacock, M.D.; C. J. B. Williams, M.D., F.R.S.; Sir William Fergusson, F.R.S.; Prescott Gardner Hewett, Esq., F.R.S.; John Hilton, Esq., F.R.S.; Professor Humphry, M.D., F.R.S.; John E. Erichsen, Esq.; John Simon, Esq., F.R.S. *Treasurer:* E. Headlam Greenhow, M.D. *Council:* F. E. Anstie, M.D.; J. Syers Bristowe, M.D.; William Marcet, M.D., F.R.S.; Charles Murchison, M.D., F.R.S.; Frederick W. Pavy, M.D., F.R.S; Richard Quain, M.D.; James D. Rendle, M.D.; Francis Sibson, M.D., F.R.S.; Reginald Southey, M.D.; Hermann Weber, M.D.; Alexander Bruce, Esq.; Campbell De Morgan, Esq., F.R.S.; Arthur E. Durham, Esq.; Cooper Foster, Esq.; George E. Gascoyen, Esq.; Ernest Hart, Esq.; Christopher Heath, Esq.; John W. Hulke, Esq., F.R.S.; Charles F. Maunder, Esq.; Thomas Smith, Esq. *Honorary Secretaries:* John Burdon Sanderson, M.D., F.R.S.; George W. Callender, Esq.

THE PRESIDENT'S ADDRESS.

This time twelvemonth, gentlemen, I had occasion to thank you for the signal honour you then conferred upon me, in making me your first President. I have now again to offer you my thanks; and I do so in all sincerity, not only for the compliment which you have just paid the other retiring officer and myself, but also, and especially, for the indulgence with which you have been good enough to accept the slender and imperfect service which alone I have been able to render you. I beg leave to add my own congratulations to those of the Council upon the progress and prosperity of our Society during the first year of its existence; upon its increasing number, upon its financial ease, and upon the creditable volume of *Transactions* which it has been able to put forth. I do not feel so certain that I can, with a clear conscience, and in terms as absolute, commend our meetings—that is to say, ourselves—for the strictest adherence to the professed objects of the Society; which are "the collection of reports of cases of interest, especially of such as bear upon undetermined questions in pathology and therapeutics." I have noticed, and others have noticed—and I take blame to myself for not having from this chair sufficiently discouraged—a tendency to wander beyond our prescribed limits, and to trespass upon the grounds of a kindred and friendly society, which, if not damaged, might reasonably be offended by such an invasion. But I am willing to look upon this as merely the unsteady walking of infancy; and to believe that, as we get older and stronger, we shall manage our steps better, and, respecting our neighbours' fences, keep strictly to our own well-marked path. The record of cases, closely observed and accurately detailed, calculated to throw light upon unsettled points in pathology—that is one of the proper and legitimate objects of the Clinical Society; and the investigation of the special action and efficacy of remedies is another, and, in my judgment, at present the more pressing and important of the two. The few words which I addressed to the Society on the evening of our first meeting have been, I fear, somewhat misapprehended. It seems to have been thought, in some quarters, that I had renounced my faith in physic—that I undervalued the resources and the usefulness of our art. Such a notion is the very reverse of the truth. I am anxious to have the effects of remedies carefully ascertained and certified, just because I have so great faith in their real force. What I deprecate, what I would fain see altered, what it is one great end of this Society to do away with, is the vagueness of aim, the uncertainty of result, the merely tentative nature of too many of our prescriptions. Far from thinking that our warfare with disease is a vain warfare, I am only desirous that our arms should have the precision of the modern rifle, instead of the wild flight of the old-fashioned smooth-bore. Probably I have even greater reliance than many Physicians upon the virtues of drugs—of what used to be called simples—a word I like, because it helps continually to suggest to one's mind the golden rule, that their administration should be simple; that they should be mixed as little as possible with other substances which might confuse and vitiate the conclusions to be drawn from their actual operation. I am one of those who hold to the doctrine—always within its proper limitations, the limitations assigned by Bacon—the doctrine of final causes, so despised by modern philosophy. I believe that those subtle essences which human research and ingenuity have succeeded in deriving from various substances in Nature, and which, when applied to the human body, sometimes even in very minute quantities, have a potency so marvellous as to abolish pain, to compel sleep, to extinguish fevers, to stop for long, perhaps for ever, the recurrence of paroxysms of epilepsy which had continued to recur for years, were implanted in those substances by the Creator, among other uses, it may be, for these very services to mankind; and that there lie concealed in other substances, and especially in the vegetable kingdom, many analogous healing powers, which it is a part of man's mission and privilege, and will be his great reward, to search after and to discover. The intelligent and scientific quest of such new remedies; the verification of the exact properties and effects of those we already possess, in order that the active and useful may be rightly applied, and the worthless discarded—these, I repeat, ending as I began, are or should be, and I make no doubt will be, among the main purposes of this Society. The fruit of its institution, in that direction, will become more and more apparent when the inquiries into particular remedies, which have been entrusted to committees of our members, shall be ripe for report. In bidding you officially farewell, I must express the very great pleasure which your choice of my successor has given me. I heartily congratulate the Society upon its passing under the rule and headship of such a man as Mr. Paget.

Mr. MOORE read an account of a case of severe inflammation about the hand and forearm which was treated with marked benefit by acupressure of the brachial artery.

Mr. DURHAM referred to the importance of endeavouring to lessen the arterial supply in similar cases by the position of the limb. He thought acupressure a severe measure for the treatment of these cases.

Mr. CARTER suggested the employment of digital pressure of the main artery of the limb, and Mr. T. SMITH referred to the amount of local irritation caused by the needle.

Mr. MAUNDER insisted upon the care which should be taken in the selection of cases, and stated that it was not so much a question of the method employed as of the principle involved in the arrest or cutting off of the supply of blood to the inflamed parts.

Mr. HEATH alluded to the desirability of trying the effect of drugs in local inflammations. He instanced the use of tartar emetic and of belladonna as showing their utility in certain cases.

Mr. Moore replied that he was desirous of simply placing the case on record, as it seemed to him that in this instance the remedy had been efficacious.

Mr. Thomas Smith brought before the Society an interesting case of Rupture of the Intestine, in which the bowel was punctured before death to relieve its extreme distension. He referred to various cases in which a similar plan of treatment had been employed, and pointed out the comfort which the patient derived from the use of so simple a remedy.

Dr. Fagge narrated a case which had been under Mr. Birkett's care in Guy's Hospital, in which great temporary relief had followed the operation.

Mr. Holthouse said this plan of treatment was advocated by Mr. Phillips. He commented on the desirability of puncturing the bowel with a needle in certain instances of hernia, as facilitating reduction of the intestine.

Mr. Durham referred to Mr. Stocker's experience of the operation, and the utility of the measure in the treatment of a case of strangulated hernia which had come under his notice.

Dr. Stewart pointed out the efficacy of belladonna injections in cases of over-distension of the bowel with flatus.

After some remarks from Mr. Bruce,

Mr. T. Smith expressed a doubt whether a needle would be found as useful an instrument as a fine trocar. He, of course, regarded the operation as one to be practised only after the failure of other remedies.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 19th inst. :—

Cox, William Ashley, Bath, of the Edinburgh and St. George's Hospitals.
Crespi, Alfred John, Cheltenham, of the Birmingham and University College Hospitals.
Hardey, Edward Peirce, Hull, of St. Mary's Hospital.
Horsey, Alfred John, M.D. Canada, Kingston, Canada, of the London Hospital.
Howell, John Alexander, L.S.A., Bombay.
Hubbard, Thomas Wells, St. Lawrence, Isle of Thanet, of Guy's Hospital.
Humphreys, John Henry, Birmingham, of the Birmingham and University College Hospitals.
McConnell, James Frederick Parry, Allahabad, East Indies, of St. George's Hospital.
McMahon, John James, L.S.A., Dundalk, of the Dublin School.
Middleton, William Henry, Darlington, of the Manchester School.
Palmer, Frederick Stephen, Brixton, of the Westminster Hospital.
Perkins, Edward, L.R.C.P. Edin., Manchester, of the Manchester School.
Petch, Richard, Compton-terrace, Islington, of King's College Hospital.
Redmayne, John Thomas, Clitheroe, Lancashire, of Guy's Hospital.
Wigg, Henry Carter, M.B. Edin., Victoria, Australia, of University College Hospital.

It is stated that three candidates failed to acquit themselves to the satisfaction of the Court, and were consequently referred to their Hospital studies for six months.

The following gentlemen passed on the 20th inst. :—

Collet, Augustus Henry, Worthing, Sussex, of Guy's Hospital.
Dobson, William, L.S.A., Leeds, of the Leeds School.
Flowers, William Field, Tealby, Lincolnshire, of Guy's Hospital.
Gobat, James Timotheus, Jerusalem, of the Leeds School.
Hall, James Asbridge, Halifax, of the Leeds School.
Hoar, Charles Edward, Maidstone, of King's College.
Holmes, Francis Abraham, Nassau, Bahamas, of the Middlesex and St. Mary's Hospitals.
Hull, George Askew, St. Mary Abbot's-terrace, W., of University College.
Jones, Charles, L.S.A., Carnaby-street, of the Middlesex Hospital.
King, William Moore, Brighton, of St. Bartholomew's Hospital.
Lack, Thomas Lambert, L.S.A., Chichester, of King's College.
Laing, Robert, Newcastle-on-Tyne, of the Newcastle School.
Norman, Burford, L.S.A., Taunton, Somerset, of Guy's Hospital.
Norton, George Everitt, L.S.A., Upper Baker-street, of the Middlesex Hospital.
Railton, Thomas Carleton, Manchester, of the Manchester School.
Rudge, Charles King, Bristol, of the Bristol School.
Salaman, Selim Myer, M.B. Dub., Maida-hill, of the Dublin School.
Wade, Richard Corston, Manchester, of the Manchester School.

It is added that only two candidates failed to acquit themselves on this occasion to the satisfaction of the Court of Examiners, and were consequently referred to their Hospital studies for six months.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, January 14, 1869.

Franklin, Benjamin, Bedford-place, W.C.
Knowles, John, Northumberland-street, W.C.
Mason, John Dawson, Lewisham-road, S.E.
Ward, William Simpson, Holbeck, Leeds.
Wilson, John Bower, Sheffield.
Wood, Alexander, Banff, Scotland.

The following gentleman also, on the same day, passed his First Examination :—

Fox, Hugh Courtenay, London Hospital.

NAVAL AND MILITARY APPOINTMENTS.

Admiralty.—The following appointments have been made :—Samuel D. Wells, Staff Surgeon, to the *Ganges :* Garland W. L. Harrison, Assistant-Surgeon, to the *Indus :* William C. J. Holmes, Assistant-Surgeon, to the *Victory.*

County of Elgin.—1st Elgin Mounted Rifle Volunteer Corps : George Whyte, to be Honorary Assistant-Surgeon ; January 9.

County of Stafford.—20th Staffordshire Rifle Volunteer Corps : William James Kite, Gent., to be Assistant-Surgeon ; John Manley, Gent., to be Honorary Assistant-Surgeon, *vice* Kite, promoted ; December 30, 1868.

County of Suffolk.—West Suffolk Regiment of Militia : Assistant-Surgeon John Kilner, to be Surgeon, *vice* Creed, deceased ; January 8.

BIRTHS.

Hardesty.—On January 13, at High-street, Lochee, Dundee, the wife of J. Jeffrey Hardesty, L.R.C.P. and S.E., of a daughter.

Harrison.—On January 13, at Albany-courtyard, Piccadilly, the wife of John Harrison, F.R.C.S.E., of a son.

Hodder.—On December 8, at the Pavilion, Barbadoes, the wife of F. W. L. Hodder, M.B., M.R.C.S. Eng., Staff Assistant-Surgeon, of a daughter.

Hood.—On January 20, at 65, Upper Berkeley-street, Portman-square, the wife of J. Wharton Hood, M.D., of a son.

Muir.—On December 25, 1868, at Halifax, Nova Scotia, the wife of Dr. Henry Skey Muir, H.M.'s Medical Staff, of a daughter.

Orange.—On January 16, at Broadmoor, Wokingham, Berks, the wife of Wm. Orange, M.D., M.R.C.P., of a daughter.

MARRIAGES.

Banning—Cooper.—On January 14, at St. Mary's Church, Gateshead-on-Tyne, Robert J. Banning, M.D., of Gateshead, son of Joseph Banning, Esq., of Fairfield, Liverpool, to Alice, youngest daughter of the late William Cooper, Esq., of London, and step-daughter of Alexander Cruickshanks, Esq., Mount Greenwich House, Gateshead.

Bradford—Morgan.—On January 9, at St. Peter's Church, Bayswater, Milton Bradford, of 79, Talbot-road, Westbourne-park, solicitor, to Rosa Louisa Ellen, youngest daughter of the late George A. Morgan, F.R.C.S., of Harbury, Warwickshire.

Dawson—Riley.—On January 13, at All Saints, Foxholes, near Scarborough, by the Rev. J. Foord, assisted by the Rev. M. Mayer, Rector of Wold Newton, Charles William Dawson, Surgeon, Hunmanby, Yorkshire, son of the late Wm. Dawson, Esq., of St. Maurice House, York, to Miss Martha Sellar, niece of Wm. Riley, Esq., of Boythorpe Lodge.

Jackson—Caunter.—On December 17, at Trinity Church, Allahabad, James Rawlinson Jackson, M.D., H.M.'s Indian Medical Service, to Alice, younger daughter of Henry Caunter, Esq., Ashburton, Devon. No cards.

Joy—Mackay.—On November 4, 1868, at the Protestant Episcopal Church, Valparaiso, by the Rev. Richard Dennett, D.D., John Holmes Joy, A.M., M.Ch., M.D., youngest son of Henry H. Joy, LL.D. Dublin, to Anita Mary, second daughter of Dr. John Mackay, of Lebu, Chile, S.A., and formerly of Fortwilliam, Invernessshire, Scotland.

DEATHS.

Bell, Mrs. R., relict of the late Thomas Bell, M.D., formerly of Cheltenham, at 28, Palace-gardens-villas, Kensington, on January 16, in the 71st year of her age.

Boott, Francis Horrocks, Esq., second and only surviving son of the late Francis Boott, M.D., V.P.L.S., at his residence, Dudley, on January 16, in the 45th year of his age.

Brodribb, Dr. W. P., of Bloomsbury-square, on January 8, aged 68.

Burrough, R. F., M.R.C.S.E., J.P., of Dartmouth, on December 26, 1868, aged 74.

Cowan, Dr. J., R.N., at Upper Gray-street, Newington, Edinburgh, on January 6.

Cumming, Leonora, fifth and youngest daughter of W. S. Cumming, Surgeon, at Limehouse, on January 15, aged 35.

Daniell, Alfred Horatio, M.R.C.S.E., L.S.A., at Kegworth, on the 12th inst., aged 47.

Kemplay, B., L.S.A.L., formerly of Leeds, at Wakefield, on January 1, aged 63.

Little, Sarah Sophia, wife of the Hon. B. Little, M.D., at Singapore, on December 4, 1868.

Venn, Henry, M.R.C.S., on January 18, at Windsor.

Walsh, James A., L.A.H. Dub., of Westland-row, Dublin, on January 3, aged 53.

Wright, Henry G., M.D., M.R.C.P., Physician to the Samaritan Hospital, at 65, Harley-street, Cavendish-square, after a long illness, on January 14, in his 41st year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Bristol General Hospital.—Assistant House-Surgeon ; must possess a registered qualification. Applications to the Secretary at the Hospital on or before the 25th inst. Election on the 1st proximo.

"Dreadnought" Hospital Ship.—Assistant-Surgeon ; must be M.R.C.S. Lond., unmarried, and be between 21 and 40 years of age. Send testimonials to the Secretary, Seamen's Hospital Society, 86, King William-street, E.C., on or before the 26th inst. Particulars of duty may be obtained on personal application only.

GLASGOW EYE INFIRMARY.—Assistant-Surgeon; must be a registered Practitioner of two years' standing. Application to be made to George Black, Esq., 46, West George-street, Glasgow.

HALIFAX INFIRMARY.—House-Surgeon; must be on the Medical Register of Great Britain, and possess one Medical and one Surgical diploma, licence, or degree, recognised by the Medical Council. Send testimonial to Dr. Alexander, Halifax, on or before Tuesday, January 26.

INFIRMARY FOR EPILEPSY AND PARALYSIS, CHARLES-STREET, PORTMAN-SQUARE.—Assistant-Physician; must be a Graduate in Medicine and a Member or Fellow of the Royal College of Physicians. Applications and testimonials to the Secretary at the Infirmary. Election on February 18.

LEICESTER BOROUGH LUNATIC ASYLUM.—Resident Medical Superintendent; must be qualified to practise Medicine and Surgery, and be legally registered under the Medical Act, 1858. Applications, enclosing testimonials and stating age and qualifications, to be sent to Mr. S. Stone, Town Clerk, Leicester, on or before March 11 next.

ROYAL HANTS COUNTY HOSPITAL, WINCHESTER.—House-Surgeon; must be M.R.C.S.E., or have the Surgical diploma of a Royal College or a University in Scotland or Ireland, and also either a licence from the Royal College of Physicians, London, or from the Apothecaries' Society. Applications, enclosing testimonials, to be sent to the Committee, under cover to the Secretary, before February 3 next.

ROYAL SOUTH LONDON DISPENSARY, ST. GEORGE'S-CROSS, S.E.—Honorary District Surgeon; Lambeth District. Apply to Mr. Hentsch, at the Dispensary.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—House-Surgeon and Assistant House-Surgeon; must be Members of one of the Colleges of Surgeons of the United Kingdom, and L.S.A. or L.R.C.P. London, and be registered under the provisions of the Act of 21 and 22 Vict. cap. 90. Applications to Dr. J. C. Hall, on or before February 6.

STOKE NEWINGTON DISPENSARY.—Assistant Resident Medical Officer; one qualification required. Particulars upon personal application at the Institution, between 11 a.m. and 2 p.m.

ST. PANCRAS, MIDDLESEX.—District Medical Officer; must be qualified in both Medicine and Surgery, as required by the Poor-law Board. Applications (which must be made on forms provided for the purpose), with testimonials, must be delivered at the Clerk's Office, Vestry Hall, St. Pancras, before 12 o'clock, on Monday, January 25. Candidates must attend on Thursday, January 28, at 12 o'clock.

TUNBRIDGE WELLS INFIRMARY AND DISPENSARY.—Resident House-Surgeon and Secretary; must be unmarried; M.R.C.S. London, Edinburgh, or Dublin, and L.R.C.P. or L.S.A. Applications, with proofs of qualifications, &c., to the Secretary at the Infirmary, on or before Wednesday, February 3. Election on Monday, February 8, at 3 o'clock p.m.

WEST HERTFORDSHIRE INFIRMARY, HEMEL HEMPSTEAD.—House-Surgeon and Assistant-Secretary; must possess both Medical and Surgical qualifications, and be registered. Send certificate of registration and testimonials to the Secretary at the Institution, at or before 12 o'clock, on Thursday, January 28. Election on Thursday, February 11, at 3 o'clock.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Berwick-upon-Tweed Union.—Mr. W. A. Paxton has resigned the Islandshire District; area 11,908; population 2109; salary £25 per annum.

Wandsworth and Clapham Union.—Dr. Wm. Connor has resigned the Workhouse; salary £135 per annum.

Wangford Union.—The Beccles District is vacant; area 16,859; population 7221; salary £90 per annum. Also the Workhouse; salary £42 per annum.

APPOINTMENTS.

Battle Union.—Edward Smith, M.R.C.S.E., L.R.C.P., to the First District and the Workhouse. Joseph A Simons, M.D. St. And., M.R.C.S.E., L.S.A., to the Second District.

Clifton Union.—Lemuel M. Griffiths, M.R.C.S.E., L.R.C.P. Edin., to the First District.

Preston Union.—Arthur G. Evans, M.R.C.S.E., L.S.A., to the Fifth District and the Penwortham Workhouse.

Thrapston Union.—William H. Masters, M.R.C.S.E., L.S.A, to the A District and the Workhouse.

UNIVERSITY INTELLIGENCE.—OXFORD, Christ Church, January 14, 1869.—There will be holden on Saturday, February 20, an election to seven junior studentships of Christ Church, whereof two will be adjudged after an examination in mathematics, and one after an examination in physical science. For the remaining four, the examination will be chiefly in classics, but questions in history will be given, and one studentship at least will be awarded for proficiency in this subject. These studentships will be worth from £80 to £90 per annum, inclusively of rooms, and will be tenable for five years. No one will be admissible as a candidate for the classical and mathematical studentships who was over nineteen on January 1 last, nor for the physical science studentship who was over twenty on that day. Candidates for the classical studentships must call upon the Dean, with certificates of baptism, of standing (if members of the University), and of good character, on Monday, February 15, at 12.30. Candidates for the mathematical studentships must call, with the same documents, on Friday, February 5, at 12·30, and candidates for the physical science studentship on Tuesday, February 9, at the same hour.

INTERNATIONAL MEDICAL CONGRESS.—Professors Palasciano, of Naples, and Pantaleoni, of Rome, have issued proposals for holding an International Medical Congress at Florence in September, 1869. They have laid down the statutes for its management and a programme of the questions to be discussed, which seems a somewhat premature proceeding.

COLLEGIATE DIVISIONS.—The following will no doubt be read with some interest by those of our readers who take an interest in the affairs of the Royal College of Surgeons, and especially those interested in the subject of conducting the Professional examinations for the Fellowship and Membership of the College. Mr. Le Gros Clark introduced the following motion, which was seconded by Mr. Hancock, viz.:—"That it is expedient that the primary examinations for the Membership and Fellowship of this College be conducted by examiners specially appointed for that purpose, in concert with the President and Vice-Presidents for the time being." Whereupon Mr. Hilton moved, and Mr. Cock seconded, the following amendment, viz.:—"That the discussion on Mr. Clark's motion be adjourned to the next meeting of the Council." The question of adjournment was met by a demand on the part of Messrs. Hewitt and Hawkins that the names of those voting for and against the adjournment be entered on the minutes:—For the motion, 7, viz.:—Mr. South, Mr. Mackmurdo, Mr. Hilton, Mr. Cock, Mr. Lane, Mr. Busk, and Mr. Smith. Against the motion, 14, viz.:—Mr. Swan, Mr. Solly, Sir William Fergusson, Bart., Mr. Thomas Paget, Mr. Adams, Mr. Hancock, Mr. Curling, Mr. Clark, Mr. James Paget, Mr. Hawkins, Mr. Hewett, Mr. Birkett, Mr. Simon, and Mr. Holden. The motion for the adjournment was consequently lost. The votes of the Council were then taken on the original motion by Mr. Clark, and, on the demand of Messrs. Hawkins and Hewett, the names of those voting for and against the motion were again directed to be entered on the minutes—viz., for the motion 9—viz., Mr. Thomas Paget, Mr. Hancock, Mr. Curling, Mr. Clark, Mr. James Paget, Mr. Hawkins, Mr. Hewett, Mr. Simon, and Mr. Holden. Against the motion, 11—viz., Mr. Swan, Mr. South, Mr. Hilton, Mr. Cock, Mr. Solly, Sir Wm. Fergusson, Bart., Mr. Adams, Mr. Lane, Mr. Busk, Mr. Smith, and Mr. Birkett. The motion by Mr. Clark was therefore lost. At this meeting of the Council Mr. Litchfield Jones Moseley was, on the recommendation of the Museum Committee, appointed an assistant in the Museum.

LYON MÉDICAL.—Under this title M. Diday's well-known *Gazette Médicale de Lyon*, after twenty years of independent existence, will in future appear, having been amalgamated with the *Journal de Médecine* of the same city. The only doubt we have of its future success arises from its editing being placed in the hands of a numerous committee, having their rights and their vetos.

PRESENTATION.—Dr. Suffield, of Clifden, has been presented with an address, a handsome timepiece, and a purse of money by his friends and patients in Connemara. Dr. Suffield has held the post of Medical officer to the Union Workhouse for twenty-eight years, and he served ably and bravely through the famine years of 1847, 1848, and 1849.

THE convict Bisgrove, who was reprieved by the Home Secretary, has been pronounced insane by the visiting justices. His insanity is said to be the concomitant of epilepsy which originally was the result of mental shock produced by seeing a man crushed by the fall of a piece of stone.

A MEETING of the General Committee formed for the foundation of a Marshall Hall Memorial Scholarship will be held at the rooms of the Medico-Chirurgical Society, by permission of the Council, on Friday, the 29th, at 5 p.m., to elect the members of an executive committee and to afford an opportunity for discussion as to the best form for the memorial to take. Dr. Burrows will preside. Amongst the latest supporters of the movement are Mr. Paget, F.R.S., Dr. Sieveking, Dr. Acland, Dr. Ogle, Mr. Haynes Walton, Dr. George Stillwell, Mr. Turner (Manchester), etc.

LIVERPOOL.—The annual meeting of the members of the Medical Institution was held January 12, when the following officers and Council were appointed for the year 1869:—*President:* Dr. MacNaught. *Vice-Presidents:* Drs. Cameron, Gee, Whittle, and Parsons. *Hon. General Secretary:* Dr. Oxley. *Hon. Secretary to the Ordinary Meetings:* Dr. Roberts. *Hon. Treasurer:* Mr. A. B. Steele. *Hon. Librarian:* Dr. Davidson. *Members of Council:* Mr. Bickerton, Mr. C. B. Wilson, Dr. Skinner, Dr. Rawdon, Dr. Desmond, Mr. Hamilton, Dr. Selford, Mr. MacCheane, Dr. Bennett, Dr. Lyster, Mr. T. S. Walker, and Dr. Waters.

THE SCIENTIFIC CONGRESS OF FRANCE.—Contrary to the usual habit of scientific bodies of a migratory character, the thirty-fifth meeting of this Congress was held at Montpellier in December. Aided, we suppose, by the mildness of the present season, the attendance was good, and the discussions were well

maintained. In the Medical Section a programme of thirty-five questions came under discussiou, this having first been widely circulated, so as to enable intending visitors to know what was to be brought forward. This in some respects is a good plan, especially as it does not prohibit other topics being introduced, preference, however, being given to those on the paper.

THE MEDICAL CLUB.—The members of the Medical Club and the Profession generally are informed that it has been decided to hold a series of "house" dinners at the Club during the present season. The next dinner will take place on Wednesday, February 3, at 6.45 p.m., under the presidency of Sir Charles McGrigor, Bart. The price of the dinners, exclusive of wine, has been fixed at five shillings. Members may introduce two friends each (not necessarily members of the Club), and, if intending to be present at the dinner, are requested to leave their names and those of their friends at the Club-house, or to inform the steward by letter, at least two days previously.

ENLARGEMENT OF THE QUEEN'S HOSPITAL, BIRMINGHAM.—We referred last week to a scheme which had been propounded for the enlargement of the Queen's Hospital. This was to be carried out by the subscriptions of the working men of the town. On Saturday last a meeting, numerously attended, was held at the Town Hall for the furtherance of the object. The chair was occupied by Mr. George Dawson, who in a few eloquent sentences urged upon the meeting the importance of the subject they had met to discuss. Amongst the speakers was Mr. Gamgee, who was an able advocate of the proposed change. A series of resolutions was proposed and carried. If properly managed such a scheme may be attended with great good to the working population of Birmingham ; but we repeat what we said in our last impression, it will not do to change a noble charity into a self-supporting institution.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.—The quarterly meeting of the Association will be held at the Freemasons' Tavern, Great Queen-street, Lincoln's Inn-fields, on Friday, the 29th inst., at half-past seven p.m. Resolutions affirming the necessity for better payment of the Medical officers and permanence of appointment in all cases will be submitted to the meeting. It is also proposed to bring forward a resolution that Poor-law Medical officers should be deemed entitled to superannuation allowance, the same as members of the Civil Service, etc. As this meeting will be the last before the assembling of Parliament, and prior to any attempt that may be made to obtain redress of the grievances of the service, the Council earnestly request that the members and friends of the Association will make an effort to be present on the occasion.

POOR-LAW MEDICAL SERVICE.—*St. Pancras.*—The Guardians passed a resolution that Medical officers should undertake to give a month's notice previous to resigning office, the Board considering it inconvenient that they should relinquish their duties suddenly. This contrasts strangely with a ruling of the Chairman of this very same Board a few weeks ago. One of the Medical officers wished to withdraw a resignation which he had sent in. The Chairman ruled that he had ceased to be their officer by the very act of tendering his resignation. Was it on that occasion that the Guardians felt the inconvenience referred to? The Poor-law Board have approved of the appointment of Mr. Hill to the joint duties of the male and female departments of the House at an increase of salary from £100 to £150 a year. *Clerkenwell.*—The vestry received an application from one of their sanitary inspectors asking for permission to apply for the office of vaccinating inspector. The incongruity of the application was too much for the vestry's gravity, and attracted nothing but ridicule. Yet in a neighbouring parish—St. Pancras—a still more incongruous appointment has actually been made, the office of vaccination inspector having been conferred on a gentleman who had been a greengrocer, but was the son of a vestryman. [*** We insert this on the authority of a well-informed correspondent, but we really can hardly believe it.] *Islington.*—In accordance with Dr. Seaton's suggestion, the Guardians have decided that only one vaccinator shall be appointed for the whole parish, who shall attend at four different stations once a week.

ODONTOLOGICAL SOCIETY.—At the annual meeting of this Society held January 11, 1869, the officers and Council for the current year were elected as follows :—*President :* H. J. Barrett, Esq. *Vice-Presidents :* (*Resident*) R. Hepburn, Esq.; Arnold Rogers, Esq.; John B. Fletcher, Esq.; (*Non-resident*) S. L. Rymer, Esq., Croydon; P. Orphoot, Esq., Edinburgh; George T. Parkinson, Esq., Bath. *Treasurer :* W. A. Harrison, Esq. *Librarian :* Alfred Coleman, Esq. *Honorary Secretaries :* (*Ordinary*) Edwin Sercombe, Esq.; Charles James Fox, Esq.; (*for Foreign Correspondence*) John Drew, Esq. *Councillors :* (*Resident*) G. Gregson, Esq.; C. Vasey, Esq.; Edwin Saunders, Esq.; A. Hockly, Esq.; J. Walker, Esq.; Isaac Sheffield, Esq.; J. W. Elliott, Esq.; Thomas A. Rogers, Esq.; W. G. Bennett, Esq.; (*Non-resident*) R. Ransom, Esq., St. Leonard's; H. Campion, Esq., Manchester; H. Morley, Esq., Derby; J. Steele, Esq., Croydon; J. S. Coles, Esq., Plymouth. Mr. Fox, the Honorary Secretary, exhibited some improvements in compressed nitrous oxide recently carried out at his suggestion by Messrs. Coxeter and Son. Mr. Hulme, the Honorary Curator, read a long and elaborate paper, which was warmly applauded, upon the formation of a Dental Museum.

AUSTRALIAN BEEF.—On Thursday last Dr. Richardson presided over a large meeting of working men and their wives who had been called together by Mr. Tallerman, of the Australian Meat Agency, to banquet on animal food imported from Victoria. The dishes, all of beef and mutton, were numerous, including pies, stewed beef, beef-steak puddings, mince collops, stuffed roll of mutton, brawn, German sausages, and potted meats. The Chairman, who was supported by Dr. Stallard, Dr. H. B. Paul, the Rev. Mr. Bewick, J. Bate, Esq., and several other gentlemen interested in the question of food, rose when the banquet was over, not to propose a toast, but to the more practical purpose of inviting a full and candid discussion of the merits of the foods of which the company had partaken. The request was responded to by several speakers, including Dr. Stallard, Mr. Warrener, and the Rev. Mr. Bewick, the expression of opinion being decidedly to the effect that the experiment, taking it altogether, was not only bold, but successful, that the nutritive quality of the meat was retained, and that improvement only was wanted in reudering it rather more agreeable to the palate—*i.e.*, in the removal of a certain degree of saltishness and smokiness which more or less prevailed. Mr. Tallerman replied in a speech which the Chairman characterised as evidencing courage, knowledge, good sense, and perfect candour, and a unanimous and hearty vote of thanks was accorded to Mr. Tallerman, with the hope for his entire success. The repast was excellently served, was spread with great neatness and taste, the speeches delivered were practical and good, and the meeting altogether was one of singular success.

MEDICAL BENEVOLENT FUND.—The annual general meeting of this charity was held on Tuesday, January 12, Dr. Lloyd Birkett being in the chair. In the Report of the Committee it was stated that 106 cases had been relieved during the year, the total amount thus expended being £855. In several instances grants from the fund had been made, conditional on a certain additional sum being raised by the friends of the applicant, with excellent results. The number of annuitants at present is twenty-seven, and it is hoped that the Committee will soon be able to add to these, as the candidates are numerous and many of them in most distressed circumstances. The committee and officers for the ensuing year were elected, and the thanks of the meeting were given to Dr. Broadbent, who resigned after holding the office of Honorary Secretary since 1864. The successor appointed to the somewhat arduous duties was Stamford Felce, Esq. In conclusion a vote of thanks to the Medical press was moved by T. H. Hills, Esq., and unanimously carried. Every disposition had been shown by the editors of the various journals to aid in bringing the charity before the Profession, and the principles on which it is conducted cannot fail to recommend it when they are known. All the work is done gratuitously by members of the Profession, and those who require the aid of the fund have only to show that they really are in need, and that their position is the result of misfortune, and not of misconduct, and assistance is at once given without canvassing.

PROPOSED INFIRMARY AT OLDHAM.—The *Oldham Chronicle* of the 16th inst., in speaking of the proposed Infirmary for that town, treats the subject with much fairness and ability. After stating the arguments *pro* and *con*, the writer says:—"On balancing the advantages and disadvantages, therefore, it has been argued that it is desirable to have a local Dispensary and Infirmary, and we by no means quarrel with the decision, provided that the project can be carried out so as to keep clear of the rates, and so as not to encourage unthrift amongst our industrial population on the one hand, or be a mere financial saving to benefit societies and large employers on the other." Further on are the following pertinent remarks, which present a singular contrast to some of the observations made at Birmingham the other day on the proposed

enlargement of the Queen's Hospital, in which "self-help" and "independence" were so frequently referred to. "It is no real boon to provide men, who are in a position to pay for what they require, with gratuitous Medical aid. The indiscriminate manner in which some subscribers to these institutions scatter their recommendations is a serious evil. It demoralises instead of assisting the recipients, by sapping the foundations of self-help and independence. At the same time, we fully admit that cases of the most painful nature frequently occur in the families of hardworking, careful, and provident men, where the assistance of such a charity is invaluable, and ought in no wise to be considered a badge of pauperism, or a disgrace of any kind. It is really to meet such cases that an infirmary becomes legitimately useful—cases on the confines, perhaps, of destitution, but not within the range of actual pauperism. To this class of cases, and to sudden injuries by accident, the operations of an infirmary ought to be limited, for as surely as its help is extended beyond this point, it will become a hindrance instead of a handmaiden to true charity. Sedulously also ought the promoters of the scheme to set their faces against every effort of large manufacturing establishments and benefit societies to make the infirmary the substitute for the Medical attendance which they guarantee to the families of men connected with them. The usefulness of an infirmary will be entirely lost if such a state of things be encouraged or permitted to exist."

NEW BOOKS, WITH SHORT CRITIQUES.

Quarterly Journal of Microscopical Science. Edited by E. Lankester, M.D., F.R.S., etc., and E. Ray Lankester, B.A. Oxon., F.R.M.S. New Series, No. XXXIII. London: John Churchill and Sons. Pp. 112.

*** It is perhaps to be regretted that there are now so many opponents to this the oldest and, as it has proved itself, the most useful Microscopical Journal. Still this opposition has only served to put the editors on their mettle, for we have in the present number some admirable contributions and many beautiful engravings. Dr. Beale contributes some observations on the minute anatomy of the papillæ of the frog's tongue; Mr. Wonfor, Brighton, writes on certain butterfly scales characteristic of sex; there are next splendid articles by C. J. Müller on Vaginicola valvata, and by Ernst Haeckel on Monera: Professor Allman writes on a Rhabdopleura, a new form of polyzoa, and Dr. Focke, of Bremen, on naked freshwater Radiolaria. There are, besides these, many other contributions of great merit, but we have specially cited the above on account of their intrinsic excellence.

The Monthly Microscopical Journal. Transactions of the Royal Microscopical Society, and Record of Histological Research at Home and Abroad. Edited by Henry Lawson, M.D., F.R.M.S., Assistant-Physician and Lecturer on Histology St. Mary's Hospital. No. 1. London: Hardwicke. Pp. 68.

*** From the rivalry which exists between our various microscopical journals, the public seem likely to reap the benefit of enhanced value in all. One regrets the distribution of power over three where one used to suffice, and cannot help suspecting that in time all must suffer. Still, in the mean time, there is no indication of weakness, and the first number of the new monthly journal starts off vigorously with a variety of excellent matter. But the preparation of such a work once a month is no ordinary task, and the editor will have cause for self-gratulation if he succeed in his arduous undertaking. The most important contents are on the minute papillæ of the frog's tongue, by Dr. Maddox; microscopic fungi in pathologic processes, by Dr. Thudichum; on two heliostats for photomicrography; the functions of deep-sea protozoa, by Dr. Wallich; and the formation of the blastoderm in some crustacea, by Van Beneden and Bessels.

The Handy Book of Anatomical Plates. Designed, under the direction of Professor Masse, by Corbié and Leveillé, with a descriptive text by Edward Bellamy, F.R.C.S. (Exam.), Demonstrator of Anatomy in Charing-cross Hospital, etc. Parts I. and II. London: Baillière.

*** This useful little atlas of human anatomy, which has long been known in its French dress, now appears in English, under the careful superintendence of Mr. Edward Bellamy. Each number contains fourteen plates, with descriptive letterpress, and costs half a crown. As the whole will be completed in eight monthly parts, a perfect anatomical atlas may be obtained at the small cost of twenty-one shillings. Of the plates themselves it is unnecessary to say anything; the names of the artists, the first anatomical draughtsmen in the world, are sufficient guarantee for their accuracy and artistic character. It is perhaps to be regretted that the publication of the work began with osteology, as certain of the other plates, if not more accurate, are at least more striking. As to the letterpress, Mr. Bellamy has taken care to render all French idioms into the appropriate English equivalents, so that the reader has no difficulty about terms which might otherwise prove puzzling.

Report of the Sanitary Inspection of Shipping within the District of the City of London. By Henry Letheby, M.B., M.A., Medical Officer of Health for the City of London, etc.

*** Dr. Letheby reports that in the small city district of the port of London during the last two years there had been 4223 visitations of ships and vessels, and on 149 occasions it had been found necessary to change their sanitary arrangements, chiefly by ventilating and cleaning the forecastles. Dr. Letheby justly complains of the inaction of the other authorities over the port in making no appointment similar to his own; for, as he says, the master of a vessel, on receiving any sanitary order, has only to let loose his moorings and drop down the river a few yards, when he is beyond the control of the City authorities.

NOTES, QUERIES, AND REPLIES.

Be that questioneth much shall learn much.—Bacon.

Mr. Couper's valuable paper on the Detection of Astigmatism shall appear as early as possible.

Dr. H. Kennedy's note on the Duration of Acute Rheumatism unluckily reached us too late for insertion this week. It shall appear in our next.

Our correspondent at the Camp at Colchester is thanked. An account of Professor Halford's experiments appeared in our journal of January 9. We are gratified to have obtained our correspondent's good opinion, and hope to continue to deserve it.

We have received a newspaper containing an account of the annual meeting of the Devonshire Hospital and Buxton Bath Charity. The report refers especially to the good results obtained in the Hospital from the reception of patients suffering from chronic rheumatism, who derive benefit from the air and waters of Buxton, together with the good and plentiful diet of the Hospital.

Counter Practice.—The following curious and instructive announcement is made in a circular relating to "The Chemists' and Druggists' Almanac and Pharmaceutical Text-book for 1869":—

"Some ten or twenty pages of this Text-book will be prepared on a design furnished expressly for this work, which will enable chemists and apothecaries to make private memoranda respecting the cases for which they prescribe. We have no wish to encourage the system of counter prescribing, but it is idle to deny that it exists, and in many parts of the country is undoubtedly a great benefit, especially to the poorer classes. Chemists, therefore, who do, to a large or small extent, prescribe at the counter, will do well to provide themselves with these, and thus preserve their notes of cases in a neat and convenient form."

Now, we would suggest, as counter practice is "a great benefit," that the "private memoranda" of the prescribing druggists should be published for the "benefit" of the public. Such a publication would doubtless give us many revelations of a remarkable kind; but we fear that the "enemy will not *write* a book."

THE SUBSCRIPTION FOR THE FAMILY OF THE LATE MR. JUMP.

The following additional subscription has been received:—Mr. Pretty, £1 1s.

SPEAR *v.* DOIDGE DEFENCE FUND.

The following subscriptions have been received:—

	£	s.	d.
W. Babbage, Esq., London	5	5	0
R. Willis, Esq., Horrabridge	5	5	0
J. H. Willis, Esq., Lewdown	5	5	0
E. Pethybridge, Esq., Launceston	5	5	0
Thompson and Wilson, Launceston	5	5	0
Dr. Littleton, Plymouth	1	1	0
H. Walmsley, Esq., Preston	1	1	0
— Preston, Esq.	1	1	0
T. Q. Conch, Esq., Bodmin	1	1	0
Dr. Sargent, Polyphant, Launceston	1	1	0
J. Crocker, Esq., Stogumber	1	1	0
W. P. Swain, Esq. Devonport	1	1	0
J. Somer, Esq., Broadclyst, Exeter	1	1	0
J. Gould, Esq., Hatherleigh	5	0	0
R. Kerswell, Esq., St. Germans	1	1	0
A. W. Owen, Esq., Hatherleigh	1	1	0
W. C. Northey, Esq., Tavistock	1	1	0
J. Pearse, Esq., Tavistock	1	1	0
R. Sleman, Esq., Tavistock	1	1	0
W. Brown, Esq., Callington	1	1	0
Dr. Dalby, H.M.S. *Implacable*	1	1	0
J. K. Cotton, Esq., Barnstaple	5	5	0
Thos. Boyle, Esq., New Quay	0	10	0
A. Kelly, Esq., Kelly	10	0	0
John Ware, Esq., Pen Avon House, Clifton	2	2	0
Mr. T. White, Launceston	0	10	0
A. Gaved, Esq., St. Mabyn, Cornwall	1	1	0
C. R. Prance, Esq., M.D., Plymouth	1	1	0
T. B. Harness, Esq., Tavistock	1	1	0
Anonymous	0	10	0
Thos. Good, Esq., Launceston	1	1	0
Thos. Langton, Esq., London	0	10	0
Wm. J. Square, Esq., Plymouth	1	1	0
R. J. Laity, Esq., Devonport	1	1	0
Dr. Bulteel, Plymouth	1	1	0
J. Thompson, Esq., M.D., Bideford	1	1	0
R. Griffin, Esq., Weymouth	0	5	0
W. P. Simpson, Esq., Weymouth	0	5	0
J. Harper, Esq., Barnstaple	1	1	0
A. Hingston, Liskeard	1	1	0
J. H. S. May, Esq., Plymouth	0	10	6
Rev. H. J. Morshead, Kelly	1	0	0
H. T. Woodd, Esq., Gunnislake	1	1	0
Walter A. Leslie, Esq., Bletchingly	0	2	6
F. Trimmer, Esq., Okehampton	1	1	0
Thos. Harper, Esq., Plymouth	0	10	6
T. S.	0	7	6
Stamford Pelce, Esq., M.D., Harrow-road, London	0	10	6
Messrs. Robbins and Co., 372, Oxford-st., London	1	1	0
Dr. Marshall, Clifton	0	5	0
Henry Greenway, Esq., Plymouth	3	3	0
H. Slade, Esq., R.N. (per *Lancet*)	1	1	0
R. T. Nichols, Esq., M.D., London	0	10	6
R. M. Watson, Esq., Stoke, Devonport	1	1	0
Dr. W. V. Lush, Weymouth	0	5	0
R. S. Jackson, Esq., Plymouth	0	10	6
G. Jackson, Esq., Plymouth	0	10	6
Mr. J. Jackman, Meadwell, Kelly	1	0	0
Rev. E. Rimell, Marystowe, Devon	1	1	0
Messrs. White & Dingley, solicitors, Launceston	15	15	0
C. E. Langford, Esq., Plymouth	1	1	0
Dr. Brown, Preston, Lancashire	1	1	0
Mr. Pretty	1	1	0

The Committee beg to tender their best thanks to the gentlemen whose names are in the foregoing list, not only for their subscriptions, but also for the deep sympathy for Mr. Doidge conveyed in their letters to the Treasurer and Secretary enclosing their subscriptions. They confidently hope that by continued exertions a much larger amount may yet be realised for this most desirable object.

Launceston, January.

cember.

son, the

Edwards the Ornithologist.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I find that one of your correspondents, in the *Medical Times and Gazette* of December 26, wishes to know something of Edwards the ornithologist. He will find some account of him in Beeton's "Dictionary of Universal Information," in Maunder's "Treasury of Biography," and a fuller account in the "Imperial Dictionary of Universal Biography."

I am, &c. H. S. Maysmor, M.D.

Cliftonville, Brighton, Sussex, Jan. 14.

On Loose Cartilage in the Knee-Joint.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Mr. Alfred Poland relates an interesting case of loose cartilage in the knee-joint in your journal of the 9th inst. In his remarks on the case he observes, "The open incision has still an advantage over the subcutaneous. If we look to facts, we must admit there are deaths and permanent stiffness recorded after open wounds in the knee-joint." So far as I am aware such results have not followed subcutaneous incision. If failures are recorded in the last-mentioned operation, I believe it would be in consequence of the means used by the operator, rather than of the principle itself. For a long time I have felt the necessity of modifying the subcutaneous method, and for this reason I showed some years ago to a meeting of the British Medical Association an instrument by the use of which the subcutaneous operation is much simplified, and the result successful.

Wimpole-street, January 19. I am, &c. Henry Dick.

Queries on Chloroform.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The following questions have been addressed to me by a foreign Professor of Surgery, and I should feel obliged by your answer:—

1. Where can a drawing and description of Dr. Snow's inhalation apparatus be obtained?

2. Is it a fact that the inhalation of more than 5 per cent. of chloroform to 100 of atmospheric air is dangerous?

3. Where is the report of the Chloroform Commission or Committee published?

4. What is the reason that, notwithstanding the registering apparatus similar to Dr. Snow's, chloroform is still empirically applied by pouring it on a cloth, and the patient still exposed to the danger of a fatal effect?

January 14. I am, &c. Medicus.

*** 1. In Snow's work on anæsthetics, edited by Richardson. London: Churchill and Sons. 1858. 2. The argument that over 5 per cent. of chloroform, diffused in air, is dangerous to inhale, was sustained, with much force, by Snow. But the view cannot be accepted as a proved fact without qualification. 3. In the *Medico-Chirurgical Transactions*. 4. Convenience is one reason. Another is that some of the first authorities on chloroform maintain that observance of the symptoms produced is the true and only method of avoiding danger, and that all apparatus are embarrassing in action and delusive in respect to safety.

COMMUNICATIONS have been received from—

Dr. Maysmor; Dr. Whitmore; Medicus; Mr. Bruce; Mr. C. J. Fox; Mr. C. Morrison; Mr. Oxley; Mr. John St. S. Wilders; A Subscriber; Dr. T. Hirschberg; Dr. W. Hargrave; Mr. Jonathan Hutchinson; Dr. Henry Carnley; Dr. Henry Dick; Mr. H. G. Liddell; Mr. E. Pocknell; Mr. P. Le Neve Foster; Dr. Alexander Gibb; Dr. Lobt Marsh; Dr. Jeffery Hardesty; Dr. W. D. Moore; Dr. Gervis; Mr. J. Z. Laurence; Dr. Wilks; Mr. W. Adams; Dr. Oppert; Mr. J. Chatto; Dr. E. J. Syson; Dr. Edwards Crisp; Dr. Henry Kennedy; Dr. Hughlings-Jackson; Mr. H. Smith; Dr. Tilbury Fox; Mr. Coupee; Inspector-General Gordon, C.B.

BOOKS RECEIVED—

Flint's Practice of Medicine—Ellis's Medical Formulary—Hager's Pharmacopœiæ Recentiores—McElroy on Organic Life.

NEWSPAPERS RECEIVED—

Yorkshire and Lincolnshire Advertiser—Buxton Advertiser—Saunders's Newsletter—Oldham Chronicle—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 16, 1869.

BIRTHS.

Births of Boys, 1179; Girls, 1091; Total, 2270.
Average of 10 corresponding weeks, 1858-67, 1993·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	741	749	1490
Average of the ten years 1858-67	827·1	837·2	1664·3
Average corrected to increased population	..	..	1830
Deaths of people above 90	1	..	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	1	1	14	1	5	6	1	...
North	618210	...	8	12	2	10	19	2	...
Central	378058	...	..	6	1	5	7	1	...
East	571158	...	3	17	3	11	17	3	...
South	773175	2	8	15	1	20	10	5	...
Total	2803989	3	20	64	8	51	59	man, L. –	

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, January 16, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1861.)	Births Registered during the week ending Jan. 16.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Jan. 16.	Temperature of Air Fahr. Highest, during the Week.	Temperature of Air Fahr. Lowest during the Week.	Temperature of Air Fahr. Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London Metropolis	3170754	49·7	2270	1462	1490	50·9	33·1	40·4	0·23	23
Bristol City	169423	36·1	120	76	*73	50·3	37·7	43·5	0·31	31
Birmingham Boro'	300848	46·1	248	175	140	51·5	35·6	41·3	0·37	37
Liverpool Boro'	566052	99·7	355	295	292	50·6	37·0	41·6	0·38	38
Manchester City	376892	82·7	269	210	*185	..	..	..	..	..
Salford Borough	119350	23·1	80	60	75	49·5	36·0	41·7	0·42	42
Sheffield Borough	239752	10·5	204	126	114	55·0	34·0	41·2	0·51	52
Bradford Borough	138522	21·0	68	71	63	..	..	..	..	..
Leeds Borough	253110	11·7	149	129	151	52·0	37·0	42·4	0·16	16
Hull Borough	126882	35·6	85	59	61	47·0	33·0	38·9	0·38	38
Nwestl-on-Tyne, do.	130503	24·5	111	69	71	48·0	32·0	39·1	0·09	9
Edinburgh City	178892	40·2	132	86	92	48·7	33·0	41·6	0·10	10
Glasgow City	458937	90·6	346	268	306	48·6	36·3	42·4	0·88	89
Dublin City and some suburbs	320762	32·0	145	158	148	56·8	39·6	46·9	1·07	108
Total of 14 large Towns	6545557	35·5	4582	3244	3261	54·8	32·0	41·7	0·41	41
					Week ending Jan. 9.	Week ending Jan. 9.				
	1863									
Vienna City	581000	...			303	..	39·2	..	..	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·894 in. The barometrical reading decreased from 30·34 in. at the beginning of the week to 29·47 in. on Friday, January 15. The general direction of the wind was S.E.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated ontside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

January 23. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Royal Institution, 3 p.m. Prof. Odling, "Hydrogen and its Analogues."

25. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London 8 p.m.: Casual Communications. 8½ p.m.: Mr. Wm. Adams, "On Subacute and Chronic Rheumatic Affections of the Joints, their Pathology and Treatment" (2nd Lettsomian Lecture).

26. *Tuesday.*

Operations at Guy's, 1½ p.m.: Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Ethnological Society, 8 p.m. Mr. Hyde Clarke, "On the Proto-Ethnic Condition of Asia Minor, the Chalybes, Idæi, Dactyli, etc., and their Relations with the Mythology of Ionia."

Royal Medical and Chirurgical Society, 8½ p.m. Adjourned Debate on Drs. Gull and Sutton's Paper "On Rheumatic Fever." And Papers by Mr. John Wood or by the late Dr. Hillier.

Royal Institution, 3 p.m. Mr. Westmacott, "Fine Art."

27. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.: Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Hunterian Society Special Council Meeting, 7 p.m.), 8 p.m. Dr. H. G. Sutton, "On the Difficulty of Diagnosing Rheumatic Fever from Pyæmia."

28. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Royal Institution, 3 p.m. Mr. Rupert Jones, "Entozoa."

29. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Royal Institution, 3 p.m. Mr. Ruskin, "Flamboyant Architecture of the Valley of the Somme."

NEW MUSTARD PLASTER.

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They have been adopted by the Administration of the Paris Hospitals, and by the Imperial Navy of France.

See THE LANCET, Feb. 22nd, 1868:—

"In the Mustard Leaves of Mr. Rigollot we have, it is believed, a reliable and very ready means of obtaining the epispastic effects of mustard."

See MEDICAL TIMES, Feb. 8th, 1868:—

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ORIGINAL LECTURES.

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

Fellow and late Examiner in Midwifery at the Royal College of Physicians; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital; Physician to the Royal Maternity Charity; Consulting-Physician to the East London Children's Hospital; Examiner in Midwifery at the Royal College of Surgeons.

Lecture XX.—Part II.

INDUCTION OF LABOUR CONTINUED.—DISCUSSION OF THE VARIOUS PROVOCATIVE AGENTS—DANGER OF THE DOUCHE—ACTION OF THE VARIOUS DILATORS.

We have divided the agents at our command for effecting delivery at will into the *provocative* and the *accelerative*. Let us first examine *the means we possess of provoking labour*. These are numerous. In a course of lectures designed to be practical rather than historical, it is not desirable to discuss them in detail. I have endeavoured to do this in a memoir "On the Indications and Operations for the Induction of Premature Labour, and for the Acceleration of Labour.(a) It may be stated as a general fact that all the means employed act by stimulating the spinal centre to exert itself in causing contraction of the uterus. Some of these agents act directly upon the spinal marrow, being carried thither in the blood. Such are ergot of rye, borax, cinnamon, and other drugs. Some evoke the energies of the diastaltic system by stimulating various peripheral nerves. Such are rectal injections, the vaginal douche, the colpeurynter, the carbonic-acid douche, probably the irritation of the breasts by sinapism and the air-pump, the cervical plug, the separation of the membranes, the placing a flexible bougie in the uterus, the intra-uterine injection, the evacuation of the liquor amnii, and galvanism.

The artificial dilatation of the cervix, the evacuation of the liquor amnii, and the intra-uterine injection act in a more complicated manner, and not simply through the diastaltic system. Some of the above agents are altogether uncertain and untrustworthy; some are in the highest degree dangerous; and some are both efficient and safe. Ergot, borax, cinnamon, and all other drugs may be dismissed on account of their uselessness or uncertainty. Ergot is not only uncertain, but when it acts it is liable to prove fatal to the child. Rectal injections may be harmless, but cannot be relied upon. Irritation of the breasts often fails, and it is liable to be followed by inflammation and abscess. The vaginal douche (Kiwisch's plan), which consists in playing a stream of water against the cervix uteri, is often tedious, and is not free from danger. It requires to be repeated at intervals during one, two, or more days. It is liable to cause congestion of the lower segment of the uterus. Serious shock, metritis, and death have followed.

The *intra-uterine douche*, sometimes described as Kiwisch's plan, was in reality introduced by Schweighäuser in 1825, and by Cohen in 1846.(b) It is known in Germany as Cohen's method. It was recommended by Schweighäuser as a better means of detaching the membranes than the use of the finger or sound adopted by Hamilton. Cohen thought the injected fluid acted, not by detaching the membranes, but through its being absorbed by the surface of the uterus. Professor Simpson (c) says that he at first used the vaginal douche of Kiwisch, but "he soon found it a simpler and more direct plan to introduce the end of the syringe through the uterine orifice;" he became convinced that the douche was liable to fail, unless the injected fluid accumulated and distended the vagina, so as to expand that canal and enter the os uteri, and that its efficiency was great in proportion to the extent to which it separated the membranes.

The *intra-uterine douche*, although more certain, is even more dangerous than the vaginal douche. Lazzati relates two fatal cases. Taurin saw, in January, 1860, in Dubois' clinique, such grave symptoms follow that death was apprehended. Salmon, of Chartres, related to the Académie de Médecine (July, 1862) a fatal case. Depaul communicated to the Parisian Surgical Society (1860) a case of death occurring suddenly from the uterine douche. Blot had to deplore a similar accident in the Clinique d'Accouchements. Tarnier relates two similar cases. Esterlé relates a case (*Annali Universali di Medicina*, March, 1858) in which serious obstruction to the cardiac circulation, ending in death, occurred. Two eminent Physicians have informed me of a fatal case which occurred within their knowledge in the neighbourhood of London. It may be asked—How is it that the injection of a stream of water into the vagina or uterus can prove fatal? The cases cited, and they are by no means all that are known, leave no doubt as to the fact. It seems to me that danger results in three ways. The first is by *shock*. If water is injected into the gravid uterus, it can only find room by stretching the tissues of the uterus. This sudden tension is the cause of shock. It has been supposed that some of the fluid finds its way through the Fallopian tubes into the peritoneum, causing shock. And the following case, related by Ulrich,(d) suggests another solution:—

"H. W., aged 29, was, at the end of her second pregnancy, carrying twins. Three vaginal douches were used to accelerate labour—the last one by a midwife. The temperature of the water was 30° R. The 'clysopompe' was used. Eight hours after the injections had been going on, the patient got up in bed, and instantly fell down senseless, and died in a minute at most, with convulsive respiration-movements and distortion of the face. Five minutes afterwards crepitation was felt on touching the body. Venesection was tried in the median vein. Only a few drops of blood came. On section, the cerebral sinuses were found full of dark fluid blood; the membranes not very hyperæmic; the brain normal. The heart was lying quite transversely, the left ventricle strongly contracted, the right ventricle quite flaccid; the coronary vessels contained a quantity of air-bubbles. The left heart contained scarcely any blood; the right had a little; it was quite frothy."

It is probable, then, that air may get into the uterine sinuses.

Dr. Simpson relates the following(e):—"He had been greatly alarmed by seeing a patient faint under an injection, probably from some of the fluid getting into the circulation. And he had seen two more alarming cases still where both the patients died. In both, only a few ounces of water were injected; and yet rupture of the uterus took place. The occurrence of the rupture was to be explained by the fact that the uterus, being already fully distended, could not admit the few ounces of fluid without being stretched and fissured to some extent; and during labour these slight fissures might easily be converted into fatal ruptures. In one case the patient died before labour was completed; in the other, in twelve hours after its termination."

Another objection by Dr. Simpson is, that in injecting water we have no control over the direction it will take in the uterine cavity, and that the placenta may be detached. Cohen's cases show that this accident may happen.

It is also apt to displace the head, and cause transverse presentation.

Of course no degree of efficiency could justify the use of a method fraught with such terrible danger. But the douche does not possess even the merit of certainty. It has been repeated many times during several days before labour ensued. Lazzati, having tried it in thirty-six cases, found that the number of injections required ranged from 1 to 12; the quantity used was about forty pints; the duration of the injections was from ten to fifteen minutes at a time; the temperature of the water 28° to 30° R. The time expended from the first injection to labour varied from one to fourteen days, the average being four days.

It has also been found that a large proportion of the children were lost.

The douche, therefore, whether vaginal or intra-uterine, ought to be absolutely condemned as a means of inducing labour. I think it necessary to repeat this emphatically, because, notwithstanding the warnings conveyed by many fatal catastrophes, I find that the use of the method is still taught and practised.

Mr. James, formerly Surgeon to the City of London Lying-in Hospital, described(f) a plan of intra-uterine injection which he had practised since 1848. He passes an elastic male catheter to the extent of four or five inches through the os, between the uterine wall and the membranes, and then injects about eight ounces of cold water. Of eight children, only two were still-born.

Recently (see *Obstetrical Transactions*, 1868) Professor Lazarewitch, of Charkoff, has explained, modified, and given more

(a) *Obstetrical Transactions*, 1862.
(b) *Neue Zeitschrift für Geburtskunde*, Band xxi.
(c) "Obstetric Memoirs and Contributions," vol. i., 1855.
(d) *Monatsschrift für Geburtskunde*, 1858.
(e) *Edinb. Med. Journal*, 1862.
(f) *Lancet*, 1861.

precision to this method. He proves by observations and experiments that the nearer to the fundus of the uterus the irritation acts the more speedy and sure is the result, and *vice versâ*. He contends that the frequent failure of the douche was due to the stream not being carried much beyond the os. He found that when the stream was carried up to the fundus one injection was commonly enough. He therefore introduces a tube as near to the fundus as possible, and then injects several ounces of water. The cases he relates (twelve in number) sufficiently establish his proposition that this method is more sure than other modes of applying the douche, but they are too few to prove that it is more safe. I feel very sure that if it be at all frequently adopted fatal catastrophes will ensue.

It may, moreover, be doubted whether, in cases managed according to the principle of James and Lazarewitch, the injection of water was not really superfluous. The passage of a catheter five or six inches into the uterus detaches the membranes along its course, and this, it has been seen, is usually quite enough to provoke labour. Why not, then, rest satisfied with that portion of the proceeding which is efficient and safe, and discard that which is superfluous and dangerous?

It is instructive to compare the histories of some cases of intra-uterine injection with those of accidental or intra-uterine hæmorrhage depending upon detachment of the placenta. Sudden severe pain in the abdomen at the seat of effusion, shivering, vomiting, collapse, are all observed in both cases. In the case of hæmorrhage these are certainly not in proportion to, or due alone to, the loss of blood. They seem to be the direct effect of injury to the uterus from sudden distension of fibre. The uterus will *grow* to keep pace with developmental stimulus of a body contained in it; but *it will not stretch* to accommodate several cubic inches of fluid suddenly thrust into it. Yet this is what it is called upon to do when water is injected. If the water escapes as fast as it enters, the shock may be avoided, but the operation is also liable to fail in inducing labour.

The injection of carbonic acid gas or even common air is more dangerous still than the injection of fluids. Scanzoni has related two fatal cases from the injection of carbonic acid, and Professor Simpson relates one where the patient died in a few minutes after the injection of common air.

Another agent is galvanism. Herder suggested this as a direct stimulant, to cause the uterus to expel its contents, in 1803. In 1844, Hörninger and Jacoby brought on labour by this agent. Dr. Radford showed the value of galvanism in labour and in controlling hæmorrhage. In 1853, I published (*Lancet* and *L'Union Médicale*) a memoir on this subject. I succeeded, in three cases, in inducing labour by it. But the method is tedious, and sometimes distressing to the patient; I have, therefore, abandoned it.

Another exciting or provoking agent consists in the insertion of some form of plug or expanding body in the os or cervix uteri. A great variety of contrivances for this purpose have been proposed and tried. It is unnecessary to describe the greater part of them. Those most in use are the sponge-tent, the laminaria-tent, and the elastic air or water dilator. There is no doubt labour can be induced by these agents. But it appears to me that their use to provoke labour is not based on a rational view of the physiological or clinical history of the process. I agree with Lazarewitch that irritants applied to the cervix are slow and uncertain. And I believe that in most cases some further means, such as rupturing the membranes, will be necessary. The laminaria-tent is, however, extremely useful in expediting the dilatation and evacuation of the uterus in some cases of abortion.

The method known as Professor Hamilton's, which consists in detaching, by means of the finger or sound, the membranes of the ovum from the lower segment of the uterus, has the recommendation of safety; but it is uncertain in its operation.

The success that commonly attends the plan of introducing a bougie into the uterus between the ovum and the uterine wall is perhaps evidence of the truth of Lazarewitch's proposition that irritation should be applied to the fundus. I find that the bougie should be passed at least six or seven inches through the os uteri in order to insure action. Probably, in many cases where it has failed, the bougie has only penetrated a short way. By passing the bougie gently, letting it worm its own way, as it were, it will naturally run between the membranes and the uterus where there is least resistance, turning round the edge of the placenta. Dr. Simpson says we may always avoid the placenta by ascertaining its position by the stethoscope.

Some use an elastic catheter supported in its stilet, and withdraw the stilet when the catheter is passed. The stilet converts the catheter into a rigid instrument, which is objectionable. An elastic bougie answers perfectly.

If a rigid instrument be used, there is great likelihood of rupturing the membranes; and although this may happen at some distance from the os uteri, premature escape of the liquor amnii may follow. The bougie owes part of its efficacy, no doubt, to the necessary detachment of the membranes from the uterus, but not all, since it is found that labour more surely supervenes if the bougie be left *in situ* for several hours.

I believe this method is now the one most generally adopted. No other method combines safety and certainty in an equal degree.

Puncturing the membranes as a provocative of labour is practised in two ways. The direct puncture at the point opposite the os uteri is probably the oldest method of inducing labour. It is one of the surest. The immediate effect of draining off the liquor amnii is to cause concentric collapse of the uterine walls, diminishing its cavity in adaptation to the diminished bulk of its contents. This involves some disturbance, probably in the utero-placental circulation. The parts of the fœtus come into contact with the uterine wall. Hence uterine contraction is promoted both by diastaltic excitation and by the impulse given by the concentric collapse.

In certain cases, the puncture of the membranes is the most convenient, as where the object is to lessen the bulk of the uterus, and to insure labour quickly. But it is open to the following objection:—It is an inversion of the natural order of parturient events. Some uterine action, lubrication, and expansion of the cervix ought to precede the evacuation of liquor amnii. If this order be not observed, the child is apt to be driven down upon the unyielding cervix, and the uterus, still contracting concentrically, compresses the child and kills it. And this is all the more likely to happen in premature labour from the greater liability to shoulder-presentation and descent of the funis.

This objection is to some extent obviated by a modification of this method. Hopkins(g) recommended to pass the sound some distance between the ovum and the uterine walls, and then to tap the amniotic sac at a point remote from the os. By this mode it was sought to provide for the *gradual* escape of the liquor amnii. This operation may be regarded as a compromise between the direct evacuation of the liquor amnii and Hamilton's method of detaching the membranes. It is an important improvement, and is still successfully adopted in this country and in Germany.

Vaginal Dilatation.—In 1842(h) Dr. Hüter described a method for exciting labour by placing a calf's bladder, smeared with oil of hyoscyamus, in the vagina, and distending it with warm water. This proceeding he repeated every day until labour set in, which usually happened in from three to seven days. Professor Braun(i) substituted a caoutchouc bladder, to which, from the purpose to which it was devoted, he gave the name of *colpeurynter*. Von Siebold, von Ritgen, Germann, Birnbaum, and others adopted this modification. Another form of vaginal dilator is the air-pessary of Gariel. The earlier trials with this instrument seem to have been especially unfortunate, since six mothers died out of fourteen; and Breit saw inflammation of the genitals and death caused by it. I do not think these dangers are inherent in the method, if carefully pursued; but the principle of vaginal dilatation and excitation is certainly untrustworthy.

Direct Cervical Dilatation.—For the last fifty years various contrivances for mechanically dilating the cervix have been tried. The idea of dilating the cervix by sponge-tents was announced by Brünninghausen in 1820. This was again advocated in 1841 by Scholler. It has since been in constant employment at home and abroad. From personal observation I am in a position to affirm that this method is very uncertain as to time. Symptoms like those of pyæmia have ensued from the absorption of the foul discharges caused. This accident may possibly be obviated by the use of tents charged with antiseptic agents.

Osiander, Von Busch, Krause, Jobert, Dr. Graham Weir, Rigby invented other forms of dilatatorium more or less resembling the urethral dilators which have lately come into use. These numerous contrivances attest the strength and prevalence of the opinion that it was desirable to possess a power of dilating the os and cervix uteri at will. The subject attracted the attention of Dr. Keiller, in Edinburgh, early in 1859, and in March of that year he, Dr. Graham Weir assisting, accelerated a labour which had been provoked by other means, by intro-

(g) "Accoucheur's Vade Mecum." Fourth edition. London. 1826.
(h) *Neue Zeitschrift für Geburtskunde*, 1843.
(i) *Zeitschrift für Wiener Aerzte*, 1851.

ducing within the os uteri the simple caoutchouc bag, and gently distending it.

The case of Mr. Jardine Murray (i) is the first published case I am acquainted with in which fluid pressure was used to dilate the uterus to accelerate labour. It was a case of placenta prævia. Mr. Murray first detached the placenta from the cervical zone after my method, then introduced a flattened air-pessary between the wall of the uterus and the presenting surface of the placenta, and inflated by means of a syringe.

Dr. Storer published a case in 1859 (k) in which he introduced "the uterine dilator" within the cavity of the uterus. He especially insisted that the dilatation "was *from above downwards.*" I saw inconveniences in the use of elastic bags expanding inside the uterus, even more serious than those attending the vaginal dilator or colpeurynter of Braun. The cervix it was that required dilating, and a bag expanding below it in the vagina, or above it in the uterus, could only act upon it indirectly, imperfectly, and uncertainly. Besides, the uterine dilator seemed unsafe; during dilatation it must distend, stretch the uterine walls at the risk of injury and shock, and it was very likely to displace the head from the os uteri.

I had long felt the desirability of bringing the further progress of labour with placenta prævia, after having arrested the hæmorrhage by detaching the placenta from the cervical zone, under more complete control. I had always strongly insisted upon the danger of forcibly dilating the cervix with the hand, and when I read Mr. Murray's case I was engaged in devising an elastic dilator capable of expanding the cervix with safety. The first form I devised was an elastic bag with a long tube mounted on a permanent flexible metal tube, having apertures at the end inside the bag. The metal tube served as a stem to introduce the bag inside the cervix, to keep it there, and to carry the water for distension. This form was modified and adopted by Tarnier, of Paris, and others, when I had abandoned it for the fiddle-shaped bags, which are now in general use. The constriction in the middle is seized by the cervix, whilst the two ends expanding serve to prevent the instrument from slipping up or down. This instrument imitates very closely the natural action of the bag of membranes. By its aid it is very possible in many cases to expand the cervix sufficiently to admit of delivery within an hour, although generally it is desirable to expend more time. I have completed delivery in five hours, in four hours, and even in one hour from the commencement of any proceedings. In many cases of placenta prævia where there was scarcely any cervical dilatation I have effected full dilatation in half an hour.

In the paper in the *Edinburgh Medical Journal* (1862) I proposed that the first step in the induction of labour should be the full dilatation of the cervix uteri, and after that to proceed to further provocation and acceleration. I related cases in which I began with dilating the cervix, afterwards rupturing the membranes, further dilating, and turning. I am now convinced that, although this rapid method is very feasible, and is even proper under some circumstances where prompt delivery is urgently indicated, it is desirable under ordinary conditions to prepare the uterus by some preliminary excitation.

It has been thought by some that pneumonia is a definite disease easily recognisable, and much the same in all patients. I very much doubt if any single name in nosology includes such a variety of conditions. It may be the most trivial or the most serious disease. There are a vast number of cases of real pneumonia which have only to be let alone to recover. There are others that no treatment can bring to a favourable termination. The whole character of the malady, its progress, and fatality, depend so much upon the age and strength of the patient, the extent and portion of lung affected, and the complications, that no statistics, unless more carefully framed than any hitherto published, can be accepted in evidence of the superiority of one plan of treatment over another. Simple sthenic pneumonia of a part of one lung in adults is rarely fatal, especially if it involve the lower lobe. With or without treatment, nay, in spite of bad treatment, it will recover in the vast majority of cases. Double pneumonia is much more dangerous, especially if the apices of the lungs are affected. Certain diseases seem to predispose to pneumonia, and to render it more fatal, more especially diseases of the kidneys, spleen, perhaps of the skin, malarial poisoning, and fevers.—*Dr. Davidson's Report of the Antananarivo Dispensary for* 1865-6.

(i) *Medical Times and Gazette*, 1859.

(k) *American Journal of Medical Science*, July, 1859.

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LECTURES ON

THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,

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LECTURE IV.

THE PART PLAYED BY GERMINAL MATTER IN THE FORMATION OF BONE—ORGANIC AND INORGANIC MATTER GERMINAL MATTER OF LACUNÆ—FORMATION OF CANALICULI—CANCELLI AND COMPACT TISSUE—LAMELLÆ AND PERFORATING FIBRES—CANALICULI NOT PROCESSES OF A CELL—MYELOID CELLS—PRIMARY AND SECONDARY BONE—GERMINAL MATTER OF BONE TRANSPLANTED—INFLAMMATION OF BONE.

CONTRACTILE TISSUES—CONTRACTILITY—UNSTRIPED MUSCLE—BLADDER OF FROG—ARTERIES—PREPARATIONS.

(*Continued from page* 58.)

Canaliculi not Processes of a Cell.—The view concerning the formation of lacunæ and canaliculi above given is very different from that generally taught, for most authorities look upon the lacunæ as *cells*, the canaliculi as *processes from them*, and the osseous tissue as an *intercellular substance*.

Virchow and many other observers consider that the canaliculi are formed as *offshoots* from the mass of germinal matter, and these offshoots are supposed to gradually bore their way through the calcified intercellular substance, and in some quite unexplained manner to meet the processes from adjacent cells and become continuous with them.

The appearances which have led Virchow and other observers to maintain that the lacunæ and canaliculi formed a cell with its offshoots can be satisfactorily explained without resorting to such a view, which is quite incompatible with many facts which have been conclusively demonstrated, while all attempts to show the supposed offshoots boring their way have signally failed. The stellate appearance of the nucleus, which was supposed to indicate the commencement of the shooting-out operation, has nothing whatever to do with the formation of the canaliculi; for the "offshoots" never correspond in number with the canaliculi. Virchow, however, talks of the processes which are to become the canaliculi "boring" their way "through the intercellular substance like the villi of the chorion do into the mucous membrane, and into the vessels of the uterus"—forgetting that the canaliculi exist before the formation of the so-called "intercellular substance" is complete, and that the end of each villus of the chorion is a mass of germinal matter, while nothing of the kind exists in the case of the canaliculi. The notion of cells shooting out processes which meet those of other cells is a most fanciful one, and totally unsupported by observation. The idea as applied to the bone-cells is purely hypothetical, and would never have been advanced had it not been first assumed that the lacuna with its canaliculi was a stellate cell. Such an assumption necessarily required new assumptions to support it, and so the unfortunate hypothesis of "boring processes" had to be invented.

Myeloid Cells.—Wherever cancellated structure is to be found, spiculæ and cylindrical processes and flattened plates, consisting of small masses of germinal matter separated by soft formed material, are found in considerable number. In some cases, too, structures of the same kind are met with beneath the periosteum as well as beneath the medullary membrane. These, in fact, represent the early stage of the formation of bone tissue, and ordinarily undergo ossification. In some forms of disease, however, they grow and multiply very rapidly without becoming condensed or calcified. They may accumulate so as to form a vast soft and rapidly increasing spongy tissue, which has been truly considered as closely allied to certain forms of cancer. The masses above described vary much in size and form in the healthy state, and from the circumstance of their being found in great number in close proximity with the marrow, they have been termed "myeloid cells." In no structure of this kind do we meet with anything to justify the idea that the lacunæ and canaliculi are stellate cells. Each mass is oval, and usually smooth on the surface.

Formation of Primary and Secondary Bone.

In the development of the bones of the skeleton of man and the higher vertebrata, the temporary cartilage is the seat of formation of a very imperfect and soft spongy kind of osseous tissue, which serves only a temporary purpose, and is entirely removed when the more permanent form of bone is produced. In the expanded portion of the cranial bones, however, ossification takes place without the previous formation of the temporary or primary bone, as it has been called. These bones are not preceded by temporary cartilage, but from the earliest period they appear to consist of fibrous tissue, like the periosteum of bones generally, and the fibres of this fibrous tissue become calcified, while its masses of germinal matter, or at least some of them, take part in the formation of the future lacunæ. The more lasting or secondary bone of the skeleton generally is formed at the deep layer of the fibrous periosteum (specimen 49; Figs. 7 to 10); and the process agrees very closely in its general characters with that which takes place in the ossification of the expanded portion of the cranial bones. Beneath the periosteum may be seen numerous large masses of germinal matter, for the most part of an oval form, which are the agents concerned in the production of the formed material of the future bone. And the changes which take place are closely analogous to those which have already been described as occurring in the frog's bone. It is, however, much more difficult to study them, in consequence of the firmer consistence of the tissue and the difficulty of obtaining sufficiently thin sections for examination by very high powers. Such sections are absolutely necessary for demonstrating the changes, which occur here on a scale very small as compared with that upon which they proceed in the cartilage of the frog.

Fig. 7.

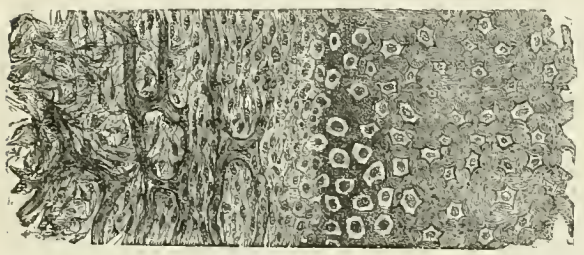

Fig. 7.—Very thin section of recently formed bone, *e*, with periosteum and its vessels, *a*, *b*, *c*. From the growing femur of the kitten one day old. *a*, connective tissue at the outer part of the periosteum; *b*, more compact portion of periosteum, with numerous capillary vessels; *c*, inner part of periosteum, formed material of bone, and masses of germinal matter, which are becoming surrounded with calcareous matter. At *e*, the process of ossification is nearly complete, but the lacunæ still remain of very large size. ×215.

Fig. 8.

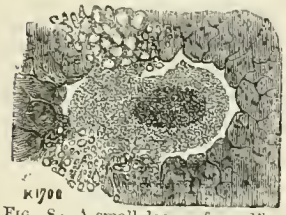

Fig. 8.—A small lacuna from Fig. 7 in process of formation. ×1700. In one part to the left, the canaliculi are being formed. The formation of those to the right of the figure is complete.

Fig. 9.

Fig. 9.—One-third of the inner part of the wall of a fully formed lacuna. From the frog. In the lower part of the drawing to the right is a portion of germinal matter. Above this is the formed material, with the globules of calcareous matter deposited so as to leave intervening channels, some of which remain as the canaliculi. ×1700.

Fig. 10.

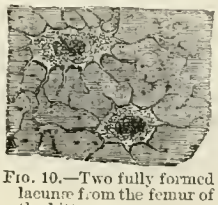

Fig. 10.—Two fully formed lacunæ from the femur of the kitten.

Germinal Matter of Bone Transplanted.—When periosteum is transplanted, as was done by M. Ollier, of Lyons, to various parts of the organism, the production of the bony tissue formed in the new situation is due to the growth and development of the masses of germinal matter which exist in such great number at the deep surface of this fibrous membrane. These grow and multiply, and produce formed material, just as if they had remained in the original seat of their development—a striking proof that the *kind* of tissue formed by germinal matter depends upon its *powers* rather than upon its position or the conditions to which it is exposed. In certain forms of bone cancer very minute portions of actively growing germinal matter are sometimes carried to the lungs, and grow and multiply and give rise to bone cancer in the pulmonary tissue, showing that the germinal matter possesses the peculiar property or power of giving rise to this particular tissue if supplied with pabulum.

Germinal Matter in Inflammation of Bone.—In inflammation of bone the masses of germinal matter of the lacunæ increase in size, and appropriate the formed material adjacent to them. Thus, a lacuna becomes much enlarged, and is found to contain several small spherical masses of germinal matter instead of one. The bone tissue between several lacunæ may be disintegrated and removed, and thus a space of considerable extent may be scooped out even in the compact tissue, and may be occupied by masses of germinal matter resulting from the division of those belonging to several lacunæ. This is one way in which an abscess in bone may originate.

Caries and necrosis of bone could not occur but for the germinal matter, and every kind of tumour and morbid growth of osseous tissue originates in the germinal or living matter of bone.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

NOTES ON THE PNEUMOTHORAX OCCURRING IN PHTHISIS.

By R. DOUGLAS POWELL, M.D., M.R.C.P.,
Assistant-Physician to the Hospital for Consumption, Brompton.

It is proposed, in the present communication, to deal only with pneumothorax occurring in cases of phthisis.

The tendency to pneumothorax in phthisis consists in the constant softening down of deposited tubercle and pneumonic infiltrations, which goes on extending around already formed cavities or leads to the formation of new ones; this tendency is most generally resisted by the thickening and induration of the pleura and lung tissue, and by the firm adhesions which take place between the pulmonary and costal pleuræ. In some cases, however, the softening process appears to advance too rapidly for the preservative morbid process to keep pace; the pleura becomes extensively undermined by the abrupt softening down of large masses of degenerated tubercle or pneumonia situated immediately under it; its vascular supply is interfered with; one or two small sloughs form, and on a slight exertion or cough one of these gives way, and pneumothorax results. There is also by no means the same tendency to the adhesive pleurisy in all cases of phthisis. There appears also to be another way in which the opening may be produced, not so common as that above mentioned, but which the writer of this paper has seen exemplified in two cases (Scoggins, *Medical Times and Gazette*, April, 1866, and Case 4)—viz., by the formation of a sinus leading from an old cavity, and precisely analogous to those seen in limbs leading from carious bone, or in the neighbourhood of chronic abscesses. A cavity in the lung, after enlarging in the ordinary way to a certain extent, ceases to do so, and becomes converted into a chronic abscess, with vascular walls yielding pus; sinuses not unfrequently extend from cavities of this kind to the pleural surface, and, in a few unfortunate cases, where adhesions have not been previously formed, may open into the pleural cavity. Most commonly there are strong adhesions over a cavity of this kind. In Case 4, above quoted, on separating some firm adhesions nearer the apex of the lung, another opening was found, and corresponding to it on the costal pleura was a deep erosion representing the blind end of a sinus which had bored through the two adherent layers of the pleura. In this way perforation from a cavity through the chest wall may take place.

In the case of Scoggins the cavity was a very old one, and the sinus opened through the posterior mediastinum into the

opposite pleural cavity by a well-defined aperture, the tissue having been, "as it were, bored through by a circular canal" (*loc. cit.*).

The symptoms of pneumothorax are often completely masked, while, on the other hand, all the symptoms, sudden pain, dyspnœa, shock, etc., may be produced by the acute active congestion of pneumonia, with superficial pleurisy supervening, in an advanced case of phthisis. The principal symptoms are—sudden acute pain, followed by great dyspnœa and shock; pulse frequent, feeble, small; respiration relatively more frequent than the pulse; usually aphonia; occasionally great hyperæsthesia of affected side; position often frequently changed—dorsal, with head raised and inclination to sound side (after effusion has taken place to affected side), or the patient may support himself on his knees and elbows, with slight inclination to left and right side alternately. M. Gaide(a) explains the instinctive adoption of this position as allowing the heart to rest on the thoracic wall so as not to compress the sound lung. Orthopnœa, with slight inclination forwards, is a common position.

Physical Signs.—These simply require enumeration, with the exception of two or three. Bulging of the affected side, with raising of the shoulder; effaced intercostal spaces; immobility or impaired mobility of the side. Displacement of heart towards the opposite side. Hyper-resonance on percussion to true tympanitic note. Respiration absent or very feeble, or amphoric at one or more points of the chest, with metallic whisper and metallic echo on cough (true pectoriloquy is rarely heard); metallic tinkling and vocal fremitus absent or diminished. Later, when effusion has taken place, there is dulness below, hyper-resonance above, the two shifting with position of the patient, splash on succussion, intercostal fluctuation, etc. This fluctuation gives to the finger, on percussion at the line of juncture of the air and fluid, a peculiar thrilling sensation.

Of all these signs the three important ones for diagnosis are—hyper-resonance; absence of, or feeble, respiration sounds, or amphoric breathing; displacement of heart.

These three signs are the most constant, and, being present, render the diagnosis certain. They can also be observed without distressing the patient unnecessarily during the period of shock. Laennec only mentions displacement of heart casually and as a possibility. M. Gaide was the first to insist upon it as a clinical fact. It is a fact of the first importance, and requires a few more words for its explanation. The commonly received doctrine that the heart is displaced towards the opposite side by the pressure of the escaped air is not wholly true, for the displacement is instantaneous. This was first noticed as a clinical fact by the writer in 1865, in a case seen within two or three minutes of seizure; the explanation was not then, however, apparent. The true mode of production seems to be the following:—The mediastinum (including the heart) is the only boundary common to the two thoracic cavities, which is flaccid, and admits of a certain degree of passive movement to either side. It is maintained in position (and with it the heart) by the opposing *elastic tensions* (b) of the two lungs, each tending to draw it (the mediastinum) to its own side. Now, if the elastic tension of one lung be destroyed by the admission of air from without into the pleural cavity, causing the lung to collapse, the elasticity of the other lung has no opposing force, and immediately draws the mediastinum, and with it the heart, to its own side. Moreover, when an inspiratory effort is made, it is impossible for the elasticity of the sound lung to be overcome, and, consequently, for its expansion to commence, until the mediastinum has become sufficiently convex to be *stretched*, and thus to form a resisting wall. In this way and to this extent the displacement of the heart is immediately and necessarily consequent upon the admission of air into the pleura. Beyond this it may be increased by the direct pressure of subsequent accumulation of air.

The following experiments were made to test the accuracy of this view:—

April 16, 1868.—Subject, a young woman in the post-mortem room, Middlesex Hospital. A skin flap was raised from the median line on the left side, and a long needle thrust vertically through the pericardium into the heart, at the fourth interspace, left border of sternum. The pleura was then opened by an incision at one of the left interspaces; a faint sucking noise was heard, and the needle was immediately deflected to the left. The arms were then drawn upwards equally, making a movement of inspiration, and the deflection of the needle was increased. On opening the chest no adhesions were found; there were some pyæmic deposits in lungs, and slight consolidation of both bases. This experiment was made in the presence and with the kind assistance of Mr. Henry Arnott. The diagrams below will illustrate this and the following experiment:—

Diagram of Section of Chest viewed from above.

Fig. 1.

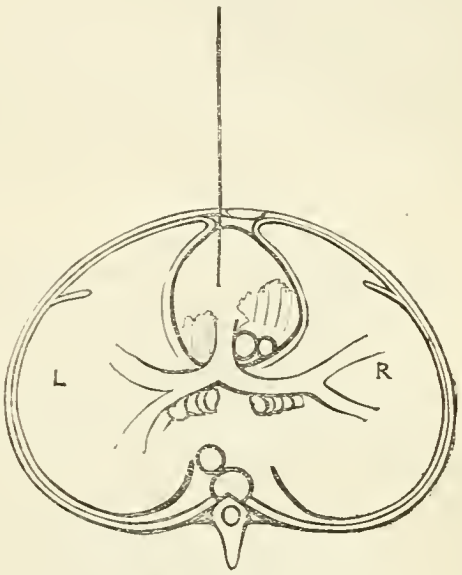

Fig. 1.—Before admitting air into left pleura.

Fig. 2.

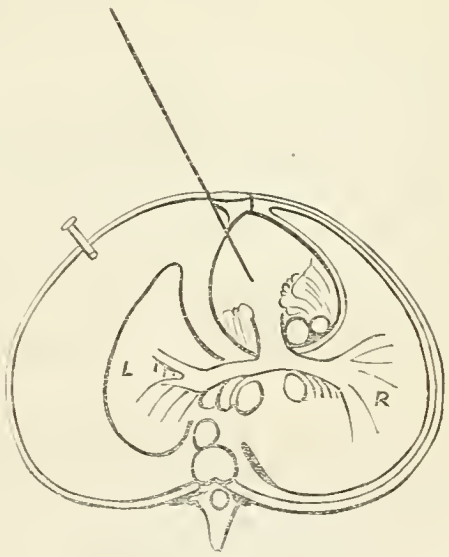

Fig. 2.—After entry of air into left pleura.

April 23.—A moderate-sized dog was put under chloroform, and a skin flap of a few inches raised from præcordial region; the muscles were then divided by a circular incision of about two inches diameter. A long needle was then thrust into the heart at the left border of the sternum; it vibrated with cardiac pulsation, and had a slight inclination to the left of the vertical line. At a moment when the respirations were regular and uniform, an opening was made into the left pleura through one of the lateral interspaces; the air was freely sucked in, and the needle instantly deflected strongly to the left. The total deflection was about 35° from the vertical line, the accidental deflection at first being perhaps 15°. This experiment was made with the kind assistance of Mr. Alexander Bruce, M.S. The deflection

(a) "Obs. à l'Hôpital St. Antoine," *Archives Gén. de Médecine*, t. xvii. 1828.

(b) This tension was found by Dr. Salter, in some experiments on the dog, to be equal to from twelve to eighteen inches of water. (Lecture at the College of Physicians, 1865.)

of the needle was, of course, in both these cases, an index of the displacement of the heart.

The heart may beat so feebly as to be felt only with great difficulty, in which case the displaced cardiac dulness may be detected, or its position ascertained, by the stethoscope. In one case of Dr. Quain's, at the Brompton Hospital, there was no cardiac dulness to be found, nor any impulse, and only with difficulty could any sound be detected. In this exceptional case an opening in the pericardium allowed the air to escape from the pleura into it, and the heart was compressed backwards. Concerning the respiration a few words are necessary. If there be well-marked amphoric respiration, the communication between the pleura and bronchial tubes will be free, and the opening patent. If there be no amphoric respiration, or complete absence of respiration, the bronchial tubes communicating with the cavity are very small, or the aperture in the pleura is very valvular, the prognosis derived from this negative sign being very grave, and confirmed by the steadily increasing dyspnœa.

(To be continued.)

ON A NEW AND SIMPLE MEANS OF DETECTING MIXED ASTIGMATISM BY THE OPHTHALMOSCOPE.

By JOHN COUPER,

Surgeon to the London Hospital, and Senior Assistant-Surgeon to the Royal London Ophthalmic Hospital, Moorfields.

The test I am about to describe renders the detection of the mixed form of regular astigmatism (*i.e.*, that in which an eye presents a myopic conjoined with a hypermetropic meridian) by means of the ophthalmoscope as certain and easy as that of either myopia or hypermetropia. In fact, the test is the same in principle for all three conditions. An eye is known to be myopic if an inverted image of its fundus comes into view when a simple concave mirror and no lens is used for its illumination. An eye is known to be hypermetropic when the details of its fundus are seen as an erect image under like conditions of illumination. Of course I here assume what generally happens—viz., that in viewing a near object the observer is not careful to relax his accommodation.

It lately occurred to me, while examining some cases of mixed astigmatism with the mirror alone, that both an inverted and an erect image ought to be alternately visible, according as the fundus is viewed through the meridian of greatest or that of least curvature of the media. I selected for examination a boy of 13, who has myopia $\frac{1}{7}$ in the vertical meridian, and absolute hypermetropia $\frac{1}{18}$ in the horizontal meridian, and after fully dilating the pupil by atropine, endeavonred to analyse the eye, and, as it were, separate one section of the media from another by means of a diaphragm furnished with a narrow slit. Through this slit, held alternately in the plane of the least and of the greatest curvature of the media, I sought to illuminate the fundus and obtain an alternately erect and inverted image of it, but I failed. Too little light was admitted by the slit, and there was a difficulty in keeping it opposite the pupil.

On resuming the examination without the slit, I saw the erect image plainly when vertical branches of the retinal vessels were made (by appropriate movements of the observed eye) to sweep horizontally across the area of the pupil. The reason of this was obvious. Rays diverging in a horizontal plane from any point in these vessels are refracted by the horizontal section of the media—the meridian of least curvature in this instance—and, holding, as they do, a slightly divergent course after leaving the cornea, are in a condition to come to a focus on the observer's retina.

This erect image, however, underwent a peculiar distortion, as though a vessel changed the direction of its curve in sweeping across the field. Thus it mattered not whether the vessel was seen at the extreme right or the extreme left of the pupil; it always presented a concave bend towards the centre of the pupil. I was soon convinced that this confusion of the image was due to the fact that, while the straight vertical part of the vessel was viewed erect, the curved part was seen inverted, and therefore with an apparent motion opposite to that of the other, because seen by means of rays diverging in the vertical plane and refracted by the meridian of greatest curvature of the media.

Reasoning from this, I argued that I ought to see an inverted image of horizontal retinal vessels by making their image sweep in a vertical direction through the pupillary area; and, on putting the matter to the test, I did, in fact, get the inverted picture with the utmost distinctness. The vessels were now seen through the meridian of greatest curvature of the media, and the rays from them were refracted so as to form an inverted aërial image at a distance of eighteen inches from the eye. In order to view this image, it was of course necessary to place it beyond my near point of distinct vision. In this instance, an interval of two feet two or three inches between my eye and that under examination sufficed.

I had arrived, therefore, at this result, that, taking the precaution to recede sufficiently to make sure of seeing an inverted image, should there be one, and then simply causing the observed eye to follow gentle movements of my forefinger, first in a horizontal and then in a vertical direction, the erect and inverted images successively came into view without any change in my distance from the patient, and without any change in the adjustment of my eye.

I now turned to the other eye, which was not under atropine, to learn if both images were as readily seen through an undilated pupil. They were as visible as ever; but it was now necessary, on account of the lad's perfect power of accommodation, to have his eye adjusted for a distant stationary object, and to give rise to apparent motions of the ophthalmoscopic image by movements of my own head.

I had soon the opportunity of repeating these observations on an eye with hypermetropia $\frac{1}{12}$th absolute in the horizontal plane, and myopia one-twentieth in the vertical plane. Here the inverted image being formed at a distance of twenty inches, I had to recede about thirty or thirty-two inches from the eye in order to see both images. Even at this distance both were readily distinguishable, and I have no doubt that as small a degree of mixed astigmatism as of hypermetropia or myopia can be thus recognised, and I am satisfied that the ophthalmoscopic test will prove as practically useful in the first as it has proved in the two latter.

I wish now to touch very briefly on a peculiarity of form in eyes affected with mixed astigmatism. It is well known that the cornea frequently appears, even to the naked eye, to have a greater dimension from margin to margin in the direction of the meridian of its least curvature than in that of its greatest in astigmatic eyes. This feature is especially noticeable in the mixed variety of the disease, and it is associated with a yet greater deformity. The whole globe evidently departs from the spherical form. It exhibits a flatter surface and larger curve at the upper and lower equatorial regions than at the outer equatorial part. The vertical diameter of the globe is less than the horizontal, and the form of the eye approximates to an ellipse more than to a sphere. The name elliptiform might be applied to this type of globe just as the elongated myopic globe is called bathymorphic, and the short hypermetropic globe plathymorphic.

After my observations were made, I learned that two competent ophthalmoscopists had previously examined the first-mentioned case with the mirror, and had come to opposite conclusions as to the state of the refraction—one asserting that he saw the fundus as an inverted image, the other maintaining the image to be erect. Both were right: they merely happened to view the fundus through opposite meridians of the media.

In conclusion, I may notice shortly the other modes of detecting astigmatism by the ophthalmoscope.

Knapp and Schweigger have shown that the disc of the optic nerve assumes an ellipsoidal form, and appears elongated first in the meridian of greatest, and then in that of least, curvature when alternately viewed as an erect and an inverted picture. The higher degrees of all forms of regular astigmatism may be thus recognised, but care is required to hold the correcting lens of the ophthalmoscope parallel with the plane of the pupil, lest by its obliquity it superadd an astigmatic element of its own to that of the media.

Donders, too, has pointed out that retinal vessels running horizontally cannot be distinctly seen simultaneously with those that have a vertical course in an astigmatic eye, since they are viewed through sections of the media that refract differently. To see each distinctly the observer must accommodate by turns for the meridians of greatest and of least curvature. Considerable expertness in the use of the ophthalmoscope is needed for this, and the same care as in Knapp's and Schweigger's test is needed to avoid holding the correcting lens obliquely.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ROYAL FREE HOSPITAL.

CASES OF SALIVARY FISTULA SUCCESSFULLY TREATED BY OPERATION.

(Under the care of Mr. JOHN D. HILL.)

Salivary fistula is perhaps one of the most troublesome and intractable affections requiring Surgical aid, and this is explained by a consideration of the physiological processes connected with the structures implicated in its course.

In some instances, however, a successful issue may be attained in a comparatively short period of time, provided the patient be constantly under the Surgeon's eye. The following cases fairly illustrate the subject, and it may be well to record them in the order in which they have occurred under Mr. Hill's observation:—

Case I. represents inflammation of cheek and parotid gland followed by occlusion of duct, abscess, and fistula.

Case II., a punctured wound of the infra-maxillary region, wounding the salivary duct, and leading to fistula.

Case III., a salivary calculus causing obstruction of Wharton's duct and inflammation, abscess, and fistula below the jaw.

Case IV., suicidal wound below jaw, severing submaxillary duct and leading to fistula.

The cause of this affection being understood, the first step in Surgical treatment is to establish a free communication between the gland and the cavity of the mouth; this having been accomplished, the fistula is then to be closed.

Mr. Hill has adopted the following operation:—The patient having been placed upon a sofa, a very fine silver or gold probe is carefully and gently insinuated along the whole track of the fistula so far as it will pass. The forefinger is then introduced into the mouth to feel for the bulb of the probe, which is generally well covered with soft parts: if this can be felt, then a curved or straight needle (threaded) is guided along the probe and then thrust through the mucous membrane into the mouth. One end of the thread is now drawn out of the mouth, while the needle is withdrawn with the other end; the probe being returned, the needle is again passed along it, and thrust through at another point one-third of an inch from the first, and, if possible, nearer the gland. The probe is now withdrawn, and the ends of the thread, which are both in the mouth, are tied together, forming a small seton. Mr. Hill has sometimes had occasion to adopt certain modifications in the steps of this operation, as in Case No. 1, where the fistulous channel was extremely long and oblique; here he passed the needle through the entire thickness of the cheek, exactly opposite the bulb of the probe; and again, in Case No. 2, where the fistula was extremely tortuous, he succeeded in passing the thread from within, taking the bulb of the probe as his guide.

The seton is retained for a variable time, but as soon as all irritation consequent on the first stage of the operation has subsided, the edges of the fistula are pared with a fine needle-pointed knife, then carefully drawn into direct apposition, and, lastly, kept covered with collodion for three days. This proceeding may have to be repeated several times at intervals; but if great care has been taken, and no severe inflammation has ensued, at the end of a fortnight or less, the fistulous aperture will be found, if not quite closed, much reduced in size, and may, in the latter case, be touched with a fine cautery to complete the cure.

Case 1.—Mary P., aged 28 (a strumous girl), attended the Hospital as an out-patient August 6, 1860, with a salivary fistula below the lobe of the left ear. Six months previously she had suffered from a severe attack of inflammation of the cheek and parotid gland, which terminated in an abscess; this burst at the spot where the fistulous opening now exists. Since this attack she has been constantly annoyed by the salivary flow during mastication, and complains of a sense of dryness of that side of the mouth, and indigestion after meals. A good-sized probe was introduced along the sinus, which was very oblique, and about an inch and a half in length; the needle was then passed through the cheek on the point of the probe, and, to insure the track of the fistula being opened, the probe was passed through the needle-hole previous to the second thrust, and the operation completed as before described.

September 20.— Fourteen days later the edges of the fistula were pared.

30th.—Fistula much reduced in size, and will only admit a fine piece of wire; salivary flow is diminished; patient is more comfortable, and the mouth feels natural, the sensation of dryness being nearly absent.

October 10.—Still a small hole remains. Applied a fine steel wire cautery.

16th.—Fistula healed; seton removed.

November 30.—Well. On opening the month two small puncta are seen, not unlike the puncta lachrymalia (but larger). These show the openings of the artificial communicating duct.

Case 2.—John W., aged 21, carpenter, attended the Hospital as an out-patient, February 16, 1861, with a submaxillary wound. It appears that he had been "larking with one of his mates," and by some accident fell upon the point of a file which he had in his hand. When brought in he was very faint, but had not lost much blood. The forefinger was inserted into the wound, which was ragged, and leading in a direction backwards, upwards, and a little to the left of the raphe. The floor of the mouth had escaped penetration. The wound was closed in the usual way, and he attended the Hospital three or four times a week. A good deal of inflammation and suppuration ensued, and the saliva oozed out of the wound every time he took food, and he said his mouth felt dryish. After eight weeks the wound would only admit a large probe. He was allowed another month to give it a fair chance of filling up, but to no purpose.

May 20.—The fistula has made no progress; it is now S-shaped. The probe having been bent accordingly and inserted, a curved needle was passed through the floor of the mouth on to its point. It was then brought out three-quarters of an inch nearer to the gland, when the seton was secured. After sixteen days all irritation had subsided; therefore on June 5 the edges of the fistula were pared and brought together.

June 12.—Aperture is much smaller, and but a very fine pin-hole is seen, which now and then permits the saliva to trickle away. Applied wire cautery.

25th.—Is still discharging. Applied cautery again.

July 10.—Is now quite healed. Seton is removed.

August 10.—Continues well. The puncta can be seen, as in the last case.

Case 3.—Jane K., aged 42, attended the Hospital as an out-patient January 18, 1863, with a salivary fistula opening beneath the lower jaw. For some months she had suffered from shooting pains beneath the tongue, and about three months ago was attacked with severe pain and swelling about the tongue and lower jaw. After a week's severe suffering an abscess burst beneath the chin, a little to the right side of the raphé, from which the saliva had constantly escaped since that time. Her mouth feels dry and uncomfortable, and she is much annoyed at meal times by the salivary flow down her neck. On introducing a probe the sinus is found to course backwards and upwards, the external opening being half an inch to the right of the symphyses of the jaw. At the extremity (inner) of the fistula the probe struck against a calculus, which was removed by making a small incision on the floor of the mouth. The wound healed up in a few days, but the fistula made no progress.

February 15.—The probe was now introduced into the sinus, and a needle guided by it through the floor of the mouth to fix the seton.

March 3.—All inflammation is now past—the edges of the fistula were therefore pared and brought together.

16th.—No saliva has escaped since the operation. Seton is removed.

25th.—Is now quite well, and the puncta can be seen very distinctly.

Case 4.—William J., aged 23, on May 10, 1867, quarrelled with his sweetheart, and in a fit of passion thrust a penknife into his throat half an inch in front of, and above, the os hyoides. On attending the Hospital the wound, which was a very small one, was probed, and the direction seemed to be upwards and forwards; the probe could be felt by the finger in the mouth, but the floor had escaped penetration. The wound was closed in the usual way, and on the following morning inflammation had set in pretty briskly; this, however, subsided in the course of a week, when it was found that the saliva escaped through the wound in considerable quantity and particularly at meals; he also complained of a sense of dryness in his mouth, and heartburn. At the expiration of two months (July 12), as the fistula would not heal, Mr. Hill passed a probe along its track, and then guided a straight needle armed with thick silk into the mouth, and secured it as in the other cases.

July 24.—All acute symptoms have now subsided, and the fistulous aperture is somewhat smaller; the edges of it were now pared, and the wound closed.

30th.—The wound is all but healed. Now and then a drop or two of saliva escape. Applied cautery.

August 15.—Still a hole, but very small. Applied cautery wire again.

31st.—Is at last healed up. Seton was removed to-day.

September 29.—Continues well. Puncta very well shown.

SAMARITAN HOSPITAL.

PARTIAL LUXATION OF THE ARTICULATIONS OF THE PELVIS—RECOVERY.

(Under the care of Dr. ROUTH.)

Rebecca P., aged 20, resident of the country, was admitted under Dr. Routh, at the Samaritan Hospital, July 6, 1867, supposed to be labouring under uterine disease. About five months ago was first seized with pains in the bowels, and found she could not walk without difficulty. This gradually increased till she could not walk at all without assistance, and then only very imperfectly, and was consequently obliged to pass most of her time sitting on a chair. Sometimes she felt her hips "crack" as she walked, but nothing more. She does not remember that any sudden effort, long walk, or fall preceded her illness which she could in any way regard as a cause. She had not lifted any unusually heavy weight, except perhaps when occasionally nursing her parents, both of whom were fat and heavy, and whom she may have occasionally lifted. But she never noticed anything as having occurred on any one of these occasions. There was slight backache. The external pudenda were very sensitive, and more or less leucorrhœa had persisted for five months. The cervix was somewhat conical. In other respects the functions were regular; nor was she aware there was anything wrong in these parts.

On Admission.—The patient being placed in the erect position, and made to walk—which she did with the greatest difficulty, and chiefly by sliding one foot before the other—Dr. Routh placed one hand on the pubes and the other over the sacrum, when a distinct crack, as of two irregular bones rubbing upon each other, was heard, and felt with the hand at the pubes, and also posteriorly at the left sacro-iliac synchondrosis. The nature of the case thus being obvious, a tight bandage was at once pinned round her. She now could hold herself up without assistance, and walked with comparative ease. The diagnosis was subsequently confirmed by Dr. Savage. By the third day she could walk without pain with the bandage on.

A regular bandage of canvas, fastening on by strong buckles, was made for her by Mr. Russell, and she left the Hospital for a convalescent institution July 13.

She returned about a month ago (December, 1868), and had grown quite stout, strong, and ruddy, so much so that a much larger bandage was required. She preferred keeping this on, although she could walk without it. The articulations appeared now to be fixed.

Prevention of Pain from Blisters.—M. Bricheteau states that he has found the hypodermical injection of from 5 to 10 drops of a solution of hydrochlorate of morphia (1 part to 50 of water), executed immediately before applying the blister, a most excellent procedure. When the blister is good it begins to rise in from three to five hours, and, as the effect of the morphia lasts for six or eight hours, all pain is prevented during the process. In some persons, whose skins resist a blister more than ordinarily, the injection may be delayed for an hour after its application. By this means, when a blister is applied at night, the patient, as far as it is concerned, may still enjoy his night's rest; and sensitive persons are saved much suffering, as, for example, in the case of the application of blisters to the hypogastric region in young women. The dressing a blister also requires attention. No greasy substance should be applied; but having left as much of the raised epidermis intact as possible, this should be emptied of its serum by a broad clip with scissors, and, after it has sunk down again on the dermis, a thick layer of wadding should be applied. This is to be left on for two days, no other dressing being required. Cicatrisation may also be hastened by the following contrivance:—Cut a good-sized hole in the centre of the blister before applying it, and this central untouched portion greatly expedites the healing of the denuded zone which surrounds it.—*Bull. de Thérap.*, December 15.

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SATURDAY, JANUARY 30, 1869.

THE INDIAN MEDICAL SERVICE.

The stream of candidates for this service is likely to be enlarged now that the Army Medical Department is temporarily closed against them. There is no doubt that in India that service presents many advantages over the British as regards pay and likelihood of obtaining lucrative appointments as Civil Surgeons, Superintendents of Vaccination, Professorships in the various Medical Colleges at the Presidencies or large up-country stations, etc. The new furlough rules lately introduced also render the expatriation of all ranks less complete than it used to be. Besides, the Medical and Military Retiring Funds put it in the power of the Indian Medical officer to make an earlier and much more ample provision for his family than any within the reach of the Medical officer of the British Army. But with all these advantages there are certain drawbacks and causes of jealousy and contention, as to the nature and origin of which those only who are practically acquainted with the two services can fairly judge. A recent writer in the *Madras Times* goes at full length into some of the grievances of the Indian Medical Service, and complains that—

"In the higher ranks the havoc has been greater still. Five of the administrative appointments (out of twelve) have been either suppressed or transferred to the British Medical Service, whose officers of inspectorial rank are vulgarly supposed to find it as difficult to discover anything to do, as the remaining Indian officials find it impossible to execute to their own satisfaction the exaggerated work imposed upon them. Owing to this paucity of the higher and better paid appointments, combined with the absurd and new-fangled rule which holds out a rich premium, in the shape of increased pension, upon retention of office for five years, promotion is, and must remain, uttterly stagnant. Loss of Professional and social status is a more delicate matter to handle; but in reviewing the present position of our Medical Service we cannot omit to treat upon it briefly. The exclusion of Medical officers of the Indian Army from all positions in which Europeans are the primary care cannot fail to depress the former in the estimation of an 'Anglo-Saxon' community. . . . Again, the free admission to its ranks of recruits from the subordinate grades—and infusion both of East Indians and natives is more likely to increase than to diminish as time goes on—cannot fail to operate in the same direction."

All these tears are simply evidence that the vested interests of the officers of the Indian Medical Department were too precious to be distributed among those of another service, the only counterbalancing advantages of which are the Medical care and superintendence of European troops in the East Indies, with the chance of an occasional tour of service, on reduced pay, with the same troops in the West Indies, or some other equally unattractive climate.

It is by no means unlikely that it may be found eventually necessary to revert to the old system of a local European army for India, and then the Medical officers of the Indian service can enjoy all the social status and prestige of which the writer in the *Madras Times* complains of their having been deprived by not having their share of the Medical care of the "Anglo-Saxon." Meanwhile, however, we are bound to state that the number of gentlemen of native Indian birth who are being admitted into the Indian service bids fair, in course of time, to make it purely local, and so in a great measure to lower, if not the standard of efficiency, at least the general character of the service and its attractions for Englishmen. To Lord Halifax (late Sir Charles Wood) belongs the responsibility of having brought about this result, which, rightly or wrongly, will make the Indian Medical Service far from popular. We have been informed that the proportion of Eurasians in the batch of candidates for next examination is much larger than usual—fully one-half.

THE PRACTITIONER OF THE FUTURE.

(*Concluded from page* 95.)

The Medical Profession contains in its ranks a large number of ill-remunerated and ill-appreciated members, and it ought to be, as no doubt it is, the desire of the governing and teaching bodies so to regulate the course of Medical study that the future Practitioner may acquire the best status and emolument possible. But, with a common end in view, they differ as to the means; some are for going back, for dropping science, and giving what is called a practical tone to the curriculum; others are for pushing on, and giving an increased preponderance to science.

The former party grumbles to itself thus:—The Medical Profession, they say, has suffered, and is still suffering, from a pernicious process of levelling upwards. Medical men have made a serious mistake in abandoning the dispensing of medicines. And what have they gained, or are likely to gain, by this kind of action? There must ever be grades in our Profession, and instead of having Physicians and Apothecaries both well paid and flourishing, we find General Practitioners quite as well qualified as—indeed often acting as—Physicians in all but that which is the cream of a Physician's life, the fee. No one can live by booking visits at half a crown, and running the risk of bad debts. Third-class patients begrudge the small fee for a visit and the payment to the chemist as well; and the latter most likely gets as much for the drugs as the Practitioner for the prescription. The race of pure Physicians, especially in the country, is rapidly dying out, and the old-fashioned apothecary has almost disappeared. In the place of the former we are getting the specialist, and instead of the latter *the chemist*. Counter prescribing by the chemist is increasing, and will increase, *pari passu* with our abandonment of dispensing—a new race over which we have no control is springing up, and the profits which should be those of the apothecary find their way into the druggist's pocket. If the iniquitous Pharmacy Act had inflicted any penalty on men who step out of their province to fulfil duties for which they have had no opportunity of becoming qualified, instead of depriving Medical men of the right to dispense remedies—a function for which they were fully qualified—it would have done well. As it is, counter practice is ever on the increase. Only the other day the chemist's year-book was published, a special and important feature of which were certain columns in which chemists might *keep records or notes of the cases they treated*. This would be very laughable were it not so very serious. Jeames's diary would be nothing to some of these registers. Over-education of the General Practitioner is the surest thing to foster such an undesirable state of affairs. A man does not require to know all the *ologies* to enable him to compound and dispense a black draught; but he requires to be taught when and where to give it so as to benefit his patient. If the hard and fast line which is to be passed before our Profession can be entered is fixed too high up, we shall thereby infallibly increase and foster illegitimate practitioners. It is far better to face the truth at once. The acquirements and accomplishments of a pure Physician are not necessary for an apothecary, and should not be exacted from him. If there are to be grades, let them be indicated by examination as well as by other means.

To all this the reply is obvious. Four years are devoted to Medical study, and if this time were properly used, the student might acquire practical as well as scientific training, each of good quality. To go back to an apprenticeship, to spending years in dispensing and practice before acquiring the elements of Medical knowledge, would be to perpetuate an old mistake. To take students into the wards of an Hospital, and teach them the symptoms and treatment of disease before the anatomy and physiology of the organs involved, would make them confirmed empirics. Practical clinical teaching is not swamped by a preponderance of science in the curriculum; but at present, for want of system, all teaching is less effective than it should be. We should be inclined to claim one year for science, one for anatomy and physiology, and two for pathology, semeiology, and therapeutics.

THE WEEK.

TOPICS OF THE DAY.

There are six months to the election of Councillors in the Royal College of Surgeons, but already names and vacancies are being discussed and chances calculated. At present it appears that there will be three vacancies declared, the retiring members being Mr. Solly, Mr. Mackmurdo, and Mr. John Adams. It is to be presumed that these gentlemen will offer themselves for re-election, and it is improbable that they will all offer themselves in vain. On the other hand, it is not likely that the Fellows will allow an opportunity of infusing some new blood into the Council to pass. The result of the last election augurs strikingly in favour of the success of Mr. Gay, should he again ask the suffrages of the Fellows. We only hope that whatever may be the character of the election or the number of the candidates, it will result in giving a voice in the government of the College to men who have risen to eminence in their Profession unsupported by the coteries of the great Hospitals, and without the assistance to be derived from chairs in the great schools and universities. Not that we in any degree undervalue the position and influence which a Surgeoncy to a great Hospital or a Professorship necessarily confers. But the Council of the Royal College of Surgeons is a representative body—it ought fairly to represent the whole Profession of Surgery, and should comprehend men who have obtained the confidence of their fellows and the support of the public unaided by the notoriety and opportunities to be got from teaching and Hospital practice. It would be invidious to calculate the chances of the retiring members should they offer themselves for re-election. We may, however, take it for granted that Mr. Solly's friends will muster strongly in his support, as he is now junior Vice-President of the College, and, in case of re-election, will undoubtedly fill the offices of senior Vice-President and President. If there be only one new member returned, we have reason to expect that the choice of the Fellows will fall upon Mr. Gay, a man who has fought his way single-handed to the foremost rank in his Profession without adventitious aids; for although he is Surgeon to one of our smaller Hospitals, it cannot be said that he has owed his success to the brilliancy of his public appointments. There is at present a vacancy in the Court of Examiners of the College, caused by the expiration of Mr. Partridge's term of examinership. Mr. Hancock is the next in seniority of the members of the Council, and would undoubtedly fill the office of examiner with great credit. Mr. Partridge, however, has the option of offering

himself for re-election, and his friends urge that he has a certain claim upon the Council as having been the first to introduce the application of Surgical apparatus as a practical part of the examination.

It is with burning indignation the Profession will hear that one or more of the students who attended at the examination held on Tuesday last week at the College, whilst waiting their turn in one of the College apartments, amused themselves with irreparably injuring, by a stick or umbrella, two of the valuable oil paintings belonging to the College. One was the well-known picture of chimpanzees, by Zeitter; the other a picture of monkeys, by the English animal painter Stubbs. We believe that in the worst days of the Bob Sawyers and Ben Allens Medical students would have voted such an outrage a disgrace. We would remind the candidates who presented themselves on that evening that, until the perpetrator is discovered, they all will remain under suspicion.

The new President of the Poor-law Board has no easy task before him. On the one hand, he has to meet the wants of an increased and rapidly increasing pauper population; on the other, he dares not shut his ears to the indignant remonstrances of overtaxed ratepayers. Many of his present difficulties are due to the hasty and panic-begotten legislation which followed the late outcry for Workhouse Hospital reform. We have noticed this matter so frequently already that we should not again recur to it were it not to urge the propriety of a pause in the work of erecting sick asylums until the sense of the House of Commons on Mr. Torrens's motion has been taken. Only last week the inhabitants of Poplar sent a deputation to Mr. Goschen to beg that this respite might be granted them. The rates in this parish already amount to 2s. 4d. in the pound for the current quarter, and yet the inhabitants are expected to raise £66,000 (the Poplar Union £143,000) for enlarging the workhouse, building the new sick asylum, and purchasing schools. Mr. Goschen told them that the enlargement of the workhouse was a necessity, but that no more money should be spent than necessary. He also said that the Government had under their consideration the subject of the equalisation of rates in the metropolitan parishes. We should be glad to receive an assurance that if the principle of equalisation is to be introduced, it is to be made to bear equally throughout the country, and that extra expenses for buildings, where deemed necessary, are to be made a charge on the consolidated fund. But, at least, wretchedly poor and overburdened parishes like Poplar ought not hastily to be saddled with gigantic outlay. Of course, the workhouse must be made larger where the rates are 2d. and 4d. in the pound, and it does not require much sagacity to prophesy that as long as the rates go on increasing the workhouse will require enlarging. The two things act mutually as cause and effect. Property will be driven away, and decent poverty will rapidly become pauperism.

The Poor-law Board have addressed a long letter to the Holborn Guardians in answer to the remonstrance of the latter on the subject of the Hospital for 600 beds the Board has ordered to be erected for the Finsbury Asylum district. The Poor-law Board objects to the scheme of the Holborn Board of erecting a new infirmary close to the present workhouse, on the ground of the expense of the land which would have to be acquired in Gray's-inn-lane, and also on account of the smallness of the building, which would be the necessary consequence of the high value of the site. This reasoning is very likely quite valid, but the Poor-law Board do not pretend that the Holborn share of the expense of a Hospital for 600 beds would be small. At any rate we think that, as in the case of the Poplar Union, Parliament should be allowed to give its verdict before ratepayers are taxed for these enormous undertakings in addition to their present burdens.

The Metropolitan Board of Works seem to think that the authorities of St. Thomas's Hospital have got the best of the bargain. It appears that the Court of Chancery will not allow the Hospital to pay the money for the site on which they are building, because the Hospital has not yet obtained possession of the full title. Meanwhile the Hospital has the land, the interest of the money value of which is £100 per week. Of course, the ratepayers of London have been hitherto the losers, as the Metropolitan Board of Works had to borrow £90,000, for which they pay large interest, in order to make necessary compensations and obtain possession of the land which the Hospital has been enjoying since May, 1868, when the foundation-stone was laid. Mr. Tite, answering for the Hospital authorities, says that they will only be too glad to get rid of the money as soon as they receive the title—that the money is "rather a burden than a pleasure." If so, we should suppose they cannot object to making over to the Board of Works the interest of the £100,000 which they have been receiving for the last seven months.

The appointment of Gas Examiner to the City is still unfilled. We hear that a selection of those who are considered the most eligible has been made by the Committee appointed to examine the qualifications of candidates. The fortunate selected are Drs. Versmann, Redwood, Whitmore, Paul, Ansell, and Professor Anderson, of Birmingham. Dr. Versmann has the advantage of a high recommendation for his knowledge of practical chemistry from the Master of the Mint, to whom he acted as assistant for many years both at University College and at the Mint. Dr. Redwood has made a considerable reputation as Professor at the Pharmaceutical Society, and Dr. Whitmore as the indefatigable Medical Officer of Health in Marylebone. It is said, however, that proof of chemical attainments will have most weight in the election.

The question whether the Faculty of Physicians and Surgeons of Glasgow confer by its licence a double qualification has been again decided in the Walsall County Court. The plaintiff, a Mr. Daniel Kerr, practising with the diploma in question, sued one George Windsor, a grocer at Wednesbury, for the sum of £4 11s. for Professional advice and medicine. It was proved that the major part of the amount—in fact, all except 2s. 6d. —was for Medical attendance. The licence of the Faculty of Physicians and Surgeons of Glasgow gives the right to practise in Surgery and pharmacy. The plaintiff submitted that, under the Medical Registration Act, he was entitled to recover his whole claim. The lawyer employed for the defence contended that, under his diploma, Mr. Kerr could not recover for purely Medical attendance. After the first hearing of the case, the judge decided for the plaintiff for £3 11s., but gave leave to the defendant to move that the sum be reduced to 2s. 6d. upon giving satisfactory evidence that the charter granted to the Faculty of Glasgow conferred no power to grant licences to practise as an apothecary. Accordingly, the defence moved for a reduction in the amount, and produced a certified copy of the charter of the Faculty. After a prolonged argument on both sides, the judge decided that the Medical Act only gives a person registered the right to recover payment according to his qualification to practise Medicine or Surgery, or both; that the charter of the Faculty of Physicians and Surgeons of Glasgow, and the Act by which it is confirmed, only empower that Faculty to grant licences in Surgery; that this fact appears in their elections to Fellowships, which comprise two orders—Physicians and Surgeons (whence the title of the Faculty of Physicians and Surgeons). Those only are eligible as Fellows in Medicine who have obtained a right to practise Medicine from other examining bodies, whereas their own licentiates are eligible as Fellows in Surgery. The plaintiff's qualification, therefore, limited his right to the practice of Surgery, he being only registered as a licentiate. The judge expressed a willingness to grant a case on either side, and further postponed the confirmation of his judgment until this day (Saturday), in order that the plaintiff's lawyer might produce a report of a case of the University of Glasgow *v.* the Faculty of Glasgow, which he said had been heard before the House of Lords, and in which he affirmed

that it was decided that a person holding a Scotch Surgical diploma could practise in Medicine. From a report which appeared in the local paper, it seems that the case has been thus brought to an issue by the fully qualified Practitioners of the town.

The Howard Association is a Society having for its object the promotion of the best methods of preventing crime and dealing with criminals. This Association is now moving to obtain a Royal Commission of Inquiry for the purpose of obtaining an alteration of the laws respecting criminal lunacy. In their published address they not only urge the differences which exist between the legal and the Medical views of insanity, but they refer to the statistics of prisons to prove the fact of the punishment of many victims of mental disease. Thus, in the official report of the Millbank Prison, issued June, 1868, of 943 convicts 34 are certified as insane; but besides these, there are 218 "mental cases," including the weak-minded, but excluding the epileptic. In other words, more than one-fourth of the whole of the prisoners are of doubtful responsibility. The evidence of the Lord Advocate for Scotland, Mr. Bruce Thompson, Surgeon to the prison at Perth, and of Mr. Measor, late Deputy-Governor of the Chatham Convict Prison, are adduced in support of the necessity for legislation; and several Physicians of eminence, amongst whom are Dr. H. Tuke, Dr. Maudsley, Dr. B. W. Richardson, and Professor Laycock, have appended their signatures to a note inviting attention to the address, and urging the employment of Parliamentary influence to obtain a Commission of Inquiry.

We notice with regret that Dr. James Hunt, who has ably filled the chair of the Anthropological Society since its commencement, is retiring from the Presidency by Medical advice. He is to be succeeded by Dr. John Beddoe. We see in the report of the anniversary meeting that, during the last year, a movement has been in progress for amalgamating the Anthropological and Ethnological Societies. It, however, seems to have been abandoned, in consequence of what the Council of the Anthropological Society call "the unscientific opposition" raised to the name "Anthropological." But, add the Council, "they (the Council) felt it their duty, upon this point, to listen to no compromise." We hope the unscientific opposers feel extinguished.

HOSPITAL ADMINISTRATION.

A DISCUSSION of considerable interest followed the reading of a communication by Dr. Fleetwood Buckle, of King's Lynn, at the Social Science Association, Adam-street, Adelphi, on Monday evening. It will perhaps be remembered that, some little time ago, Dr. Buckle published a small work on the subject of Hospital administration, which, though well received at the time, turned out, on more mature investigation, to be somewhat inaccurate; and it was soon seen that the tables which accompanied the present communication were equally so. It was accordingly moved and carried that some statistics should be given by Mr. Wilkinson, Secretary to St. Mary's Hospital, whose admirable pamphlet on this subject has been examined with great care and found unimpeachable—in fact, Mr. Charles Hawkins, who most violently attacked Dr. Buckle's figures, was equally loud in the praise of Mr. Wilkinson's researches. Dr. Buckle stated that Hospital accounts never reached the governors until after the annual meeting, so that there was no opportunity of discussing them for another twelvemonth. This was plainly contradicted by Mr. Hawkins. Dr. Buckle also attributed a considerable portion of the expense of Hospitals to the resident Medical officers, and proposed that men should be trained up for an office of such importance, and that it should be rendered a permanent one. Any one who is familar with London Hospital management will perceive that this is impracticable. A suggestion of more importance, however, was that a *uniform* set of accounts, audited by some Government official, should be annually published for the public benefit. It was, however, the statistical portion of the paper which was most criticised, for in the first place Dr. Buckle had taken the total number of beds in each Hospital, not the average number occupied, and yet had made the expense of each only half what it appears to be according to Mr. Wilkinson's more accurate data. Taking the run of London Hospitals, it might be said that the annual cost of each bed is £45, in some more, in others less; not one of them, with the exception of Westminster, is as low as Dr. Buckle's average of £27 4s. 5d. (At Westminster the cost is £27 3s. 7d.) So again, with regard to each in-patient, Dr. Buckle makes the cost of each £2 14s. 9d., while Mr. Wilkinson's carefully tested figures show it to be almost invariably over £4. The discrepancy is still more strongly marked with regard to out-patients. Each of these Dr. Buckle makes out to cost 4s. 6d., whilst Mr. Wilkinson, borne out by skilled men, makes it only a shilling, and he is said to err rather over than under the mark. Such discrepancies show the fallacy of rough and ready methods of attaining results. Still, in the discussion which followed, many good ideas were thrown out. Thus Mr. Hawkins showed that the expenditure of small Hospitals appeared relatively larger than some others, because they required the same staff. A Hospital with about 300 beds, he thought, was best. If there were more, the official staff had again to be increased. The idea of greatly reducing a Hospital expenditure by limiting the resident officers' diet he considered absurd. Mr. Ernest Hart remarked that a regular form of annual account for each Hospital, properly audited and made public, would be a great boon. Several Hospitals had refused to give statistics, and these were the very places one wanted to get at. As the result of investigation, he thought he could say that there was no maladministration, but a good deal of bad administration. The cost of food at different Hospitals varied a good deal with the creed of the Medical officers, some being fond of stimulation—some not. Some discussion followed on the treatment of gentlemen's servants in Hospitals, their masters being subscribers or governors. The mortality returns were also shown to be fallacious criteria, as in the case of Middlesex Hospital, in whose cancer ward patients were retained until death.

YELLOW FEVER IN THE CAPE VERDE ISLANDS IN THE YEAR 1868.

WE have received from good authority particulars on this head, which we derive at first hand from Sr. J. F. da Silva, a Physician of distinction in the Cape Verde. They are supplementary to all that has appeared in the *Diario de Lisboa* in the mother country, and in the *Boletino Official* of the Cape Verde Government, during the past year. The fever was imported from the French colonies, Gorear and Saint-Louis, and it made its first appearance in Bissan. The part of the population that suffered most was the city of Praia, in the island of San Thiago. Commencing in the middle of July, 1868, the disease spread with such rapidity that a very large proportion of the European inhabitants became successively or simultaneously affected, so much so that during the month of August there were received into the military Hospital of Misericordia no less than 285 cases, of which, by September 1, forty-one had proved fatal. During the month of October there was a considerable decline of the epidemic, the affected persons being those who came from the interior of the island San Thiago or other points. The disease, however, spread to the isle of Brava, one of its first victims being the Medical officer, Theophilo Joaquim Vieiria. There were also some cases in individuals who had withdrawn from the city Praia to other points of the island San Thiago. During the reign of the epidemic a great strain was put on the services of the Medical staff in San Thiago. The principal Surgeon, Custodio Diarte, Sr. A. J. Nunes, Surgeon-Major of Battalion, and A. da C. Ferreira Borges, Pharmaceutist, all of whom were sufferers from the disease.

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showed all along extraordinary devotion to the service of the sick. Sr. Leygnowda Pimenta, of the pharmaceutical branch, alone in the Medical service succumbed to the disease, and is much regretted.

NAVAL REDUCTIONS.

Among the recent reductions in the Navy there is none which will be more acceptable to the Medical officers of that service than the abolition of the appointment of Captain-Superintendent of Haslar Hospital. The absurdity of placing a naval captain as the director of a large and purely Medical establishment is only equalled by the still existing anomaly of the military commandants who hold sway at Netley and Woolwich. We have so frequently and so strongly adverted to this on *Professional* grounds that we had commenced to despair of any alteration, but now hope is renewed within us when the question appears likely to be approached from the *financial* point of view.

MEDICAL DIRECTOR-GENERAL OF THE NAVY.

Dr. Bryson, having completed the term of his appointment, will now retire, with the gratification of having received the highest approval from the Admiralty of his ability in conducting the Medical Department. The officers who have served under him are anxiously awaiting the nomination of his successor, as they naturally desire to be represented by one of themselves whose Professional and social standing will be such as to secure the respect of the Profession at large as well as of the Royal Navy. We regard as impracticable the rumoured change which would place again the Medical Department under the same authority with the victualling and transport offices, and trust that we shall see one of the Senior Inspectors-General ruling over our Medical brethren of the Navy. On the employed list we find that the name of Sir David Deas, K.C.B., stands first. He is now the first Medical officer of Haslar Hospital, where his efficiency as an administrative officer will be the best guarantee of success if he be removed to the wider sphere of the Directorship. Next following on the list is Dr. George Burn, whose devotion to the service has secured his constant active employment. He is now the second officer at Haslar, and on that account has had there a less field for the display of administrative qualities than Sir D. Deas has enjoyed. His antecedents, however, justify a most favourable opinion of his capability. We conceive that the fewer candidates for the honour, the more likelihood of its being secured to us, and we shall not canvass the merits of the other Inspectors-General, who doubtless are men of high attainments and worth, as we see that there is an interval of eight years' seniority between those names we have mentioned and that of the next in seniority. We sincerely hope that the present Admiralty will abstain from what is commonly supposed to be threatened—the abolition of the office of Director-General of the Medical Department of the Navy—a step that would render the naval service still more distasteful to the Medical Profession than it is at present.

THE ARMY SANITARY COMMITTEE.

It is not impossible that the constitution of this body may come under the notice of the present retrenching Government. It is generally known that the opinions held by Dr. Sutherland on sanitary matters are materially at variance with those of the most advanced men of the day—to mention only Sir Thomas Watson, Sir William Jenner, Dr. Budd, of Bristol, Mr. Simon, and a host of the most enlightened continental Physicians on many important questions as regards the etiology of epidemic diseases. We do not dispute the right of Dr. Sutherland to hold what opinions he pleases on sanitary matters or the ability with which he maintains them. He and Mr. John Stuart Mill may contemplate with equal complacency the position of being in the glorious minority of one; but we do consider that it is a most unfortunate thing that he should by his official position be enabled to influence and advise a non-professional body in such a manner as to put the opinions of that minority into action on questions involving the health and lives of our soldiers. We have also shown how his presence on the Sanitary Committee of the War Office is felt by the members of the Army Medical Department to be a direct reflection on their body, to whose exertions and labours in his numerous reports he is considered to have done but scanty justice. Dr. Sutherland is one of two civilians upon that Committee the prominence of his position upon which is fully shown by his name standing third in the order of seniority, those immediately above him being Lieutenant-General Sir J. Hope Grant, G.C.B., Quartermaster-General, and Mr. (late Captain) Galton, C.B., F.R.S., Assistant Under-Secretary of State for War. The fourth member is Dr. Massy, Deputy Inspector-General of Army Hospitals. Two Lieutenant-Colonels of the Royal Engineers come next, and then Colonel Sir Proby T. Cautley, K.C.B., and Sir J. Ranald Martin, C.B., F.R.S., on behalf of India; and last of all comes Mr. Robert Rawlinson, C.B., a civil engineer, the other civilian member of the Committee. We do not know what Mr. Rawlinson's duties may be in connexion with the Committee, but of one thing we are tolerably certain—that if his presence on it were felt by the Royal Engineer Department to be as great an injury and as galling a Professional slight to them as that of Dr. Sutherland has been represented to us to be to the Army Medical Department, he would long since have been withdrawn. It must at the same time be admitted that, according to his opinions, Dr. Sutherland has performed his duties with the most commendable zeal and undeniable ability, and is fairly entitled to a retiring pension.

NOTES FROM KINGSTON, JAMAICA.

The following memoranda from a letter recently received by a correspondent from Dr. Bowerbank will be read with interest. Alluding to the improvements which have been effected of late years in the sanitary state and the discipline of the lunatic asylum, and to the great diminution at the same time in the expenditure of the institution, Dr. Bowerbank says:—

"The mortality is lessened in proportion, and the recoveries increased. Diarrhœa and dysentery are now unknown. All the old privies are done away with. Nothing but the earth-closet system, even in the commodes in the sick ward. No deodorants or disinfectants are employed. The discipline, among the males especially, is admirable. All the tin utensils have disappeared; nothing but crockery. They make a large sum yearly by the farm-grounds, making clothes, and picking coir, with which their beds are stuffed, and the excess is sold at 4½d. a pound. . . . We have started a soup-kitchen in Kingston, which is doing well. About 250 paupers use it. They get turtle soup once a week. Generally speaking, they are not partial to it, which is a pity, as it is sold at 2d. a pound. Their favourite food appears to be rice and peas boiled together, with a little lard or fat salt pork. It is wonderful how sleek and fat they get upon it. I think they prefer this to anything. Another most fattening food is pumpkin and crushed maize well boiled together. Why do the military go on wasting money out here by giving the black soldier beef-steaks, etc., which he sells at half their value? Every day this may be seen going on in this city. . . . The cinchonas are doing well in the higher mountains. Next year there will be 25,000 for sale. The Governor is going to try the cultivation of the tea plant also: it will no doubt succeed. An American here is making paper and felt from the bamboo."

FROM ABROAD.—PURULENT OPHTHALMIA OF INFANTS—ANTHROPOLOGICAL STATISTICS OF PARIS.

At the Académie de Médecine M. Desormeaux, a candidate in the section of Surgical Pathology, read a memoir on the "Ophthalmia of New-born Infants," which he terminated with these conclusions:—1. Under the name of purulent ophthalmia of infants several different affections have been confounded—viz., catarrhal, blennorrhagic, and diphtheritic ophthalmias, and a special form of the disease, the "malignant

ophthalmia of new-born infants." 2. This last form of ophthalmia may be developed in new-born infants under epidemic influence or through contagion. In older infants and in the adult it is always the result of contagion. 3. Its pathognomonic symptom is the secretion of a saffron-coloured serosity, the colour of which is not due to the presence of blood, and which strongly stains linen. 4. This symptom is only observable at the outset of the disease. 5. The natural course of the disease is very rapid, so that the eye may be lost in a few hours. If it is only arrested without being cured, through insufficient treatment, it may continue for a long time, but it never gives rise to the granular conjunctiva which is a sequence of bleunorrhagic ophthalmia. 6. Usually it attacks both eyes at once. 7. The sole treatment that is of efficacy is the frequent employment of the ocular douche, followed by the injection of a weak collyrium.

M. Lagneau, a candidate for the section of Hygiene and Legal Medicine, also read a paper entitled "An Investigation of the Anthropological Statistics of the Population of Paris." This may be summed up as follows:—1. The investigation of the migratory movements and the births and deaths of the agglomerated population of Paris, as compared with the population of France, leads to the recognition of considerable differences between them. 2. The population of the Department of the Seine exhibits a proportional increase nine times greater than that of France. 3. This increase is not the result of an excess of births over deaths, but solely of an increase of immigration over emigration. 4. From the Department of the Seine more than a third of the infants are sent out to nurse into other departments. Of 20,000 infants so sent out, it does not appear that more than from 6000 to 7000 return. 5. From the tenth to the fifteenth years for males, and the fifteenth to the twentieth for females, the immigration towards Paris commences, and it seems to attain its maximum between the twenty-fifth and thirtieth years. This immigration is so considerable that the population of the Department of the Seine is found to consist of two-thirds Frenchmen born in other departments and foreigners, a little more than one-third of its inhabitants being born in the department. 6. Consequent upon this emigration of new-born infants, and immigration of adolescents and adults, the population of the Department of the Seine differs from the total population of France by a less proportion of children and a larger proportion of adults, and among these by a less proportion of married and a larger proportion of unmarried and widowed, and, finally, by an excess of adult men over adult women. 7. To this constant immigration of individuals, for the most part possessed of intelligence, and capable of taking part in the scientific, artistic, commercial, and industrial activity of which Paris is the principal centre, would seem to be attributable the increase of cranial capacity and frontal development observable, according to M. Broca, in the present Parisians, as compared with those of the twelfth century. 8. The great development of prostitution in the Department of the Seine would seem to be due to the excess of male immigrants, the large proportion of unmarried men and widowers, and the later period to which marriage is delayed in this department. 9. The "natality"—*i.e.*, the relation of births to adults of from 15 to 60, or in age for procreation—is equal, or a trifle less, in this department and entire France. 10. The fecundity of marriages is more than one-fifth inferior in this department than in France. 11. The illegitimate births form more than a fourth of the totality of the births of this department; and they are proportionally more than three times more numerous than in France in general. In part due to the temporary immigration of *filles-mères* coming from the country to lie-in in Paris, this enormous proportion of illegitimate births is also in part attributable to the greater proportion of unmarried persons. 12. The mortality of children under five years of age is nearly a third for entire France, but that of infants born within the Department of the Seine (deduced from a comparison of the births with the census of infants made five years afterwards) is more than one-half. This arises principally from sending so large a number of nurslings into other departments, but also from the fact of the illegitimacy of birth of so many of them—the mortality of illegitimate infants being nearly double that of those born in wedlock. 13. In the other periods of life, although a little lower between the fifth and fifteenth years than in the population of France, the mortality of this department continues in general to be about a third more considerable. Thus, when twenty years have passed, there are approximately but two-fifths of survivors, at forty years less than a third, and at sixty years less than a sixth. 14. In consequence of the enormous infantile mortality of the population of the Department of the Seine, the greatest portion of which does not attain the age of puberty, the mean age at the time of death is a third lower than that for entire France. The mean duration of the period of procreation being so much shorter than that of France, contributes to the explanation of the rapid extinction of Parisian families noticed by Boudin, Gratiolet, and Quatrefages. The progeny of native Parisians decreases by about two-fifths at each successive generation. 15. From this statistical investigation it appears that if great agglomerations of men are favourable to the scientific, artistic, commercial, and industrial development of a nation, they are, on the other hand, extremely prejudicial in their anthropological relations.

MEDICAL STATISTICS OF THE FRENCH ARMY FOR 1866.

In our notice of the Statistical Report of the French Army for 1865,(a) we alluded to the difficulty of instituting an accurate comparison between it and the reports of our own army, on account of differences in the systems of Hospital management. It may be well to remind our readers of some of the most important of these before entering upon an analysis of the French Statistical Report for 1866.

In the French army the sick are divided into three classes—1. *Malades aux hôpitaux*, or those treated in Hospital; 2. *Malades à l'infirmerie*, or those treated as out-patients and exempted from duty; 3. *Malades à la chambre*, or those who, suffering from trifling ailments, are able to perform their military duties while under treatment. The French returns also include officers and the native African portion of the Corps d'Algérie.

The effective mean strength of the French army during 1866 was 336,233. As compared with the strength of 1865, this shows a diminution of about 12,000 men, the reduction being entirely among troops in Algeria and Italy. There has been an increase of about 3000 men in the army serving in France. The *present* mean strength was 296,740.

The number of admissions into Hospital was 109,360, being in the proportion of 325 per 1000 of *effective* mean strength, and 369 per 1000 of *present* mean strength. The rates of admissions were lower than in 1865 in France and Algeria, and higher in Italy.

The number treated *à l'infirmerie* was 75,874, being 256 per 1000 of mean *present* strength; but as infirmaries do not exist in all corps, and officers are not treated in that manner, the proportion per 1000 of men liable to such form of treatment was 307. This shows an increase of 13 per 1000 as compared with 1865.

The number treated *à la chambre* was 515,695, or 1736 per 1000 of mean *present* strength, showing a decrease of 84 per 1000, as compared with the rate in 1865.

The total number treated was 700,929, being at the rate of 2084 per 1000 of *effective* strength, or 110 per 1000 less than in 1865.

On making the necessary deductions for successive entries of the same patient under each form of treatment, the true number of sick treated is reduced to 618,068, or 1838 per 1000 of the effective strength, or 2082 per 1000 of mean present strength, showing reductions as compared with 1865 of 94 (b) and 106 per 1000 respectively.

(a) Vol. II. 1867, p. 257.

(b) Incorrectly given as 85 in the text.

This amount of sickness, distinguishing *men* from *cases*, was distributed as follows :—

	Mean present strength.	Treated.	Rate per 1000.
France	229,761	455,808	1,984
Algeria	56,548	124,282	2,198
Italy	7,379	19,098	2,588
Penitentiaries and workshops	3,052	18,880	6,186
	296,740	618,068	2,082

If from the above we omit the troops serving in Algeria, and the men confined in penitentiaries and employed in workshops, we have a force of 237,140 men whose circumstances more nearly resemble those of our army serving at home, and among these we find that the total number treated amounted to 474,906, or 2002 per 1000 of the strength. But as those treated *à la chambre* were able at the same time to perform their duties, they also may be omitted, and we then have a total of 288,447 treated *à l'hôpital* and *à l'infirmerie*, being in the proportion of 1216 per 1000 of the strength, being in excess of the millesimal admission rate of the British army in the United Kingdom during 1866 by 363, and of the average of the preceding six years in that army by 223.

The total number treated for syphilis was 36,952, or 124 per 1000 of the mean *present* strength, and 53 per 1000 of the sick, showing an increase of 6 and 5 respectively per 1000 on the preceding year. Deducting the cases treated successively in barracks, infirmaries, and Hospitals, the number treated is reduced to 32,636, or 110 per 1000 of the *mean present* strength, and 53 per 1000 of the sick, showing an increase of 7 and 6 respectively on the preceding year. The proportion of syphilitic patients treated *aux hôpitaux* was 474 per 1000. If we omit the numbers treated *à la chambre*, as has been done above, we find that the venereal cases were in the proportion of 113 per 1000 of the sick treated.

In the British army at home during 1866, in a strength of 59,758, there were 6091 admissions for primary and secondary syphilis, being in the proportion of 102 per 1000 of the strength, and 130 per 1000 of the total number admitted—46,785.

We may hence conclude that this class of disease prevails to nearly the same extent in both armies—an impression which is strengthened by the statement that, of the sick treated *aux hôpitaux* in the French army, in every seven patients there was one suffering from syphilis—a proportion almost identical with that in the British army during 1866. The proportion constantly sick, and the loss of service in consequence in the two armies, also closely approximate, being as follows :—

	Proportion per 1000 constantly sick from syphilitic diseases.	Loss of service to whole force.
British army at home 1866 .	10·76	3·93 days
French army	9·74	2·89 ,,

The average daily sick from all causes was 15,770, or 47 per 1000 of the *effective* strength, and 53 per 1000 of the mean *present strength*, distributed as follows :—

Treated in Hospitals .	8460, or 29	per 1000 present.
,, Infirmaries .	2660, or 9	,,
,, Barracks .	4490, or 15	,,

The daily number of convalescents was 166, or ·6 per 1000 present. In our army at home during 1866 the mean daily sick was in the proportion of 42 per 1000, the average for the preceding six years having been 53.

The total mortality amounted to 3564, being in the proportion of 10·60 per 1000 of effective strength, as follows :—

	Deaths.	Rate per 1000 effective.
In France	2732	10·28
In Algeria	747	11·95
In Italy	85	10·69

If to the above be added 540 men discharged the service for ailments of a fatal nature, the maximum rate of mortality is 12·20, as compared with 14·20 in 1865. Omitting deaths from cholera and men killed in action, the death-rate is reduced to 9·60 per 1000. The average death-rate of the preceding five years, making similar deductions, was 9·41 per 1000, which is almost identical with the average death-rate of the British army in the United Kingdom.

The deaths by disease were 9·47, by accident ·65, by suicide ·48 per 1000 of the effective strength. The average death-rate during the preceding five years was, by disease 981, by accident ·59, and by suicide ·52 per 1000. During this period suicidal deaths were very numerous, among the "veterans" amounting to 2·68 per 1000. This is considered to be probably a consequence of the conditions of age, as similar results are observed in the civil population among men from 40 to 60 years of age. The Imperial Guard furnishes the next highest death-rate from this cause during the same period, ·71 per 1000.

According to length of service, the highest mortality from disease—viz., 10·80 and 10·85 per 1000—occurred respectively among soldiers of from one to three and from three to five years' service. In our army the death-rate increases in every quinquennial period of service. The difference probably depends upon some general cause affecting the populations of the two kingdoms. In France the returns of the civil population show that the highest rate of mortality between 5 and 45 years of age is in the period 20—25, and that it decreases in the two next quinquennial periods. But among the male population in England the lowest proportion of deaths occurs between the ages of 10—15, and it increases in every subsequent quinquennium.(c)

In the Report under notice it is stated that the results of the mortality returns of the preceding five years clearly establish that the first year of service does not show the heaviest mortality, as for a long time it has been considered to do; that from the third to the fourteenth year the mortality steadily diminishes, and that after the fourteenth year it is still lower than during the first five years, and that no doubt can now exist that by retaining a large number of old soldiers the mortality of the army is diminished. The contrary result of the proportion of suicidal deaths advancing with length of service was quite unforeseen until it was established by statistical researches. Suicides of soldiers had been generally attributed to the difficulty of accommodation to the circumstances of military life, while it is now proved that age, as among the civil population, is the sole preponderating cause.

During 1865 typhoid fever had caused the greatest number of deaths, but in 1866 phthisis occupies the first place, having caused 588 deaths, and, combined with chronic bronchitis, gives a total of 841, or 2·50 per 1000. The number finally discharged from the service for phthisis was 237, which, added to the number of deaths, raises the loss from this disease to 3·22 per 1000. In this disease the mortality increases with length of service. In the French army from 1·02 in the first year to 3·37 per 1000 after fourteen years, this being in accord with the experience of our army. Typhoid fever caused 501 deaths, or 1·49 per 1000, being a lower rate than in any of the preceding years. The proportion falls from 4·37 in the first year of service to ·23 per 1000 after the fourteenth.

Cholera prevailed in France throughout the whole year, but chiefly in the third quarter, during which it caused 166 out of a total of 258 deaths. It attacked the troops in Algeria during the second half-year, and in Italy during the fourth quarter. A total of 323 deaths occurred from it, or ·96 per 1000, in lieu of 1·72, the rate of 1865. The highest proportion of deaths—2·02—occurred among men in the first year of service, and only ·9 per 1000 among those of more than ten years' service. This differs from the experience of our troops in India, among whom it has been found that from 1863 till 1867 the average death-rate from cholera at different ages varies only from 4·06 to 5·10, or little more than 1 per 1000.(d) In the Mediterranean stations in 1865, the experience as to the effects of length of service in increasing mortality from cholera during the epidemic of that year agreed with that of the French army.(e)

Small-pox caused 46 deaths, or ·14 per 1000.

From 1863 till 1866, in every 100 deaths from disease whose causes were known, the most frequent were :—

Phthisis	20·83
Typhoid fever	16·57
Intermittent and remittent fevers . . .	7·19
Diarrhœa and dysentery	6·76
Acute affections of the respiratory organs .	6·33
Cholera	6·10
Killed in action	3·06
Small-pox	1·54
Diseases of the heart	1·47
Mental alienation	·72
Articular rheumatism	·38

The number finally discharged the service as invalids was 2502, or 7·44 per 1000.

The system of invaliding in the French army differs considerably from that which prevails in ours, and final discharges

(c) Army Medical Department Reports for 1863 and 1864.

(d) Fourth Annual Report of the Sanitary Commissioner with the Government of India. 1867. P. 123.

(e) Army Medical Department Report for 1866.

from the service are much less frequent than with us. If a soldier is unable from physical infirmity to serve in any particular branch, he is transferred to such other as he may be considered fit for. Sick furlough appears to be given much more extensively, and is of two kinds—1st. For ailments contracted in and by the service; 2nd. For those of origin anterior to conscription.

The results of vaccination and revaccination are given for the first time in the report for 1866. In every 100 French soldiers on first joining 92 had been vaccinated, 4 had had small-pox, and 4 had neither had small-pox nor been vaccinated.

Among the native troops in Algeria the proportions per cent. were 27 vaccinated, 59 marked with small-pox, and 14 who had neither been vaccinated nor had had small-pox. The results of 2448 vaccinations were—successful in 48, failures in 52 per cent. The results of 31,065 revaccinations were—32 successful, and 68 failures per cent.

Of 753 men attacked by small-pox 68 per cent. had been vaccinated, 26 revaccinated, 2 had had previous small-pox, and 4 had neither been vaccinated nor had had small-pox. The proportion of deaths from small-pox was 6 per cent. of cases, but information is not given of the state as regards vaccination or revaccination of the patients who died.

Forty-two insane soldiers died, or ·12 per 1000. Among men of more than fourteen years' service, 19 deaths, or ·12 per 1000, occurred under this category.

The proportion of insane patients was ·46 per 1000 effective, being a decrease of ·07 on the preceding year. In Algeria the proportion was only ·37 per 1000. According to rank, the proportion among officers was 1·50, non-commissioned officers ·60, and privates ·38 per 1000.

PROFESSOR HALFORD'S TREATMENT OF SNAKEBITE.

The following cases illustrating the treatment proposed by Professor Halford for snake-bite, cannot fail to prove of interest, especially to those of our readers who live in districts where such accidents are of common occurrence:—

A newly-married woman, residing in the vicinity of Lake Macquarie, was dangerously bitten by a moderately large brown snake, the mark of the reptile's fangs being visible near the point of the finger. Apprehending immediate danger, she at once sucked the wound, cut out the snake-bittten part, and tied a ligature round the finger about half an inch above the wound, and another at the wrist. She then rode off as speedily as possible to Newcastle for Medical aid. On the way she was directed to Dr. Irwin, Lake Macquarie-road, whom she found at home. The Doctor, seeing it was a bad case, immediately had recourse to Professor Halford's remedy. He at first scarified the wound, and poured some ammonia into it. Following up the Professor's directions, he also opened a vein above the wrist, and, with a syringe, injected a quantity of ammonia into it. He then kept the patient in constant motion, notwithstanding which, however, at intervals she appeared to be almost overcome with drowsiness, and at one time very nearly gave way to sleep. Dr. Irwin, with most commendable perseverance, then took the woman by the arm and walked her round the room until 2 o'clock in the morning, when she rallied, the drowsiness having left her. On Thursday, she appeared to have quite recovered, and returned home. It is usually understood that the bite of brown snakes is excessively dangerous.

On November 11, a man came under my care, says Dr. Dempster, of Beechworth, for treatment for the bite of a black snake. He was bitten about 8 a.m., and after several minutes had elapsed he pricked and incised the wound. Before this, however, he had felt very giddy. I did not see him for more than an hour afterwards, and treated him in the usual way, with brandy and ammonia, and scarifying the wound and applying ammonia. The man, however, fell into a state of stupor, and when I was called to him at midday we could not rouse him. I therefore injected liq. ammon. fort. into the saphena vein, and also hypodermically. This affected him at once, and after the second injection he woke up, and became sensible; his pupils, which had before been very sluggish, acted well; and his pulse rose from fifty-six to seventy. After this he went on well, with the exception of violent vomiting for twelve hours. He is now (November 15) convalescent, but very weak. I, of course, continued the stimulant treatment, but I certainly attribute the man's recovery to the injection of ammonia, of which I altogether injected about twelve minims. Professor Halford mentions, with reference to this case, that the liq. ammon. fort. should be diluted before injection in such cases with two or three times its quantity of water, and of this mixture from twenty to thirty drops should be injected into one of the larger veins. The syringe, he adds, should be carefully introduced, so as to give the ammonia a fair chance. He disapproves of merely throwing the injection under the skin, and believes that after the injection of the ammonia there is no necessity for resorting to the use of stimulants. In a matter so important as this, the result of a few more experiments will be looked forward to with great interest by the public generally, as they will no doubt be by the Profession.

Mr. Arnold, of Melbourne, writes as follows:—"Mr. Brown, stationmaster, Elsternwick, was yesterday, between the hours of eleven and twelve a.m., bitten severely on the third finger of the right hand by a brown snake, about 2 feet 10 inches in length. He felt great pain in the wound at the time, sucked the same, and applied a ligature of string. Nearly two hours elapsed before he was brought to my residence for treatment, as he did not feel the least alarmed at the consequences. On arrival, he had lost all power over the lower extremities, and had passed into a state of perfect insensibility, vomiting, feeble pulse, pupils sluggish, etc. Having adopted the usual plan of applying a firmer ligature, excised the flesh in the vicinity of the wound, and applied strong ammonia, giving brandy and ammonia, I sent for my neighbour, Mr. A'Beckett, to consult with me in the case. We then brought to our aid galvanism, which removed for the time, whilst the patient was under its influence, the insensibility. Thus, with the occasional administration of stimulants, was kept up for about two hours. Having in the interim sent for Professor Halford, he now, with Mr. Wooldridge, of South Yarra, came to our assistance. We then calmly and seriously reviewed the alarming aspects of the case, and came to the conclusion that if further means were not adopted our patient must sink. Messrs. Wooldridge and A'Beckett and myself therefore strongly urged Professor Halford to inject ammonia into the system, as originally proposed by him, the same having been a successful treatment in tried cases of animals poisoned by snakes, and more particularly in the case of a patient of Dr. Dempster's. At the time of the operation Mr. Brown was comatose. The effect of the injection of ammonia into the system was marvellous. In a very short time the patient became sensible, and in answer to a question 'how he felt,' replied 'Fine'—a very appropriate and significant word. From that time he improved, and all symptoms of coma disappeared. In five hours he was able, with very little assistance, to walk to a bed prepared for him; he slept composedly about four hours. At intervals during the day small doses of brandy, with beef-tea and milk, were given him, to combat with simple nervous exhaustion, we keeping him perfectly quiet by every means in our power. Description of operation: An incision was made through the skin, exposing the superficial radial vein, and the point of the syringe being introduced into the vein, the injection was completed."

Remarkable Case of Prostatic Calculi. — Dr. Paulicky gives an account of a prostate removed from the body of an invalid of the Hamburg garrison, 73 years of age, which felt exactly like a gall-bladder distended with calculi. The urethra was, in fact, surrounded by a large, smooth-walled, sinuous cavity, which contained the stones. It occupied almost all the lower half of the organ, only about two lines in thickness of the parenchyma remaining; and the calculi, instead of being embedded in this, were contained in the cavity so formed close in contact with each other. The upper half of the gland retained its ordinary appearance, containing only a few concretions. There were counted two hundred and forty calculi, the largest one measuring six lines in diameter, and weighing, three days afterwards, 2·7 grammes. Two others were nearly as large, and eleven others had a diameter of two lines. The great bulk of the calculi varied in size between millet-seed and lentils. There were also numerous little stones scarcely recognisable by the naked eye. In form and appearance these calculi much resembled gall-stones, but differed from them by their great hardness. The largest stone mentioned above had perforated the urethra.—*Wien. Med. Woch.*, October 21.

REVIEWS.

The Causes and Treatment of Lateral Curvature of the Spine. By Richard Barwell, F.R.C.S., Surgeon to and Lecturer on Anatomy at the Charing Cross Hospital. London: Robert Hardwicke, 192, Piccadilly. 1868.

We are glad to congratulate Mr. Barwell on a valuable addition to the pathology and treatment of spinal curvature. He tells us that his study of contemporaneous writers, English and Continental, presented such contradictions and irreconcilable theories that not one of them, nor all put together, appeared to account for the peculiarities of the disease. By a very original and ingenious process of reasoning, based on sound anatomical principles, he endeavours to demonstrate the true causes of curvature, and we think he has done so most satisfactorily. The chapters on the normal spine and the action of the serratus magnus are excellent.

A very important point in Mr. Barwell's theory is that the dorsal curve precedes the lumbar in ordinary cases; this curve having a predominance on the right side. This he explains to be owing to the rotatory action of the serratus magnus, the weight of the right arm, and greater volume of the right lung. The inspiratory action of the serratus magnus conduces largely, in women, to cause a lateral curvature, more particularly in the dorsal region, owing to the fact that thoracic respiration is more marked in them than in the male sex, whose breathing is chiefly abdominal. "These peculiarities," says Mr. Barwell, "have not as yet been satisfactorily accounted for, and, since they are essential characteristics, I must beg the reader to dismiss as untenable any theory—my own among them—which does not fully explain their occurrence and their constancy." We must praise Mr. Barwell for the careful observation and close reasoning which he has expended on the solution of this difficulty. The foregoing remarks constitute the main points in the theoretical portion of the author's work.

Mr. Barwell has long been known to differ essentially in his method of treatment in orthopædic surgery from others who have adopted this line of practice. He objects to the complicated machines used in order to promote a cure, and believes that the cases in which good has been effected have been those of the weight-bearing curves.

The plan of treatment which has been pursued by the author for some years resolves itself into three portions—viz., support, position, and exercise.

With regard to supports, they should never be rigid, and the bandage used by Mr. Barwell is contrived "simply to render permanent, by an elastic force, the office which the Surgeon's hands can only temporarily fill."

In Chap. VII., which treats of lumbar curve, the first curative means—position—is well introduced by a description and representation of the "sloping seat," the patient being placed on a wedge sloping from the convex to the concave side—a device from which it is evident that if that part of the pelvis which lies to the convex side be artificially lifted, the spine, forced by the law of balance, will *tend* to assume a curve in the contrary direction. This wedge, however, is modified in inclination by a stool, whose top can be, by means of mechanism, tilted gradually at one end without obliging the patient to rise or use muscular effort. To this treatment are added some simple callisthenic exercises.

An important peculiarity in Mr. Barwell's treatment of dorsal curvature is respiratory exercise. This consists in making the patient, sitting on the sloping seat, grasp two handles connected with strong elastic cords, these cords being fixed to staples in the walls on each side of the chair. The right arm is to cross in front of the body, and hold the handle attached to the wall on the left, while the left hand passes behind the trunk and grasps the handle from the right; thus a species of gymnastic exercise is performed, tending to equalise the respiratory efforts of the serrati.

The great point in Mr. Barwell's treatment is its extreme simplicity and disuse of complicated mechanical contrivances; and these conditions are arrived at from the anatomical and physical theories adopted by him. We most heartily recommend a study of the work. The woodcuts adorning it are carefully and artistically drawn.

There is a vacancy in the chair of Midwifery in the University of Aberdeen.

FOREIGN AND PROVINCIAL CORRESPONDENCE.

GERMANY.

THE ANNUAL CONGRESS OF GERMAN NATURALISTS AND PHYSICIANS.

Berlin, December 27, 1868.

(*Continued from page* 75.)

Professor Streubel, of Leipzig, then read a paper on dislocation of the thumb; Dr. Polack, of Vienna, on hydatids of the upper eyelid; and Dr. Van de Loo on a modified starch bandage. Dr. Prinz, of Dresden, spoke on relapses after the removal of laryngeal tumours, saying that they were most frequent in papillomata, where the base could not be so completely destroyed as it can be in mucous polypi and fibroids. He thought that the galvanic cautery would prove the best operative proceeding in such cases. Dr. Schintzler, of Vienna, however, said that he had had relapses in two cases of papilloma where the galvanic cautery had been used. Dr. Brenner, of St. Petersburg, then related the results of his electrical investigations concerning the organ of hearing. He had found that the auditory nerve answered in a peculiar manner to the continuous galvanic current, and that in cases of deafness and tinnitus this reaction was altered. Nervous affections of the organ of hearing were much more frequent than was generally supposed. Dr. Hagen, of Leipzig, said that his experience agreed with that of Dr. Brenner, and that he had seen very good results from Dr. Brenner's method of treating tinnitus. Dr. Magnus, of Königsberg, expressed his doubts about the diagnostic value of Brenner's experiments, but said that the therapeutical value of the method was very considerable. Dr. Erb, of Heidelberg, said he had been able to confirm Brenner's results in a case that had been under his care, and Dr. Moos, also of Heidelberg, related a few cases of tinnitus where the continuous current, applied according to Brenner's method, had proved successful. New surgical instruments were shown by Dr. Ravoth, of Berlin, Dr. Hochberger, of Greiz, and others. Prof. Schinzinger spoke on the treatment of bronchocele. He said that, in cystic disease, incision of the sac was the best method, but that, before opening the sac, a thread-loop should be drawn through its anterior wall, so that the Surgeon might be able, in case of hæmorrhage, to pull forward the walls of the sac, or to close hermetically the whole sac by means of sutures. In one case he dissected a dermoid cyst away from the sheath of the carotid artery, and removed the rest of the sac, and a sarcomatous lymphatic gland connected with it, by means of the écraseur. Where the bronchocele was sessile with a pedicle, he dissected the skin away from the tumour, and separated the pedicle with the écraseur. Injections of water into the sac, for clearing it after the operation, were not advisable, as they easily caused reflectory convulsions. Dr. Klein, of Vienna, said that the goîtres found endemically in Styria were mostly of the cystic variety. Tapping with subsequent injection was dangerous, because there was severe constitutional disturbance afterwards, and the tumour grew all the more quickly.

In the section for Midwifery and Diseases of Women, a discussion took place on the local treatment of the womb and its cavity by sounding, intra-uterine pessaries, dilatation, incision, injections, etc. Prof. Credé, of Leipzig, said that he had seen bad accidents caused by the introduction of the sound, such as spasms, fainting fits, severe pain, hæmorrhage, and inflammation, especially in hysterical women. He could not recommend the extended use of intra-uterine pessaries, and of laminaria and sponge-tents he had only rarely seen good effects. Incision of the cervix had proved useful in his hands for menstrual colics and sterility, but the patients ought to be carefully watched. Injections he had quite given up, as they seemed always to cause inflammation and severe pain. Prof. Hegar, of Freiburg, said his results with all the procedures mentioned were more favourable. Injections into the cavity of the uterus he only used for hæmorrhage, especially after abortion. Dr. Kristeller, of Berlin, said it was not necessary to be very timid in these matters. Since employing Marion Sims's speculum, he had never seen bad accidents after injection; he preferred, however, to apply remedies by means of camel hair-brush and cotton to the diseased parts. He often used the sesquichloride of iron and pyroligneous acid, without any trouble afterwards. Dr. Freund, of Breslau, then read a paper on the mechanism of the pelvis; Dr. Gruber on the

removal of a carcinomatous uterus; Prof. Maier, of Freiburg, on connective-tissue induration in the placenta, and its relation to irregularities of pregnancy and disease of the fœtus; Dr. Kaltenbach, of Freiburg, on the closure of the vagina in fistula urinaria; and Prof. Credé on changes of temperature in parturient women.

In the section for Infantile Diseases, Prof. Ebert, of Berlin, spoke on temporary blindness in the course of acute infectious disorders, such as typhoid fever and nephritis scarlatinosa. The patients lost their sight suddenly, and regained it as suddenly, within from twenty to forty-eight hours afterwards. There was neither congestion nor inflammation of the retina, nor paralysis, such as we observe it after diphtheria. In one case which ended fatally, the brain was found highly œdematous, and he thought temporary œdema of the centre was the cause of the blindness in the cases mentioned.

Dr. Ranke, of Munich, read elaborate statistics on the epidemic occurrence of chicken-pox, small-pox, whooping-cough, diphtheria, and scarlatina, in Munich, during a period of eight years. He did not believe that the contagium of chicken-pox and small-pox was the same. 85 per cent. of measles occurred in autumn and winter, probably because people were thrown more closely together during that season. The average mortality from measles was 1·7, but in children under one year of age it was 17 per cent. The average mortality from whooping-cough was 2·5 per cent., that from croup and diphtheria 12 per cent., that from scarlatina 7 per cent. Dr. Ranke's paper contained a large mass of valuable information, into which want of space does not allow us to enter. Dr. Schildbach then spoke on scoliosis and its treatment; Dr. Rauchfuss on fœtal endocarditis, with special regard to fœtal atresia of the ostium aortæ; Dr. Fränkel, of Berlin, on tubercle in the chorioidea of the eye; and Dr. Steffen on the examination of the heart and on endocarditis in children.

In the section for Lunacy, Dr. Meschede, of Schwetz, read a paper on heterotopy of the grey matter in the medullary fibres of the cerebellum, in an epileptic lunatic; after which Dr. Jessen spoke on physical double perception, which was owing to temporary incongruity of the action of the two hemispheres, whereby a double perception was caused, the weaker one of which was confounded with a reproduced perception of recollection. Dr. Koppe, of Halle, showed some preparations of the brain of patients who had suffered from paralytic dementia with syphilis. Similar specimens were shown by Dr. Hauptmann. A discussion then took place on several questions of the day, with regard chiefly to clinical instruction in lunacy, the administration of lunatic asylums, etc.

In the section for Public Hygiene and State Medicine, the chief points mooted were the canalisation of towns, the tables of mortality, infantile mortality, and certain questions concerning military hygiene. In the section for Medical reform the following resolutions were adopted:—"That the State should have nothing to do with the exercise of the Medical Profession as such; that it was the business of the State to see that Medical education and examination in the universities should be properly conducted; that only such Medical men should be recognised by Government as had been educated and examined in universities, and that there should be no difference as regards their status; that the State should not in any way interfere with or limit the action of Medical Practitioners; that all exceptional duties, services, and disciplinary measures which were still in some of the German States applicable to Medical Practitioners, should be abolished; and that questions regarding Medical reform should be discussed at every annual meeting of the Congress." With regard to the latter end, a committee was elected, with power to add to their number, for collecting in the meantime information respecting those points concerning which dissatisfaction at present exists in the Profession. There were also special sections for anthropology and ethnology, and for the consideration of the present state of instruction in natural science in the public schools.

BIRMINGHAM.

January 18.

A new out-patient department has recently been opened under very distinguished patronage, in connexion with the Children's Hospital. This Hospital has become a very popular institution with all classes of the community; hence it has flourished. In structure it is of the early Gothic style of architecture, and does credit to both architect and builder. Much of the success of this Hospital is due to the unremitting labours of its founder, Dr. Heslop, who has reared it with tender care, and who is still fondly attached to it, doing all he can to make it a stalwart and thriving charity.

Mr. Gamgee has hit upon a happy plan for extending the usefulness and operations of the Queen's Hospital. It is in the shape of an appeal to the "working classes" for co-operation on behalf of the proposed new accident and out-door department which is about to be erected in the rectory grounds adjoining the Hospital, and which have been lately purchased for that purpose. In furtherance of Mr. Gamgee's project, a meeting was held in the Town-hall on Saturday night, and was largely attended by the working classes. Mr. George Dawson took the chair, and made an eloquent speech on behalf of the scheme. Mr. Gamgee afterwards explained at some length, with his usual clearness and felicity of expression, the objects of the movement, and his remarks were listened to with much attention, and elicited rounds of applause. Some excellent speeches were made by several working men, and the sentiments which they expressed showed that they were fully alive, and appreciated the vital benefits which Hospitals conferred upon them, and that they were determined, "might and main," to make this fresh venture a magnificent success, and no doubt they will, and may they themselves reap all the glory of their labours. The new structure which, through their instrumentality, will be raised, is, I understand, to be called the "Working-men's Hospital."

The obstetric department of the Queen's Hospital, we hear, is about to be remodelled and put into better working order. A resolution has been passed by the committee in favour of an examination into the best way in which this can be accomplished. When we inform you that for some time past, in consequence of the non-attendance of students, the cases, both ordinary and extraordinary, have been attended by the honorary Surgeon-Accoucheurs, you may easily understand that such a perversion of the legitimate functions of the honorary officers has caused them to complain. The Queen's Hospital is the only Hospital which has attached to it a midwifery department, and if this were only properly and efficiently managed it would quickly rise into importance and favour with the public, more especially so now, because the Dispensary no longer affords relief to lying-in women, and the Lying-in Hospital has introduced the system of attendance by midwives—an experiment the success of which remains to be seen.

The guardians of the parish are about to effect sweeping changes in the system of out-door Medical relief. Already a public vaccinator has been appointed, who will supersede those who have hitherto held the vaccination contracts—the parochial Medical officers. How the guardians intend to reimburse their Medical officers for the loss of a considerable portion of their stipend occasioned by the withdrawal of the vaccination fees, has not yet transpired; but it is to be hoped that these responsible custodians of the parochial moneys will be guided in their dealings with their Professional *employés* by an enlightened policy, and treat them in a liberal spirit, for, by so doing, they cannot fail to evoke in return from their Medical officers redoubled zeal and interestedness in the performance of their respective functions. We are glad to learn from the *Scientific Opinion*, January 13, that Prof. Anderson, of our Queen's College, is a candidate for the office of Gas Examiner to the City of London, because we believe him to be an able gas chemist. From the many important investigations which he has made in gas questions, and the numerous papers which he has contributed to the *Gas Journal*, we must infer that he is peculiarly well qualified for the appointment. During the time Prof. Anderson lived amongst us he earned for himself a great name as a chemist and an authority on gas topics. On one occasion we believe that he undertook and carried to a successful issue a series of experiments on the same subject at the request of the Board of Trade, London.

Muriate of Lime in Chorea.—Dr. Rodolfi says that, with ample opportunity of treating chorea at the Brescia Hospital, and after trial of the great variety of substances recommended for this purpose, he has come to the conclusion that the best of these is the muriate of lime, preceding its employment by a purgative, composed of castor oil, calomel, and santonine. When no cerebral hyperæmia is present he then begins with the muriate, giving from seven to fifteen grains in the twenty-four hours. Improvement usually follows after the first day, and the cure is completed in from a week to a fortnight. An addition of seven centigrammes per diem of the extract of belladonna augments the efficacy of the muriate. —*Gazetta Med. Lombard.* January 16.

GENERAL CORRESPONDENCE.

THE DURATION OF ACUTE RHEUMATISM.

LETTER FROM DR. HENRY KENNEDY.

[To the Editor of the Medical Times and Gazette.]

SIR,—I was much interested in the papers on the above subject lately brought forward by Drs. Gull and Sutton at the Royal Medico-Chirurgical Society. I expected, however, that some one of the speakers would have answered the authors by quoting the very able paper of Dr. Garrod, published some years back, in which he proves, as I think conclusively, that a specific treatment materially lessens the duration of the disease, and brings it considerably within the period set down by Drs. Gull and Sutton as constituting the natural history of the affection.

Dublin. I am, &c. HENRY KENNEDY.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

LETTER FROM Mr. W. HARGRAVE.

[To the Editor of the Medical Times and Gazette.]

SIR,—I reply to your comments on my letter in your number of January 23. It was not necessary to refer me to any portions of the *Proceedings* of the General Medical Council for information. If your contributor will refer to page 170, vol. v., he will see that Dr. Aquilla Smith's Report on the Examinations of the Royal College of Surgeons in Ireland refers to those held in November, 1866, and if the same individual will refer to the *Proceedings* of the Medical Council for June 8, 1867, page 248, he will read as follows:—"The Committee have learned from Mr. Hargrave that since the visitation the decisions are made by marks, and that a member of the Council sits at each table with the examiner." It has been the practice of the Irish College of Surgeons for many years to have Councillors attending every examination. Is it fair, just, or honourable to make an *ex-parte* quotation (which is too much the habit with most men now-a-days) to prop up a partial report? Reading that report, the inference would be to any unbiassed mind that no improvements had taken place in the manner of conducting the examinations of the Irish College of Surgeons; and I regret to observe that the report of your contributor is too much in accord with the spirit of English writers on this country, who, through utter ignorance, and without due inquiry, make assertions damaging to it and to its institutions, following in the wake of the *Times*, for the purpose of flinging discredit upon us. Requesting you will give this communication insertion in your journal, I am, &c. WILLIAM HARGRAVE.

56, Upper Mount-street, Dublin, January 23.

*** Had Mr. Hargrave confined himself in his first letter to stating that since the presentation of the report to which our article referred the system of examinations at the Royal College of Surgeons in Ireland had been improved, we should have gladly published his letter without any comment; but as he gave a flat and *unqualified* contradiction to our description of that examination, which he now admits to apply perfectly to those held so lately as November, 1866, we had to point out that our remarks were founded literally on the official report of the visitor of the examination in question. When the visitors appointed by the Medical Council again report on their visitations of examinations, we shall hope to find many changes and improvements which we shall not be slow to notice in the case of the Royal College of Surgeons of Ireland. What Mr. Hargrave means by an *ex-parte* quotation we do not know; if he means that the Medical Council publish *ex-parte* reports, he should find fault with that body, and not with us.

QUARTERLY RETURNS OF LUNATICS BY MEDICAL OFFICERS OF UNIONS.

LETTER FROM DR. T. ST. J. HUDSON.

[To the Editor of the Medical Times and Gazette.]

SIR,—As some considerable misunderstanding exists in the minds of Medical officers of unions and boards of guardians as to the class of lunatics intended by the Lunacy Act to be reported quarterly, and for which each Medical officer is paid by the Board the sum of 2s. 6d. per head per quarter, I have forwarded for publication a copy of the correspondence between myself and the Secretary of the Commissioners in Lunacy on the subject. I am, &c. T. HUDSON, M.D.,

Medical Officer Shepton Mallet Union.

Shepton Mallet, January 24.

Shepton Mallet, January 4, 1869.

Sir,—I have not as yet made the usual quarterly returns for the quarter ending December 31, 1868.

It appears that the Guardians of this Union are of opinion that the Lunacy Act does not contemplate a return of the different phases of insanity made by their Medical officers. I shall feel obliged if the Commissioners of Lunacy will do me the honour to inform me what description of lunatics are to be visited by the Medical officers and returned quarterly, in order that we may have a guide for our future reports. In referring to the quarterly sheets of the Medical officers of this Union, you will see that persons who are imbecile from age as well as disease are returned.

Some of those reported are suffering from "epileptic fits;" some from imbecility caused by one or more attacks of paralysis from apoplexy; some are congenital; some are imbecile from old age. The majority, except those either confined to bed or the house from age or physical causes, are capable of earning their own maintenance, with some assistance from the poor-rates.

I have always returned those only whom I considered not responsible for their own acts in a legal point of view.

I shall feel obliged if you will send me an early reply, as my quarterly returns must remain in abeyance until I hear from you. I have the honour to be yours obediently,

T. HUDSON, M.D., Medical Officer.

The relieving officer informs me that three-fourths of those returned by me are in receipt of full relief—viz., 2s. 6d. and one loaf weekly—the other fourth of partial relief.—T. H.

Office of Commissioners in Lunacy, 19, Whitehall-place, S.W., January 12, 1869.

Sir,—The Commissioners in Lunacy, at a meeting of their Board yesterday, had under consideration your letter of the 4th inst., wherein you request for your future guidance, and that of your colleagues, Medical Officers of Poor-law districts, to be informed what description of lunatics are to be visited and returned as such in their quarterly lists.

Without attempting to define insanity in its Medical or legal sense, the Commissioners instruct me to convey to you their opinion that, for the purposes and within the meaning and intention of the Lunacy Acts, there must be positive unsoundness of mind rendering the person unfit to be at large, and incapable, by reason of weakness of intellect, of taking care of himself.

The Commissioners, in their thirteenth report to the Lord Chancellor, stated as their opinion "that all persons receiving parochial relief on account of mental infirmity or imbecility should be brought under the notice of the Medical officer, visited by him, and included in his list."

To that opinion they adhere. It does not, however, follow that the list should include all paupers of weak mind or impaired memory, the result merely, and frequent concomitant, of advanced age and decay of nature.

Such persons commonly known as fatuous may require special care and supervision, but need not, on that account only, be classed as lunatics for the purposes of the Act. At the same time, it may be that their mental condition, habits, and conduct render it proper that they should be so classed and treated. In practice, every case must be judged of and determined upon its own merits, and guardians are entitled to inquire and satisfy themselves as to the propriety of including any particular pauper in the quarterly returns of District Medical Officers.

The Commissioners think it desirable at least that, in the quarterly lists, under the head of form of mental disorder, one of the statutory terms should be employed—viz., "lunatic," "idiot," or "person of unsound mind."

I am, Sir, your obedient servant,

CHARLES PALMER PHILLIPS, Secretary.

To T. St. J. Hudson, Esq., Medical Officer of the First District of the Shepton Mallet Union.

SAUSAGES.—Dr. Sarvis, Medical Officer of Bethnal-green, last week procured the destruction of a quantity of diseased meat that had been seized on the premises of two wholesale sausage makers. The men employed in the shops were working it up for the chopping-machine.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAYS, JANUARY 12 AND 26, 1869.

Mr. SOLLY in the Chair.

DEBATE ON DRS. GULL AND SUTTON'S PAPER ON THE TREATMENT OF RHEUMATIC FEVER.

DR. FULLER, after expressing his obligations to the authors of the paper, said that their researches as to the natural course of rheumatic fever rather served to confirm the old notion that its proper cure was six weeks in blankets; but although they made out that nine or seventeen days was the regular course of the disorder, the facts were rather different. He had consulted Dr. Gull's second report, to which, however, he would not have referred had the facts of the present cases been read. The first patient was forty-two or fifty days under treatment, the second at the end of twenty-two days was doing well, the third went out at the end of forty-two days, the fifth was discharged at the end of fifty-four days, and so on. The course of the complaint was therefore to be five or six weeks under treatment. If they took the alkaline treatment, he found that the average of his own cases was seventeen or eighteen days till *they left*. Here the two systems were compared. As to the condition of heart, it was said that the liability to heart complications was greatest at first. This was quite true: but this was only saying that those parts which are most liable to attack are those which are attacked first. He must demur to the slight liability said to exist to such complications. When registrar at St. George's during four years many cases of heart complication occurred during the second and third weeks, and in his subsequent experience he had seen this over and over again. As to what was called rheumatic fever, at St. George's the term was limited to those cases characterised by fever, furred tongue, and quick pulse. The reason why alkalies were so much spoken against was that other affections, as pyæmia and acute gonorrhœal rheumatism, had been mistaken for the true complaint, for in these diseases alkalies were of no service, but under their use the patient got worse. There was no disease yielded to treatment so readily as acute rheumatism. When he could number cures by the hundred without pericarditis, it was fair to conclude that the remedy was of some service. Alkalies were quite as good in private practice, and he would still believe in alkalies—they were almost specifics.

The PRESIDENT remarked that to the list of diseases confounded with acute rheumatism Dr. Fuller might have added acute periostitis.

Dr. FULLER: Yes, and many cases of gout.

Dr. GULL said when this question was taken up at Guy's he took great care to ascertain exactly the duration of the disease and the period of retention in the Hospital. The only true criterion of the former was temperature; consequently Dr. Fuller's data were fallacious. They must have something more exact than the stay in Hospital. Dr. Fuller also remembered many instances of heart affection occurring in the second or third week. Such complications require the greatest possible care in diagnosis when the patients enter; otherwise they may seem to be developed in the second or third week. This was another source of fallacy. In such cases as those reported the question of diagnosis might be put on one side. Gonorrhœal rheumatism does not occur in young girls of 13 and 15.

Dr. STEWART remarked that about six years ago Dr. Gull narrated the facts of some sixty cases of acute rheumatism treated without internal remedies, and he wanted to hear more of his results; not getting these, he proceeded to make some investigations on his own account. He tried old plans, in some of which he had considerable confidence, but he found that he had little reason to be so, especially with regard to alkalies, for heart affection frequently came on when under the full alkaline treatment. He had observed fifty-six cases of acute rheumatism in 1864-66, and, on reckoning, he found that the average number of days the cases were under treatment, whether with or without alkalies, was forty-two, and heart complications were also nearly equal in both. In future observers should agree as to the termination of the disorder. In many of his own cases the temperature had not been carefully taken, which he regretted, as he looked on the temperature as of great importance. In many cases the acute symptoms came back even after the patient had left the Hospital. The question was not to be decided by hundreds or even thousands of cases, but by prolonged study extending over many years, for the fever varied in different years. The eruptions were different, and sometimes the symptoms became typhoid. In these last cases he was glad not to have given alkalies. He had noticed in the *Guy's Hospital Reports* that opium was sometimes given; he himself had never used anything except belladonna applied over the heart.

Dr. GULL said the opium was not given except when absolutely necessary, and then not against the rheumatic process, but merely to relieve pain.

Dr. DICKINSON said that, as to heart disease, he doubted its frequent occurrence in Hospital. Out of 113 cases of heart complication he had collected, 35 occurred in the Hospital, or about 1 in 4. In 28 cases treated without alkalies 12 were seized in the second week, 7 in the third, and 6 in the fourth.

On the motion of the President, the debate was adjourned till Tuesday, the 26th inst., when it was resumed by

Dr. DALDY, who asked what was intended by acute rheumatism, and pointed out that many forms of disease are included under the term as commonly employed. There is the lithiasis, for which Dr. Warren the elder said that six weeks was the best remedy. Were we asked to do nothing for this? Then there is a subacute rheumatism, which resembles remittent fever plus rheumatism, and tends to a natural termination in seven, fourteen, or twenty-one days. Some of the cases recorded by Dr. Gull in the *Guy's Hospital Reports* appeared to be of this character, and the natural duration of the disease would be in harmony with the results recorded.

Dr. HANDFIELD JONES pointed out the great dissimilarity between different cases of acute rheumatism, and insisted upon the insufficiency of the phenomenal study of disease, unless it led on to something more. In rheumatism he knew only the phenomena, and treated them empirically. He thought that differences in the duration of the cases were partly due to differences in the recuperative power of patients. In cases where there was high fever and great formation of acid, acid sweat, acid mouth, acid urine, he thought alkalies were indicated, and he found them grateful and beneficial to the patients. Where there was not this tendency to acidity he should not expect benefit from alkalies, and he had obtained good results by the use of quinine in large doses, twenty or thirty grains daily. Where there was much pain and swelling of the joints blisters were useful, but not if there was much pain with only slight swelling. Before attempting to arrive at results by statistical means, he thought we should determine whether what we call acute rheumatism was really one disease, in the sense in which scarlet fever or measles is a disease, or whether the term included several forms of morbid action.

Dr. WYNN WILLIAMS thought the discussion had wandered from the point, which was whether mint water or medicine should be given to the patients. He took it for granted that every Practitioner knew what was meant by acute rheumatism, and could distinguish it from subacute. He had himself suffered from acute rheumatism severely, and more than once. He had tried in his own case the do-nothing plan, and also the alkaline plan, and, as the result of his own experience, he strongly advised the use of the latter. Much relief might often be given to painful joints by surrounding them with spongiopiline, soaked in a hot lotion containing subcarbonate of potash and laudanum.

Dr. WILKS thought it the duty of as many Fellows as possible to give their opinions upon the question. He was himself more or less in accord with the authors of the paper, both from his own experience and from the merits of the paper itself. After long experience, he still did not know what was the best remedy, and found that the actual cases are far from being uniform. He had used all the suggested remedies in turn, and had found them all nearly equally successful. It was quite time such a paper should be read before the Society. He remembered a discussion four or five years ago on the same subject, in which every speaker advocated his own remedy, and in which, if a non-Medical visitor had inquired whether the disease would get well of itself, no one present could have answered the question. The method pursued by the authors was the only legitimate mode of investigation, and men who did not follow it rushed blindly into the use, in all cases, of any much-vaunted medicine of the day, such as bromide of potassium, carbolic acid, or what not.

Dr. BILLING had hoped that before the last speaker sat down he would have given his opinion about the utility of giving mint water—that is, of doing nothing—in acute rheumatism.

Dr. SIBSON inquired whether the treatment of the authors

was indeed doing nothing? He thought not. He maintained that it was doing what was both more desirable and more difficult than writing prescriptions upon paper. It was placing and maintaining the patient in the condition most favourable to recovery, and shielding him from every hurtful external influence. Nothing required so much care and skill as to do no harm; nothing was more worthy of remembrance than the Hippocratic maxim, "To do good, if possible, but not to do mischief." Was there not a common element in all the methods that had been discussed? and was not that element the warmth and rest of the Hospital, as contrasted with the conditions of the patient's home? For two years past he had treated all cases of acute rheumatism at St. Mary's without internal drugs, but with much care. Many years ago he had seen a patient walk convalescent out of St. George's to return two days later with a fresh attack; and he thought that the difficulty of enforcing proper rest after pain had subsided was one of the chief causes of relapse. At St. Mary's the chief points were—1. Absolute rest in bed, insured by swathing the arms and legs in cotton wool, and by supporting the feet by pillows, so as to relieve the ligaments from their weight. 2. The removal of the pressure of the bedclothes by a cradle. 3. The removal of local pain by smearing the affected joints with belladonna liniment, sometimes strengthened by rubbing down the extract in it. He attached little importance to the mere duration of the cases, and all importance to the safety of the heart. He believed that the plan he had laid down, by causing the heart to be called upon for a minimum of exertion, did preserve it from risk in a very great degree. If the articular pain were very severe, with much redness and swelling, he would apply a few leeches; if without much redness, he would inject a little morphia under the skin. He objected, on principle, for himself, to the peppermint water, not approving of pretended medication. For the anæmia and weakness of convalescence he gave a little iron and quinine.

Dr. Billing rejoined that, although giving mint water was doing nothing, the plan they had just heard could not be so described. It was, however, not the work of a Physician, but of a nurse. He was well assured that there was a better method of treating acute rheumatism than by the administration of mint water.

Dr. Anstie confessed himself to be without distinct belief in the efficacy of any treatment other than that described by Dr. Sibson. Still, the use of alkalies had not been scientifically condemned; and there appeared to be a good deal of evidence from experience in favour of them. Before giving them up as of no value, we ought to ascertain whether those who fail with them carry them far enough, and really produce alkalinity. In some Hospitals, he knew, this matter was carefully tested, but he thought many failures were, perhaps, due to the treatment not being carried far enough. A friend, whose absence he regretted, and whose name, which, in his absence, he would refrain from mentioning, would be recognised as that of one of our best observers, was in the habit of using alkalies in very large doses, and with marked success. The use of nitrate of potash was sometimes erroneously described as alkaline treatment; this salt being in no therapeutic sense an alkali, but a sedative of very peculiar character, and owing any efficacy it might have to its sedative properties alone. He deprecated leeching under any circumstances, and thought the hypodermic injection of morphia the best method of relieving pain.

Dr. Leared inquired whether there was any reason to believe in the actual presence of lactic acid in the blood of rheumatic patients, and whether the perspiration became alkaline under alkaline treatment?

Dr. Reginald Thompson said that, as Registrar of St. George's, he wished to state that exactly 100 cases of acute rheumatism had been admitted into the Hospital during the years 1866-67. Of these cases, 48 were admitted with heart complication, 21 were attacked by heart complication while in the Hospital, and 31 remained free. Twenty-three were cases of pericarditis, of which six in each year came on after the patients had been three days in Hospital. Excluding these patients, whose stay was protracted, the average stay in Hospital was 22 days in 1866, and 26 days in 1867. Alkalies were given in large doses, and the urine was always rendered alkaline. The average stay in Hospital of the cases complicated with pericarditis was 46 days; and in the cases in which the date of the commencement of the attack could be accurately determined, it occurred in one case on the 9th day, in two on the 11th, in one on the 22nd, and in one on the 49th. The crisis of the disease was usually on the 7th, 8th, or 9th day.

Dr. Habershon observed that he thought the frequency of relapse bore some proportion to the depressing effects of previous treatment; and believed that he had seen morbid irritability and other bad symptoms in connexion with the use of very large doses of alkalies.

Dr. Dickinson wished to supplement his observations in the former debate by saying that, when Registrar at St. George's, he saw a large number of cases of acute rheumatism, treated by different methods and under the care of different Physicians. Of 110 patients treated by different methods, among which might be mentioned bleeding, and the use of mercury, of guaiacum, and of iodide of potassium, 35 had endocarditis or pericarditis, coming on in the house after treatment was commenced. Of 47 patients treated by alkalies, there was only one in whom the commencement of heart disease was discovered after admission. This was a case of pericarditis. Alkalies should be used with discrimination and care, and only in the cases of acute acid rheumatism, which are precisely those in which the heart is most prone to be attacked. He believed that the alkaline treatment shortened the duration of acute rheumatism to some extent, but that its great value was in the protection it afforded to the heart. He would be glad to hear how the hearts had fared among Dr. Sibson's patients at St. Mary's.

Dr. Sibson had not then strict statistics upon the point, but was able to say that he had never before had so small a proportion of cases of heart disease. Without comparison with the statistics of other Hospitals during the same period of time, it would be impossible to say how far this might be due to the treatment. He had been astonished to find how few patients went out with apex murmur.

After some remarks from Mr. Macilwain,

Dr. Sutton briefly replied. He said that Dr. Fuller had complained of the omission of the dates at which the patients left the Hospital. These dates were wholly unimportant, because some patients had been kept in Hospital to test the permanence of the cure; others until arrangements were made to send them to the country; others for other reasons. With regard to diagnosis, he admitted that it was not always easy to draw a line between rheumatic fever, acute rheumatism, and some cases of acute gout. He believed all the cases in the paper had been fairly named. Many of them were in young females; and certainly none of them were gonorrhœal rheumatism. Touching the date of the commencement of pericarditis, he called attention to the possibility of overlooking the very strictly localised creak, which sometimes exists just under the second rib for three or four days before being developed into a well-marked murmur.

THE PATHOLOGICAL SOCIETY.

Tuesday, January 19, 1869.

Dr. Quain, President, in the Chair.

The President, on taking the chair, addressed the meeting as follows:—Gentlemen,—Owing to the practical character of our proceedings, and the very limited time at our disposal, it has never been the custom for those who held the office which I have now the honour to fill to address you in a lengthy or formal manner on entering upon their duties. I shall, therefore, occupy your attention but for a few minutes; the first of which shall be devoted to offering you my sincere and grateful acknowledgment for this proof of your confidence; and then to the expression of a hope that I may still find myself, at the close of my period of office, in possession of that confidence which I so much value. For my guidance I have the examples of the great and distinguished men who have preceded me in this chair, and whom I follow, I say in all sincerity, with such unequal steps. I feel, too, that should difficulties occur, for which, it may be added, there has been no precedent in our history, I can ever rely on your loyal and generous support. As I now address you, I cannot resist the impulse of memory which takes me back to a period some twenty-two years ago, when this Society first came into existence; and I would wish to dwell for a moment on the gratification which I share, in common with those who are still amongst us—and they happily are not few—who assisted at its origin. The idea of forming such a society on an independent basis, suggested, no doubt, by the existence of the Pathological Society of Dublin, first occurred to Dr. Bently, a name still borne in recollection by the early members of this Society. I can never forget the pleasure derived from the first communication received from Dr. Bently, then a stranger to me, asking my opinion of the feasibility of

carrying out such a project. It was evident that a society organised as he proposed could utilise the vast mass of morbid anatomy which must be found in a population of some three millions of people, and of which, at that time, but a very limited use was made. Teachers in the Hospitals, and students in the Medical Schools, had opportunities of studying morbid anatomy, as it was then studied. But we felt then, as would be the case even now, were it not for the existence of this Society, that to the busy Practitioner who had little time and few opportunities for making post-mortem examinations, such a society would supply an immense want. It would bring before him, from Hospitals and other sources, specimens which he could not otherwise see; he might hear them described and discussed; he would be made familiar with the subjects against which he was daily contending; and he would, so to speak, feel himself cleaned from that rust which is ever ready to accumulate on all of us. Need I say how fully these anticipations have been realised? The best, the busiest, the wisest, of our Practitioners in every rank have come hither, never failing, as was said by one of our most learned presidents, "to learn something at every meeting." This, gentlemen, in our idea at that time, constituted a large share of the benefit we expected to receive or to confer. It is true that we anticipated useful results from bringing together so many minds more or less devoted to the study of pathology, but I question if the most sanguine amongst its founders anticipated the results which have been realised by this Society. It was my intention to have brought before you an epitome of these results; but when I came to examine our work, when I referred to the admirable index given us by our colleague, Mr. Holmes, I felt that the accumulation of material was so vast that it would be impossible to bring a useful sketch of it within reasonable limits, and that in a short and meagre outline injustice must be done to the Society and to its workers. There is little cause for regretting this difficulty. The volumes of *Transactions* published by the Society, accessible and familiar to all cultivators of pathology, are themselves the records of what we have done. There is scarcely any known morbid condition which will not be found investigated, described, and illustrated more or less fully in these volumes. That they are the most valuable storehouses of pathological facts in existence is proved by the abundance of materials which they supply to writers on the subject, both at home and abroad. The original members of the Society may well feel gratified at these results. The younger members will fully participate in this feeling if they will refer to the state of pathological knowledge in what, comparing the present with the past, may almost be called the prepathological period—that is to say, five-and-twenty years ago. It is true that post-mortem examinations were conducted by zealous and able men, that drawings and models were made, and specimens collected in museums—that pathology was said to be taught and studied. I well remember the teaching of my friend, the late Sir Robert Carswell, whose pupil I was so fortunate as to have been, and I mention his name with the greatest esteem as the most distinguished pathologist and teacher of that time, one whose pathological drawings have never been surpassed for accuracy and beauty. Yet, if you refer to his great work published then, and compare the morbid anatomy and the pathology of that period with the present, you will be amazed at the progress made in the interval. It was no fault of our predecessors that they are so much behind us. Physical science has advanced, and we have taken advantage of its progress. We have taken to our aid the microscope, the test-glass, and the crucible. We search into the depths of the ocean; our predecessors went but a little way beneath its surface. Comparing our knowledge then (I speak more especially of morbid anatomy) and now as accumulated by this Society, by our fellow-labourers at home, and still more by those abroad, I do not hesitate to say that the number, the value, and the accuracy of its facts and observations will bear favourable comparison with like progress in any, as they are called, of the more exact sciences. Indeed, dealing here as we do with inanimate matter, and with the operations of physical agents upon it, we acquire, in many cases, something of that power which gives accuracy and certainty to researches in the physical sciences. Our materials are abundant; our workers able, skilled, and untiring; our appliances are efficient. We work under favourable circumstances, for we are freed from the disturbances which embarrass us when we deal with living beings and with the circumstances that influence them. In morbid anatomy, studied thus, we have a safe and true basis for pathological knowledge in its widest sense. It is thus alone we can hope to learn what the conditions are for the cure of which our remedial agents are required; it is thus alone we can hope to get rid of the doubtful and the uncertain in the practice of our art. Encouraged by success in the past, let us strive for greater successes in the future. Let us be firmly assured that an accurate knowledge of disease is the true key to an accurate knowledge of the means by which it can be prevented, can be arrested in its progress, or cured. Gentlemen, we have rejoiced in our wealth, but, like some young men who have attained their majority—as we have just done—we find ourselves embarrassed by our riches. We hear representations, I will not call them complaints, of our extravagance. We hear that there is not time to examine and discuss the subjects brought before us, that we do not derive all the profit from our meetings that they might be made to afford us. There are grounds, no doubt, to some extent, for these representations. The difficulty must be met. But, gentlemen, let me beg you to remember that, though your Council may do something—and they have this evening appointed a committee on the subject—to mitigate these inconveniences, much of the remedy is in the hands of the members themselves. Independently of the admirable reports of our committees, which may be read in the abstract, or as summaries, by the secretary, the subjects brought before the Society may be referred to the following heads:—1st. Specimens of an ordinary character, duplicates, it may be, of specimens previously presented and described. 2nd. Specimens and descriptions of them of greater pathological interest. 3rd. Pathological essays or summaries of collected cases. It has been suggested that specimens under the first head should no longer be presented to the Society. The rejection of such specimens would, for many good reasons, be very objectionable, and their interference with the more regular progress of our proceedings, I doubt not, can be obviated by their being simply presented and sent round, with labels indicating such points of interest as belong to them. With regard to the subjects comprised under the second and third heads, it cannot be denied that the description of many of them may be more condensed when read at the meetings, whilst fuller reports may be reserved for the *Transactions*. Might I quote on this point, as a guide, the advice of one who was himself a distinguished speaker and writer, when he says—

> "Concise your diction, let your sense be clear,
> Nor with the weight of words fatigue the ear."

By such means, and by others of minor detail which your Council is likely to propose, I hope and believe that our meetings will still maintain that interest which has rendered them from their commencement so continuously attractive.

In conclusion, let me say that we must not look on the object of our pursuits as specialists, nor on the specimens brought before us as objects of mere interest, however great, or of curiosity, however striking or remarkable. All we do here should be done in relation, if not in absolute or indicated connexion, with the other departments of our work. When we see the remarkable specimens of disease submitted to us in such rich abundance, we may be attracted by the unique character of some, by the great bulk of others; some may claim attention as illustrating rare skill in diagnosis, others by the rapidly destructive character of their action; some attract notice in consequence of the success with which their nature has been investigated and made clear, others by the obscurity which still surrounds them in spite of all investigation. These points are all worthy of notice; but there is something more worthy still. Be it remembered that these diseased specimens are all so many illustrations of the weakness of our art. If our means of cure were more efficient, our specimens would be fewer. It is true that there is a profound interest in studying, as morbid anatomists, these various subjects; but let us not be fascinated by our pursuit. Let us remember that the duty, the aim, the ambition of our science is to cure disease, and let us look always on these objects to that end. We may, as we go on, with the mental eye connect them with their origin and their effects; we may consider their physical conditions as well as their influence on organs and textures, and thus deduce from their clinical histories their physical signs and their symptoms. Let us thus make our morbid anatomy subservient to our diagnosis; still more so to our methods of treatment and cure. Thanks to the morbid anatomy—thanks to the physical sciences—diagnosis can hold its own. Would that we could say the same in reference to the treatment of disease. This is our weakness, here we fail. But, gentlemen, there are grounds for hope that this failure will, ere long, be converted into success, and that our therapeutics will keep pace with our pathology and diagnosis. We hear "want of faith in physic" too often talked of and too hastily accepted. Beyond all question, the treatment of disease on general principles has

improved equally with the other departments of our science. But we aim beyond this: we seek for specifics, and because we fail to find them, we hastily declare our want of faith in physic. It seems to me that such conclusions are premature; that if we knew more of remedies and their action, and if we brought them more in direct relation with the branch of science which we here cultivate, our success would be greater, and our faith would be stronger. On all sides we see efforts made to realise these objects; we see one such effort in the younger sister of our Society so recently brought into existence, and for whom we desire all prosperity; we see it in the investigation by accomplished Physicians going on around us. Let us wish them all success; and, finally, gentlemen, let us hope that the time is not far distant when our treatment of disease will be alike scientific and efficient, and when our Profession will rank as high in its scientific character in the treatment of disease as it is now unselfish in trying by sanitary rules to prevent its occurrence and its spread.

Dr. Moxon showed a specimen of Primary Cancer of the Lymphatic Glands, Spleen, Tonsil, and Gland at the Root of the Tongue. It occurred in a healthy-looking man, aged 61, who came into Guy's for tumour in the neck, and died soon after an operation for the removal of this tumour. The tumour was found to be part of a chain of enlarged glands that extended down the neck. The mediastinal glands and those within the abdomen were also enlarged. The spleen was large, and had in it very numerous small angular formations of a growth like that in the glands. The left tonsil was of six times its natural size, and it, as well as some large glands at the root of the tongue, was in the same state as the glands. This state, as far as the appearance of the tumour went, would be called encephaloid cancer. One of the very large mediastinal tumours had infected its neighbourhood, and the tissue around was changed to the same cancer; this change extended into the lung to the depth of an inch. This case corresponds partly to those which Dr. Hodgkin first described, and which Dr. Wilks has named after him—cases in which the lymphatic glands are enlarged with firm white formation, and the spleen contains the same formation in isolated patches. Dr. Moxon believed it to belong to this group of cases, which he looked upon as a natural group composing a distinct form of disease. He did not think that Virchow was right in making light of Hodgkin's disease. Virchow regards the change in the spleen as secondary to that in the glands—indeed, as metastasis—but the spleen is very rarely the seat of ordinary metastasis of cancer; and again, metastatic formation takes a rounded shape very different from that of these formations in the spleen. Further, this view makes no account of the correspondence of the association in disease of the spleen and glands with their association in healthy formation. The coincidence of some of these cases with leukæmia, which Virchow first showed, is very interesting. Dr. Moxon would consider this to mean no more nor less than that leukæmia is tumour of the blood equivalent to the tumour in the lymph glands. It is to be expected that the blood—a fluid tissue—would have its fluid cancer.

Dr. Murchison exhibited a Diseased Heart, having round it a calcareous deposit like a shell, the result of former pericarditis. The heart was hypertrophied, yet the valves were scarcely affected. The history of the case was imperfect.

Mr. Callender exhibited a specimen of Femoral Bubo ulcerating into the femoral vein and artery. The artery was opened at the junction of the superficial and deep branches. The patient was a weak young man, who came into the Hospital with a sloughing chancre and bubo; by the extension of the latter, the vessels were opened. Such an occurrence was extremely rare, even although the vessels were completely exposed. It has not occurred at St. Bartholomew's for thirty years. When Mr. Paget was a pupil there, a tradition existed amongst the House-Surgeons that they used to be frequently called up to arrest hæmorrhage under such circumstances.

Mr. W. Adams said there was a specimen at St. Thomas's Hospital, which was supposed to have opened the main trunk, but it turned out to be a small branch only.

Mr. Spencer Watson exhibited a Wasted Eyeball containing shot and bony deposit. The shot had remained dormant in the eye for twenty-four years, after which the opposite eye became affected, probably from the bone formed, and the eyeball had to be removed.

The same gentleman exhibited a Fibrous Tumour the size of a split pea, removed from the temporal side of the cornea and sclerotic.

Dr. Kelly exhibited a specimen of Embolism of the Pulmonary occurring in a woman aged 21. She was six months gone in pregnancy when admitted to King's College Hospital for disease of the rectum, under Mr. Henry Smith's care. She was suddenly seized with dyspnœa; the child was expelled, and she died in two hours. The lungs were collapsed, and a clot existed at the bifurcation of the artery. There was another at the bifurcation of the common iliac vein, from which the emboli had apparently become detached. In the pulmonary it had increased in size. It was difficult to explain its origin.

Dr. Playfair said his researches showed that in every case of true embolism death occurred about fourteen days after delivery—in fact, not till the fibrine had had time to degenerate and be ready to break off. He was therefore inclined to think that in this case the primary clot depended on the operation performed some eight or ten days before her death.

Dr. Kelly said the veins between the rectum and the clot were quite healthy. He thought the clot had been formed long before.

Dr. Crisp exhibited several specimens of Tubercle in the common Fowl. The birds last year were brought from a district in Suffolk where tubercle among birds was unknown, and after being kept for about six months in a very damp hen-house at Chelsea, their livers, spleens, and mesenteric glands became tuberculated. Dr. Crisp thought these very important specimens, as showing the effect of a damp and confined atmosphere, one of the most frequent causes of phthisis in the human subject. He had examined many years since a great many of the animals dying at the Regent's-park Gardens—a locality that was damp and foggy—and he came to the conclusion that this state of atmosphere had much to do with the production of tubercle, as it was far less prevalent at the Jardin des Plantes at Paris and in other collections in dry and airy districts. On going over the proportion of cases of phthisis to the population of the 623 districts of England and Wales, he found that a moist and damp atmosphere with a limited circulation of air was a common cause of phthisis. He did not think that the nature of the soil had much to do with it if the country was open and had a free circulation of air.

The President inquired if Dr. Crisp had seen Dr. Buchanan's paper.

Dr. Crisp replied that Dr. Buchanan's inferences were drawn from a part of England only, but his (Dr. Crisp's) included all the districts. He thought that Dr. Buchanan would be obliged to modify many of his opinions. Dr. Crisp, in answer to a gentleman who supported Dr. Buchanan's views, and who said that in a hilly part of Surrey, all clay, phthisis was very prevalent, remarked that in Chelsea, all sand and gravel, the proportion of deaths from phthisis to the population in ten years was 1 in 28; at Hampstead, which was nearly all clay, the proportion was only 1 in 61. Dr. Crisp had inoculated four healthy pigeons from these fowls. They were killed after six weeks, and no perceptible effect was produced. He had not heard of any examples where the inoculation of tuberculous matter had been before practised on birds.

Dr. Langdon Down thought this a matter of importance. His views, however, were rather with Dr. Buchanan than with Dr. Crisp.

Mr. Claremont exhibited a large Tumour of the Liver, supposed to be scirrhous. The liver appeared to have lost all of its normal structure, and the stomach was also described as affected. Referred to committee.

Mr. A. Bruce exhibited some specimens from the body of a woman, aged 97, who died of strangulated hernia. About two inches up the rectum was a stricture through which the finger could hardly be passed. Above this the gut was sacculated. The cæcum was distended with flatus; the os uteri was occluded, and a projection from it protruded into the vagina. An ossified enchondromatous tumour existed beside the thyroid, and in the lungs an additional lobe existed on either side.

In reply to Dr. Sutton, Mr. Bruce stated that the woman had besides these the ordinary lobes on either side.

Mr. T. Smith, having ascertained that the cartilages of the ribs could readily be cut, remarked that this was the case in all very old people. The ossification frequently encountered was really a diseased condition.

Dr. Moxon showed some Hyperplastic Tumours of Suprarenal Tissue, which had given rise to no peculiar symptoms during life. They were perhaps like those sometimes found in the breast. Also a specimen where subacute aortitis had led to imperfection of the valves. It was removed from a sailor, aged 25, who had symptoms of aortic disease, yet the valves were perfect. The tendinous ring was, however, too much distended to admit of the valves closing the opening.

Dr. Hyde Salter exhibited the Liver of a boy who died in Charing-cross Hospital. Two years ago there was pain and

swelling in that region, which gradually decreased, and for two years he remained of the same size. It then gradually increased till a fortnight before his death, when he began to vomit. He grew drowsy and lethargic, and died comatose. The liver contained deposits, some softer, appearing to consist of liver-cells and oil globules, the others of broken-down cells of various kinds. There were no other deposits. Referred to committee.

Mr. Arnott showed some multiple melanotic tumours which had existed in some hundreds in various parts of the body of a woman who died in Middlesex Hospital. The cancer was ordinary soft cancer with pigment. Referred to committee.

OBITUARY.

DR. HENRY MORTIMER ROWDON.

We regret to have to announce the death of Dr. Rowdon, of Nottingham-place, Regent's-park, which took place at his residence on January 21. Dr. Rowdon was a distinguished student of the Middlesex Hospital, and after the termination of his studentship was elected to the chair of anatomy in the school. On the breaking out of the Crimean war he was sent out by the Government, and served as Civil Surgeon in the Scutari Hospitals. After his return from the East he was presented with a handsome testimonial by the Civil Surgeons with whom he had been associated in recognition of services he had rendered them by procuring from the Government certain arrears of pay to which they were entitled. He filled for a number of years a place in the Court of Examiners at Apothecaries' Hall, and was instrumental with others in introducing many of the improvements which have been made in the conduct of the examinations. He was a Fellow of the Royal College of Surgeons, and a Doctor of Medicine of St. Andrews. Dr. Rowdon was a kind-hearted genial man. He bore the long and painful illness to which he at last succumbed with wonderful fortitude, and is followed to his rest by the regrets of a large number of his Medical brethren. Dr. Rowdon was 51 years of age.

NEW BOOKS, WITH SHORT CRITIQUES.

A Manual of the Operations of Surgery for the Use of Senior Students, House-Surgeons, and Junior Practitioners. By Joseph Bell, F.R.C.S. Edin., Lecturer on Surgery, Assistant-Surgeon Clinical Wards, Royal Infirmary, Edinburgh, etc. Second Edition. Edinburgh: Maclachlan and Stewart. Pp. 287.

*** We are pleased to see Mr. Bell's little manual so soon in its second edition; this shows that the book is appreciated by those for whom it is intended. It is at once distinguished by its brevity and its comprehensive character. The student can have no better guide to the performance of operations, whether small or great. He will always find Mr. Bell's directions clear and intelligible.

The Register and Magazine of Biography; a Record of Births, Marriages, Deaths, and other Genealogical and Personal Occurrences. No. 1. London: Nichols and Sons. Pp. 80.

*** For many this publication will be one of unusual interest. It does not deal specially with matters which come within our province, the births and deaths alone accepted; but we can say that the articles it contains on Henry Constable the poet, Manningham's diary, and Sir Edmund Andros, Governor of New England, are well written, whilst the memoirs of such men as Berryer, Dean Milman, and Rossini, cannot fail to be interesting. Messrs. Nichols have a great reputation as spirited and successful publishers; their name is, it may be said, a guarantee for a good article.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 21st inst.:—

Bell, Alfred James, L.S.A., Preston, Lancashire, of King's College Hospital.
Lardner, Frederick Boultbee, L.S.A., Gillingham, Kent, of Guy's and the Middlesex Hospitals.
Pollard, Frederick, L.S.A., Taunton, Somerset, of St. Thomas's Hospital.
Todd, William James, L.S.A., Gloucester-road, Regent's-park, of King's College Hospital.

At the same meeting of the Court, Mr. Augustus Edward Davies, L.S.A., Burton-crescent, of the Middlesex Hospital, passed his examination, and was admitted a Member under the old regulations of the College. It is stated that only eight candidates out of the fifty-seven examined failed to acquit themselves to the satisfaction of the Court, and were consequently referred to their Hospital studies for six months.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, January 21, 1869.

Dean, William, Slaithwaite, Huddersfield.
Lloyd, Robert Hodgens, Gaisford-street, Kentish-town.
Mackay, William, Norton, Malton, Yorkshire.
May, Bennett, Aston, near Birmingham.
Terry, William Frederick, Gower-street, W.C.

As Assistants in compounding and dispensing medicines.

Smith, Frederick Warren, Camden-street, N.W.
Speakman, Isaac, Runcorn.
Thomas, John Rush, Upper St. Martin's-lane, W.C.

NAVAL AND MILITARY APPOINTMENTS.

Admiralty.—Charles Douglas Shephard, Esq., has been promoted to the rank of Staff Surgeon in Her Majesty's Fleet.

Royal Jersey Militia.—Thomas Renoy Strahan Nevison, M.D., M.R.C.S.E., to be Assistant-Surgeon in the St. Laurence Battalion 4th Regiment.

Hilliard.—The surname of the Surgeon-Major on the Bengal Establishment, promoted to the honorary rank of Deputy Inspector-General, is Hilliard, and not as stated in the *Gazette* of Oct. 27, 1868.

BIRTHS.

Lewis.—On January 22, at Carmarthen, the wife of T. Lewis, M.D., of a son.

Rooke.—On January 25, at 26, Croom's-hill, Greenwich, the wife of H. T. L. Rooke, M.D., of a son.

Watson.—On January 16, at Hounslow, the wife of G. H. Watson M.R.C.S.E., of a son.

Wicksteed.—On January 22, at High Wycombe, Bucks, the wife of Francis W. S. Wicksteed, Surgeon, of a daughter.

MARRIAGES.

Brown—Appleford.—On January 21, at Coggeshall Church, Gordon Brown, Esq., M.R.C.S., fifth son of Thomas Brown, Esq., M.R.C.S., No. 16, Finsbury-circus, to Emily, second daughter of W. Appleford, Esq., The Abbey, Coggeshall.

Cooke—Steoman.—On January 21, at St. James's, Piccadilly, William Smith Cooke, Esq., 22nd Regiment, to Rosa Harriet, daughter of James Remington Stedman, M.D., of Guildford, Surrey.

Niell—Spicer.—On January 26, at Trinity Congregational Church, John Niell, M.D., M.R.C.S.E., to Martha Wilson Spicer, youngest daughter of the late John Edward Spicer, Esq., of Clapham, and New Bridge-street. No cards.

DEATHS.

Bate, Henry Francis, M.D., at No. 1, Clifton-terrace, Maida-vale, on January 20, aged 33.

Brown, Dr. Allan, R.N., Staff Surgeon H.M.'s ship *Prince Consort*, on passage from the Piræus to Malta, on January 19.

Butler, James, M.D., of Thurles, County Tipperary, on January 14.

Gillam, George Jules, M.R.C.S., L.S.A., late of Burnham, Bucks, at Princes Risborough, Bucks, on January 12, aged 41.

Gurdon, C. G., M.R.C.S.E., of Boxford, Suffolk, on January 9, aged 23.

Johnson, Edith Mary, the infant daughter of Dr. Joseph Johnson, Staff Surgeon 14th Depôt Battalion, at Sheffield, on January 23, aged eight months.

Peskett, George, M.D., of Beccles, Suffolk, after a few days' illness from erysipelas, on January 9, aged 45.

Rowdon, Henry Mortimer, M.D., at 40, Nottingham-place, Regent's-park, on January 21, aged 51.

Vines, Frederick Castell, M.R.C.S., second son of Charles Vines, F.R.C.S., Reading, on board the *St. Vincent*, to Adelaide, South Australia, on November 11, 1868, aged 28.

Webster, Frederick T., Surgeon, son of the late Richard Webster, Surgeon, R.N., after a short illness, at St. Alban's, on January 23, aged 57.

Wills, Charles Thomas, M.R.C.S.E., of Merthyr-Tydvil, after a long and painful illness, on January 12, aged 52.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known), are stated in succession.

Bucks County Lunatic Asylum, Stone, near Aylesbury.—Assistant Medical Officer; must have a legal qualification. Testimonials to Acton Tindal, Esq., County Hall, Aylesbury, on or before February 12.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W.—Resident Clinical Assistant; must be legally qualified. Applications and testimonials to Henry Dobbin, Esq., Secretary, at the Hospital, on or before Saturday, February 6. Election on Monday, February 8, at 4 o'clock. Particulars may be obtained at the Hospital.

Infirmary for Epilepsy and Paralysis, Charles-street, Portman-square.—Assistant-Physician; must be a Graduate in Medicine and a Member or Fellow of the Royal College of Physicians. Applications and testimonials to the Secretary at the Infirmary. Election on February 18.

Leicester Borough Lunatic Asylum.—Resident Medical Superintendent; must be qualified to practise Medicine and Surgery, and be legally registered under the Medical Act, 1858. Applications, enclosing testimonials and stating age and qualifications, to be sent to Mr. S. Stone, Town Clerk, Leicester, on or before March 11 next.

Liverpool Infirmary for Children.—House-Surgeon; must be unmarried, and be on the Medical Register of Great Britain, and possess at least one Medical and one Surgical diploma, licence, or degree recognised by the Medical Council. Send testimonials to the Hon. Secretary, on or before Saturday, February 13. Selected candidates will receive notice requiring their attendance.

ROYAL HANTS COUNTY HOSPITAL, WINCHESTER.—House-Surgeon; must be M.R.C.S.E., or have the Surgical diploma of a Royal College or a University in Scotland or Ireland, and also either a licence from the Royal College of Physicians, London, or from the Apothecaries' Society. Applications, enclosing testimonials, to be sent to the Committee, under cover to the Secretary, before February 3 next.

ROYAL KENT DISPENSARY.—Resident Medical Officer; must possess the double qualification and be registered. Applications and testimonials to C. J. Carttar, Secretary, Catherine House, Greenwich, on or before February 16; election on Thursday, February 25.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—House-Surgeon and Assistant House-Surgeon; must be Members of one of the Colleges of Surgeons of the United Kingdom, and L.S.A. or L.R.C.P. London, and be registered under the provisions of the Act of 21 and 22 Vict. cap. 90. Applications to Dr. J. C. Hall, on or before February 6.

TUNBRIDGE WELLS INFIRMARY AND DISPENSARY.—Resident House-Surgeon and Secretary; must be unmarried; M.R.C.S. London, Edinburgh, or Dublin, and L.R.C.P. or L.S.A. Applications, with proofs of qualifications, &c., to the Secretary at the Infirmary, on or before Wednesday, February 3. Election on Monday, February 8, at 3 o'clock p.m.

WEST HERTFORDSHIRE INFIRMARY, HEMEL HEMPSTEAD.—House-Surgeon and Assistant-Secretary; must possess both Medical and Surgical qualifications, and be registered. Send certificate of registration and testimonials to the Secretary at the Institution, at or before 12 o'clock, on Thursday, January 28. Election on Thursday, February 11, at 3 o'clock.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Louth Union.—Mr. E. Watson has resigned the Somercotes District; area 15,085; population 3,183; salary £35 per annum.

West Ashford Union.—Mr. Robert Skimmings has resigned the Fourth District; area 11,724; population 2254; salary £70 per annum.

APPOINTMENTS.

Kingsbridge Union.—Richard Wallace, L.R.C.P. Edin., L.F.P. and S. Glas., to the Seventh District.

Romford Union.—Alfred Wright, M.R.C.S.E., L.S.A., to the First and Second Districts.

Tiverton Union.—Frederick Marsdin, M.R.C.S.E., L.R.C.P., M.B. Lond., to the Thorverton District.

Wandsworth and Clapham Union.—Frederick Drummond Smith, M.D., to the Workhouse, *vice* Dr. Connor, resigned.

HERBERT HOSPITAL, WOOLWICH.—Mr. Simon, Medical Officer to the Privy Council, visited the Herbert Hospital, Woolwich, during the past week, and was conducted over that establishment by Deputy Inspector-General of Hospitals Dr. Inglis, C.B., and by Surgeon Perry, of the Royal Artillery.

THE Home Office have required the Middlesex justices to increase the accommodation for pauper lunatics. In a letter dated Whitehall, January 5, Mr. Bruce acquaints the magistrates that, "having regard to the entire inadequacy of the existing asylums of the county of Middlesex for the accommodation of pauper lunatics, he is compelled to call upon them to take proper steps for remedying this evil, and that in default of their doing so it will be his duty to consider whether he will not put in force the peremptory powers given to the Secretary of State by the 30th section of the Lunatic Asylums Act, 1853."

THE TUE-BROOK PRIVATE ASYLUM.—At the last Kirkdale quarter sessions, Dr. Owen, the Medical Superintendent of the Tue-brook Private Lunatic Asylum, having applied for a renewal of the licence to that institution, the visiting justices stated that they were much pleased with the order which prevailed, and with the efficient way in which everything connected with the establishment was conducted. The application was unanimously granted.

MILITARY SURGEON IN TROUBLE.—We have ascertained that the "military Surgeon," whose name appears in the police reports of the past week as having been "drunk and disorderly," is not on the effective list of the Army Medical Department, having been placed on half-pay some months ago as physically and mentally incapable of further military service, in consequence of having suffered severely from fever and sunstroke in India. The decision of the magistrate, Mr. Knox, in remanding the unfortunate gentleman until his friends could be communicated with, instead of inflicting fine or imprisonment, was extremely judicious, and shows the view which he took of the case.

POOR-LAW MEDICAL SERVICE.—*Kingston-on-Thames.*—On the board proceeding to appoint public vaccinators, all the Medical officers were reappointed with one exception. For the parish of Teddington it was resolved to advertise for a public vaccinator. *St. Marylebone.*—The committee recommended that the salary of the Medical officer of the Rectory District should be increased from £170 to £200 per annum. Mr. Tavener quoted the average number of cases to show that the remuneration was only 10¼d. per case in the Rectory District, and 1s. 1d. in the Christ Church District. He therefore moved an amendment that the salaries of the Medical officers of these districts be increased from £170 to £220, and from £200 to £220 respectively. Mr. Tavener's amendment was lost by the casting vote of the chairman (Mr. Braess). A motion to adjourn was lost in the same way, and the original recommendation of the committee was ultimately carried by a majority of 1; but notice of rescinding was given.

EFFECTS OF COLD ON INFANT MORTALITY.—How slow sometimes is the adoption of obvious improvements was never better shown than in the tardy determination of the Paris authorities to allow the registration of births to be made without insisting upon the unfortunate three-days-old infant being brought into the presence of the registering officer. M. Milne-Edwards, whose investigations on the influence of cold and other physical agents long since became classical, has just sent a note to the Académie des Sciences, reminding that learned body that forty years ago (in 1829) he made a communication to it, exhibiting the danger of this absurd practice in winter. Since then M. Loir has insisted upon this in respect to the provinces, where, indeed, it is greater in consequence of the distances that have to be traversed. At last, however, it has been found that the "administrative difficulties," which were so long declared to be "insuperable," are removable without difficulty.

ROYAL COLLEGE OF PHYSICIANS.—EXAMINATION FOR THE MEMBERSHIP, JANUARY, 1869.—The following were the papers set on Medical Anatomy and on the principles of Medicine:—1. Explain fully the principal modes by which serous effusions into the abdominal cavity are produced. 2. Describe the alterations in structure, form, and relative position to other organs, of the liver when in a state of advanced cirrhosis. 3. Describe the position of the Heart and its valves in relation to the external walls of the chest. 4. Enumerate the chief diseases which can be communicated from one person to another; and state the evidence, generally, by which such transmission of disease is proved. 5. How would you explain severe pain in the right arm occurring in a case of intra-thoracic cancer? 6. State the several conditions under which hæmorrhage from the bowels may occur. *On the Practice of Medicine, the Principles of Public Health, and Psychological Medicine.*—1. What are the principal affections of the nervous system in which bromide of potassium has been found useful; and what do you conceive to be the nature of the action of that drug? 2. Describe a case of acute eczema of the face and the treatment that you would adopt. 3. Enumerate the causes which produce coma, and state fully the circumstances in each case which would enable you to form a diagnosis. 4. A patient consults you for pain in the left side, extending more or less from the fifth rib to the lower margin of the ribs. State the conditions on which this symptom may depend; then select some one of these conditions, and describe fully the circumstances which would enable you to form a diagnosis in the particular case selected. 5. In Hospital construction, what extent of floor space and what cubical capacity would you recommend for each bed? What amount of air should pass through the room for each patient during twenty-four hours? 6. Describe a case of paralysis of the insane.

COLLEGIATE EXAMINATIONS.—The following questions on Surgical Anatomy and the principles and practice of Surgery, were submitted to candidates for the diploma of Membership of the Royal College of Surgeons on the last occasion:—1. Describe the position of the subclavian artery in its third division; and the position in relation to the artery of other structures in its immediate neighbourhood. 2. State the signs which distinguish a femoral hernia from an inguinal hernia. 3. State the symptoms of ulceration of cartilage in the knee-joint, and the treatment of that disease. 4. Dislocation of the Radius and the Ulna backwards at the Elbow.—State the position of the displaced bones; the lesions attending their displacement; and the method to be preferred for its reduction. Mention also the period of life at which the displacement is most liable to occur. 5. Describe the local condition and general symptoms of a case of phlegmonous erysipelas of the forearm; and state the local and general treatment of such a case, giving the reasons for its adoption. For any medicines that you may think useful, write the prescriptions in full. 6. Syphilitic Lepra.—Describe its diagnostic marks, and the condition of general health which commonly accompanies it. Give an outline of the probable previous symptoms of the case, and of the treatment. For the medicines that may be required, write the prescriptions in full. Time from 12 to 3 o'clock p.m. Candidates were required to answer at least four out of the six questions.

The following questions on the principles and practice of Medicine were submitted to those candidates not possessing any Medical licence:—1. Describe the course of an attack of pneumonia, the physical signs by which the several stages are characterised, and the means of distinguishing such an attack from one of pleurisy or bronchitis. 2. Mention the more important preparations of opium, belladonna, and aconite contained in the British Pharmacopœia 1867; state the purposes for which they are severally employed, and the doses in which they should be given when administered internally. 3. What are the symptoms produced by poisonous doses of these medicines? and how would you treat such cases?

ARMY MEDICO-CHIRURGICAL SOCIETY OF PORTSMOUTH.—At the eleventh meeting of this Society Staff-Surgeon Roch read a paper on the "Natural History of Abyssinia," and exhibited specimens. Assistant-Surgeon Maunsell, R.A., exhibited a carefully prepared series of geological specimens, obtained partly from the red sandstone series of Scotland, and partly from the chalk and London clay in the vicinity of Portsmouth. He briefly sketched the gradual rise of geology as a science, giving to Dr. Martin Lister, Physician to Queen Anne, the credit of having, in 1700, suggested the practicability of distinguishing strata according to their contained fossils. Deputy Inspector-General Dr. Gordon, C.B., read a paper on the "Study of Conchology." He observed that the presence of fossil shells in rocks not only indicated their geological age, but also the circumstances under which they were formed: whether deposited in oceans, lakes, or estuaries. He pointed out that many stones used in building and ornamentation are almost entirely made of such remains; as the nummulite rocks of which the pyramids of Ghizeh are principally built, the Bath oolite, and the Portland stone, Purbeck limestone, and Sussex marble; and he referred to the ancient Tyrian dye as obtained from a *purpura*. He also alluded to the employment by the Chinese of the *placuna* shell as a substitute for window-glass, of the *avicula* as a source of "mother-of pearl," of the *pecten* (scallop) as formerly a vessel in which oysters were served up at table, and as the badge of pilgrims to St. James's shrine; to the association of the *tridacna* or clam with mythology; the use of cowries (*Cypræa*) as money by the inhabitants of ancient Nimroud, and those of India, China, and Africa of the present day—and to that of the *Triton* (conch) as a musical instrument used by the Australians and South Sea Islanders, and by the Brahmins in the worship of Seva. He noticed the account, as related by Sallust, of the manner in which a common snail (*Helix pomatia*) was said to have been instrumental in ending the Jugurthan war, and quoted illustrations of the admiration bestowed upon the beauty of such shells as the *Nautilus* and the *Argonauta*. Adverting to some of the ideas once held as to the origin of fossils, he mentioned that of Plato that the nummulites of Ghizeh were petrified remains of lentils; of that which designates *Ammonites* Whitby snakes beheaded by St. Hilda, *belemnites* as elfin darts, and the barnacle *Lepas Anatifera* as but the preliminary stage of the goose, so called. Dr. Gordon then proceeded to lay before the Society a very complete and carefully prepared collection of land and freshwater shells of Hampshire, and to read a paper descriptive of them by Assistant-Surgeon Tate, Royal Artillery, who, he said, was unfortunately prevented by illness from being present.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN JANUARY, 1869.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction .	20·77	0·158	0·255	0·001	14·8	5·2
West Middlesex .	20·37	0·167	0·204	0·004	14·6	5·3
Southwark & Vauxhall . . .	21·93	0·198	0·219	0·007	14·6	5·2
Chelsea . . .	21·03	0·173	0·168	0·008	14·8	5·3
Lambeth . . .	20·19	0·180	0·231	0·004	14·0	5·2
Other Companies.						
Kent . . .	28·00	0·040	0·258	0·006	20·8	6·7
New River . .	22·43	0·107	0·240	0·005	16·4	4·8
East London . .	24·47	0·107	0·340	0·002	16·3	4·8

All the Thames waters except the West Middlesex were slightly turbid when drawn from the companies' mains.

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

DR. LETHEBY, in his annual report on the Health of the City of London, makes some remarks on the drought of last summer, which are worthy of attention at a time when the question of water-supply is attracting so much notice. The total rainfall in the City during the six months from March to September was only 8·55 inches instead of 12·76; and the number of wet days was but 46 instead of 83. Altogether, indeed, the total rainfall during the year was but 18·17 inches instead of 23·95. In every part of the country the same deficiency of rain has been observed, and in those places where the water supply was dependent on the storage of it in lakes and reservoirs from surface gathering grounds, the deficiency was absolutely distressing. This was especially so in Manchester, Salford, Stockport, Kendal, Bradford, Sheffield, Bolton, Preston, and Rochdale, where, even at the very onset of the drought, the most urgent appeals were made to the inhabitants to economise as much as possible the consumption of water, and to limit its use entirely to the most needful domestic wants. The constant supply, on which they had so confidently and almost boastfully relied, failed them in every case, and the inconvenience of it, especially where cisterns and other receptacles for water had been abandoned, was extremely great. Every kind of device was resorted to by the local authorities to secure a supply of water for even the most urgent purposes of life. On the one hand, the use of water for sanitary purposes was entirely prohibited. There were no flushings of sewers or urinals; no washings of streets or courts; no employment of water for baths; and even for trade and manufacturing purposes the supply was reduced to about half. On the other hand, with the view of increasing the supply, the neighbouring rivers were resorted to; water was purchased from mill-owners; old wells, that had been abandoned on account of their objectionable quality, were again brought into use; and, in one case, the inhabitants gladly received the drainage water from a colliery. Happily for us, this condition of things has not been experienced in London; for during the whole of the dry weather, the supply of water to the metropolis was more than usually abundant. Looking at the returns which have been published by the Registrar-General of the water supplied to London by the several companies, it appears that during the hot and dry months of June, July, August, and September, when there was almost a panic in many of the large towns of England at the terrible prospect of a total want of water, the inhabitants of this metropolis were receiving from 106,000,000 to 113,000,000 gallons of water daily—a quantity which represents a daily supply of from thirty-four to thirty-six gallons for every individual of the population, or nearly three times as much per head as was distributed to the manufacturing towns of Manchester, Salford, Stockport, Rochdale, Sheffield, and Bradford; in fact (says Dr. Letheby), we had great reason for being thankful that the supply of water to London was not from such precarious sources as open lakes or reservoirs, which are fed by the immediate rainfall of a district, but from the deep-seated and never-failing springs which form the tributaries of the Thames.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Messrs. Whitehead's Solid Essence of Beef was not referred to in our article on Liebig's Extract. It is quite a different preparation.

A. B. C. will have to pass the preliminary examination.

X. Y.—Relief can be obtained at any of the metropolitan Hospitals.

H. W. shall receive a private note.

Nottinghnm.—The telegram unfortunately too late. We never suspected you of unmitigated hippophagy.

Ubique.—The paper to which you refer was an advertisement, and the heading to it was necessary in order to comply with post-office regulations.

An Old Member.—We believe the oration will be delivered at 3 o'clock. Curiously enough, it is only advertised in the daily newspapers, not in the Medical journals.

C.—Under the Poor-law Act, a Medical officer can recommend the removal of a person suffering from infectious disease from the workhouse, but cannot enforce it. The power of enforcing removal rests with the guardians.

Vaccinator.—The public vaccinator is liable to a fine of twenty shillings if he fail to send a certificate of successful vaccination to the registrar. A private Practitioner is not liable to be fined under such circumstances, but the parent is held responsible for the transmission of the certificate of vaccination. The private Practitioner is bound to sign such certificate.

The Father of a Family.—Constant complaints are made to us on the subject of the transmission of indecent publications to the heads of families and others by the post and otherwise. These filthy books are written for the purpose of frightening timid young men, and then extorting money from them. In some cases the offenders, we believe, could be prosecuted under Lord Campbell's Act. Unfortunately, some of the leading newspapers still admit advertisements of these villanous productions, and thus become abettors of an evil greater than any other from which society suffers.

Birmingham.—The working men's scheme for the extension of the Queen's Hospital contains some points well worthy of imitation. It is proposed to erect a separate Hospital for out-patients and accidents; to classify out-patients in separate waiting-rooms, so that a healthy person suffering from a trifling accident, or another the subject of some harmless complaint, may not be compelled to wait in the same room with others afflicted with contagious diseases; to provide baths for out-patients, to lessen the risk of the public baths being used by sick persons; carriages and stretchers of proper construction for the easy conveyance of the sick and wounded; carriages for contagious cases, which are now conveyed in cabs and other public vehicles, to the great injury of the public health; the appropriation of the detached building now existing at the rear of the Queen's Hospital, for contagious cases; the establishment of a fund to provide working men whom accident has deprived of their limbs with the best made artificial substitutes; and the erection of a conservatory, which shall be available for convalescents at all seasons of the year. It is proposed that the new building shall be constructed on the best principles of Hospital management—to relieve deserving persons, and check the evil of indiscriminate charity.

A Manchester Student.—It is a mistake on the part of our contemporary. The questions are published and distributed gratuitously; moreover, they are republished every year in the Calendar of the College. In another page you will find a copy of those submitted on the last occasion, including those on Medicine, the examiners in which are Drs. Peacock and Wilks.

COMMUNICATIONS have been received from—

Dr. Rudyard; Mr. G. Gaskoin; Dr. Hargrave; Dr. W. S. Oliver; Dr. Fayrer; Dr. Letheby; Mr. George Talbot; Mr. Clements; Mr. C. J. Fox; Dr. T. Hudson; H. W.; Mr. J. F. Collingwood; Mr. J. Manley; Dr. F. Drummond; Dr. R. Barnes; Mr. A. Bacce; Mr. J. Chatto; Mr. William Adams; Dr. Murray; Mr. J. B. Curgenven; Dr. W. Hickman; Messrs. H. M. Whitehead and Co.; Dr. Gray; Dr. Lory Marsh; Dr. Chapman; Dr. Quain; Inspector-General Gordon; Mr. John Couper.

BOOKS RECEIVED—

Madden on Uterine Hydatidiform Disease—Duncan on Perimetritis and Parametritis—New York Medical Journal, No. 46—Pacific Medical and Surgical Journal, No. 19—Bell's Life, Character, and Writings—Hutchinson's Descriptive Catalogue of the New Sydenham Society's Atlas of Portraits of Diseases of the Skin—New Sydenham Society's Atlas of Portraits of Diseases of the Skin.

NEWSPAPERS RECEIVED—

Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 23, 1869.

BIRTHS.

Births of Boys, 1125; Girls, 1151; Total, 2276.
Average of 10 corresponding weeks, 1858-67, 2033·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	781	797	1578
Average of the ten years 1858-67	790·4	821·1	1611·5
Average corrected to increased population	..	...	1773
Deaths of people above 90	...	..	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	2	1	12	...	3	8	3	...
North	618210	6	12	14	4	17	11	2	...
Central	378058	...	2	2	...	6	6	...	...
East	571158	...	8	20	1	14	13	5	...
South	773175	2	5	16	...	23	8	6	...
Total	2803989	10	28	64	5	63	46	16	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·154 in.
Mean temperature	36·6
Highest point of thermometer	50·5
Lowest point of thermometer	28·1
Mean dew-point temperature	32·9
General direction of wind	S.E.
Whole amount of rain in the week	0·13

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, January 23, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending Jan. 23.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Jan. 23.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3170754	40·7	2276	1462	1578	50·5	28·1	36·6	0·13	13
Bristol (City)	169423	36·1	123	76	*93	52·8	27·2	41·2	0·34	34
Birmingham (Boro')	360846	46·1	284	175	147	53·8	30·8	38·8	0·46	46
Liverpool (Boro')	509052	99·7	371	295	271	51·5	29·3	39·8	0·31	31
Manchester (City)	370892	82·7	255	210	*203	53·5	33·0	40·9	0·41	41
Salford (Borough)	119350	23·1	93	60	52	55·5	32·1	41·4	0·37	37
Sheffield (Borough)	239752	10·5	177	126	127	55·0	31·0	39·2	0·36	36
Bradford (Borough)	138522	21·0	144	71	71	...	...	...	..	...
Leeds (Borough)	253110	11·7	205	129	135	54·0	33·0	41·9	0·65	66
Hull (Borough)	126682	35·6	73	59	64	51·0	30·0	38·3	0·13	13
Newstl-on-Tyne, do.	130503	24·5	116	69	69	45·0	30·0	38·5	0·18	18
Edinburgh (City)	178002	40·2	148	86	128	49·7	31·0	40·3	1·50	152
Glasgow (City)	458937	90·6	342	268	333	50·2	30·5	41·1	1·24	125
Dublin (City and some suburbs)	320762	32·9	154	158	171	55·6	30·5	43·8	0·87	88
Total of 14 large Towns	6546587	35·5	4761	3244	3442	55·6	27·2	40·1	0·53	54
					Week ending Jan. 16.	Week ending Jan. 16.				
Vienna (City)	(1863) 560000	...	...	...	305	...	...	27·3	..	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 30·154 in. The barometrical reading decreased from 30·35 in. on Tuesday, January 19, to 29·93 in. by the end of the week.

The general direction of the wind was S.E.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

January 30. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Royal Institution, 3 p.m. Prof. Odling, "Hydrogen and its Analogues."

February 1. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London, 8½ p.m. Mr. Spencer Watson, "A Case of Sloughing Polypus of the Antrum." Dr. Bateman (of Norwich), "On Aphasia."

Odontological Society, 8 p.m. Mr. Sewill, M.R.C.S., L.D.S., "On Impressions of the Mouth."

Royal Institution, 2 p.m. General Monthly Meeting.

2. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Anthropological Society, 8 p.m. Rev. J. C. Atkinson, "Cleveland Gravehills." Mr. E. Peacock, "Barrows at Cleatham." Dr. Charnock and Mr. A. L. Lewis, "Locmariaker."

Pathological Society, 8 p.m. Meeting.

Royal Institution, 3 p.m. Prof. Westmacott, "On Fine Art."

3. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Obstetrical Society Council Meeting, 7½ p.m.), 8 p.m. Dr. Braxton Hicks and Dr. Matthews Duncan, "Remarks on the Cephalotribe." Dr. Wynne, "On the Treatment of Ulceration of the Cervix Uteri." And other Papers.

4. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Harveian Society, 8 p.m. Dr. F. Cock, "Remarks on Intestinal Obstructions."

Royal Institution, 3 p.m. Dr. M. Foster, "On the Involuntary Movements of Animals."

5. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Royal Institution, 8 p.m. Mr. J. Fergusson, "On Tree and Serpent Worship."

Western Medical and Surgical Society, 8 p.m. Practical Evening, for the Narration of Cases and the Exhibition of Specimens.

ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

Chorea.

This is a disease characterised by irregular movements or clonic spasms of the voluntary muscles, and occurring mostly in children before the age of puberty. It occurs in all degrees of severity, from a mere twitching of a particular muscle to an implication of the whole body; in the latter case there is a necessary want of power, and the patient is confined to his bed. There may be a constant motion of the whole body, not from violent spasm, as in epilepsy, but simply from irregular muscular movement, whereby the most frightful contortions and writhings are produced. Such a horrible example you have just witnessed in the case of the man to whom we administered chloroform. We were obliged to put sideboards to his bed to prevent his falling out; he was constantly throwing his arms about, and dashing his head on the pillow. His mouth was continually being opened and shut, and thus he ate and spoke with the greatest difficulty. He had to jerk his words out, and make the most dreadful contortions in order to swallow his food. When asleep he was quiet. His mind was clear, and thus he gave a good history of his case. Very often, however, the mind becomes affected, and the patient is fatuous or maniacal. Thus I had a youth under my care who was equally bad as this man, but eventually recovered. He lay in bed in constant movement, making most dreadful contortions with his face, and with an almost total inability to articulate. After sleeping for a short time and remaining quiet, he would make most horrible grimaces, throw his arms and legs about in a most violent manner, and twist his body so as to turn completely round in bed. The attempts to eat were most painful to witness: he seized the spoon in his mouth as if he would swallow it, and occasionally, indeed, bit the nurse. I think this was sometimes done intentionally, just as a mad person would do. He became emaciated almost to a skeleton, and all the prominent parts of the body were covered with corns and scabs. There were pustules on other parts, and he was covered with scratches of his own making. I think a severe case of chorea of this kind is as dreadful a disease as any which we are called upon to witness, and the case of this lad, which lasted three or four weeks, was certainly the worst that I have ever seen recover. For some time afterwards his mind remained weak. He had had rheumatism, then slight chorea, and subsequently a fright preceding the more severe symptoms.

In less severe forms the whole body may be affected, but in a minor degree. The child may be up and able to walk about, although in a very unsteady manner. She cannot walk in a straight line, and if she attempts to carry any weight lets it fall to the ground. This is often one of the earliest symptoms observed by the parents, who discover that the child is commencing to be very destructive with the crockeryware. These irregular movements, combined with weakness of the arms, increase until the child (generally a girl) cannot dress or feed herself. She is also constantly making grimaces, and the tongue is thrust out with a jerk and then kept in motion. One side of the body is frequently more affected than the other, and is consequently weaker. This weakness may remain after the movements have ceased, and thus the patient first presents herself with a partial hemiplegia. In bad cases of chorea, after the spasms have terminated the whole body is left in a state of extreme feebleness—in fact, the patient has for the time being a general paralysis. I have seen several cases of children who lay perfectly quiet in bed, but could scarcely move their arms, and were totally unable to stand.

A very common accompaniment of the disease is a cardiac systolic bruit. This constitutes the most interesting feature in the case, and affords a prop on which can be raised several theories respecting the nature of the disease. I think I am correct in saying that the heart affection was first observed by Bright, and ever since his time the question has been as to its nature and connexion with chorea. I believe that it might be in part solved by the simple observation of a hundred cases of chorea accompanied by systolic bruit, and the discovery whether the bruit persisted or not as the choreal movements subsided. If it accompanied the disease and departed with it, the bruit could scarcely be regarded as due to an organic change. Those who have regarded it as functional have spoken of an irregular action of the heart, but as this does not in fact occur, they must have intended such an irregular action of the papillary muscles as to allow either of a temporary regurgitation of blood through the mitral orifice, or to interfere in some way with the closure of the valve and thus produce an abnormal sound. I wish I had some more positive information about the state of the heart in those who have recovered from chorea; but, as a post-mortem fact, I might state that I have never seen a fatal case in which there was not some evidence of a previous endocarditis—that is, the inner surface of the mitral valve was lined by a narrow row of beadlike vegetations. Now, in some of these cases there had been no history of rheumatism, and in some no audible bruit during the life of the patient. In the most striking examples of such cases there was a very distinct history of fright, as in the case of a young girl who was residing near the scene of the Erith gunpowder explosion. She had never had a rheumatic attack, had no symptom of heart affection, and yet after death the mitral valve exhibited vegetations. There was also the case of a little girl aged 7 who was admitted under my care with a most violent attack of chorea. About a fortnight before she had been taken to the Victoria Theatre, where she was much frightened by a sensation scene. All my endeavours to relieve her were fruitless, and she died two weeks after admission in a state of great emaciation. There was no history of rheumatism, and no bruit was audible. After death we found a fringe of small vegetations on the inner surface of the mitral valve. These were firm, and therefore the question naturally arose whether they were pre-existent to the chorea. I have also constantly met with other non-fatal cases where a bruit existed without any history whatever of rheumatism.

These cases would tend to show that the cardiac bruit was organic and a consequence of the chorea. A more usual opinion, however, is that the order of sequence is rheumatism, cardiac affection, and chorea; and thus a theory is held, which was first propagated by Dr. Kirkes, that embolic particles are carried from the heart to the spine, and there set up the irritation which is productive of chorea. This of course is a mere opinion, and not proved to be correct either in fact or in theory. The embolism has not been shown, and far less that it would produce irritation of the cord, and, if so, that this would be productive of chorea. If the latter be in an unusually excitable condition, then it is thought by some that a stimulus applied to the skin is the mode by which the movements occur, and that there are particular sensitive points of the body which give rise to the paroxysm. That rheumatism and chorea are closely allied, but not in the relation of cause and effect, is seen in such a case as that of the boy lately in Stephen Ward. He came in with a severe attack of chorea. After remaining in bed about three weeks, he began to be a little quieter, when he was seized with acute rheumatism, involving all his joints, succeeded quickly by a mitral bruit. In this case the chorea preceded the rheumatism and the cardiac disease, just as in those which result from fright. At the same time it cannot be denied that nervous symptoms much resembling those of chorea not infrequently accompany acute inflammation of the heart. Thus delirium and spasms often constitute the symptoms denoting what is called metastasis to the heart in rheumatism, and I have myself seen marked choreal movements accompany an acute pericarditis set up in the course of Bright's disease. I wish I were able to solve the question; but I by no means can yet agree with the opinion that chorea is due to a cardiac trouble when I witness the existence of this disease before the rheumatism, and also see it suddenly arise from fright, and yet followed by a cardiac bruit. It is evident that rheumatism, inflammation of the heart, and chorea are closely related, but not that they stand in the relation to one another of cause and effect. There may be some morbid condition common to all, but whether this is more immediately due to an error in the blood or nervous system is not very clear. Our late Physician, Dr. Addison, used to argue from many facts that rheumatism was a disease primarily of the nervous system.

I should very much doubt whether chorea is due to any special disease of the spinal cord or other part of the nervous system, but rather, like epilepsy, due to a disturbance of the whole of the centres. That the brain is affected is shown by the occasional maniacal excitement and the more frequent tendency to imbecility. Just as in epilepsy you may imagine a sudden disruption or discharge of nervous force exciting the ganglia below, and temporarily suspending the action of the cerebral hemisphere in which the explosion took place, so in chorea the irritation is more continuous, and the movements consequently constant. Hence, when any extra work is put on the cineritious matter of the hemispheres, as when volition

comes into play, the movements are increased. The common cause of fright would also seem to show that the first shock was mental, or imposed on the cerebrum. It is a condition in which the nervous centres have become irritable, lost their power, and the will is incapable of directing their action. A strong voluntary effort is capable for a moment of restraining the movements, but time is necessary for the power to be regained. In those cases where the complaint remains chronic, and more especially in those instances where the choreal movement is confined to one part of the body, it ceases to be a disease in the ordinary acceptation of the term; the movement is simply a bad habit. Just as the spinal cord is educated to perform ordinary routine movements, such as take place in walking or in playing a tune, when the mind is otherwise engaged, so the spinal cord may be badly educated, or have become habituated to produce certain strange movements, which require a great effort of the will or training to entirely overcome. In such chronic cases medicine is of little use.

There are a great variety of forms of chorea, having reference mostly to the part of the body affected. The strangest cases are those which occur in young women of hysterical habit, and are thus described very frequently under the head of hysteria, and which I shall allude to again.

There is a variety of this complaint which occurs only occasionally, and is a temporary trouble, but appears to be of a true choreal character. It occurs in persons of a nervous temperament, and does not appear to be common from the inquiries I have made amongst many persons concerning it. I allude to what is popularly called the "fidgets." When I had a patient in the Hospital thus troubled, I wished to give it the name δυσφορίη, as this is a classic term, and used both by Hippocrates and Aretæus. These authors, however, used it merely as a symptom of many complaints, as equivalent to "molestia" or disquiet. The attack occurs mostly after dinner, or after lying down in bed at night. It shows itself by the person being quite unable to keep some part of the body quiet, more especially the legs. If in bed he is obliged to rise, and after walking about the restlessness or fidgetiness in time passes off.

Ordinary chorea occurs mostly in boys and girls of an irritable temperament before the age of puberty; but occasionally we meet with it in adults. When occurring in young women, it is often associated with early pregnancy. So commonly is this the case that I always make inquiries in this respect when I have a case of chorea in an adult woman. In Hospital practice it has often been an illegitimate pregnancy, and therefore there may have been moral as well as physical causes to determine the complaint.

Treatment.—It might be thought by the inexperienced that those drugs which exert a physiological action over the nervous system would be those which would arrest the complaint known as chorea, but, as a matter of fact, this is not the case, so that I have almost given up looking for a remedy in the direction of this class of medicines. I do not despair, however, of finding some drug which might counteract that morbid condition of nervous system which is present in very bad cases, but in the absence of such remedy our ordinary curative means are of little avail, seeing that they can act only slowly and tend to produce a change long after the time at which the acute form of the disease would prove fatal. In these very severe and bad cases we can only hope to preserve the life of the patient sufficiently long for the most approved tonic remedies to act. For example, in such cases as I mentioned just now of children suffering from acute chorea induced by fright, a fatal termination may occur in a few days, and in these the direct sedatives are suggested. Morphia, as far as I have seen, is useless. I can call to mind two cases where large doses were given, but the effect was only transitory. The same with chloroform; the vapour produces but a temporary tranquillising effect, and our experience of it is not encouraging either in chorea or in the allied disorders, tetanus and hydrophobia. I have never seen strychnia of any use in the acute affection; and the same of belladonna and conia. In the less severe cases it is possible that one or two of these medicines may be useful, but I feel convinced that the class of medicines of which I speak—those which have a physiological action on the nervous system—are far less efficacious than the metallic tonics. It would seem that in order to produce a cure a bracing up or restoration of the original nerve power is necessary, and that the mere subdual of symptoms in no way tends to cure the complaint. When I say this I speak with some little hesitation of the effects of belladonna and conium(a), both of which remedies I have seen apparently useful. I remember when at Paris some years ago hearing Trousseau give a lecture on this disease and warmly recommend belladonna. On another occasion he was declaring that there was no drug in the Pharmacopœia equal to strong coffee, and on a third occasion he was vaunting the new gymnasium at the Hospital for Sick Children as the best therapeutic agent he knew. I mention this to show you that there really is no specific treatment for the disease. I might say that we thought we saw some benefit in one case after the use of cannabis indica, but none whatever in four cases in which we tried the physostigma.

I believe I can tell you something very positive about the treatment of chorea, and I only wish I was enabled to make the same boast in reference to some other diseases. Many years ago, seeing that every medicine in the Pharmacopœia as well as several others out of it, were said to be equal to the cure of chorea, I determined to watch the disease untrammelled by medicines, and I found that in many cases a speedy recovery took place without the admininistration of any medicine whatever. The cases which did best were the severe ones, excepting always those which were of the most violent and acute description. The first case which I watched was a little girl who had severe chorea; she was too bad to be able to stand, and was obliged to have sideboards to her bed to prevent her wriggling out of it. This child began to improve in a day or two, and went out well in a month. This is only one example of several of the same kind. I take it that the patient, being subject to constant excitement or improper treatment at her own home, has her disease there perpetuated, whereas when brought to the Hospital, being under the influence of strangers who endeavour to make her suppress the movements, and by the additional advantage of good living, she begins to recover. I should say that a weakened condition of the nervous centres being at the root of the malady, good nourishment and the tonic plan are necessary. After having learned the fact that the tendency of the disease is towards recovery as soon as all the circumstances which formerly surrounded the patient were removed, I soon afterwards learned that the cure is expedited by tonic medicines of the mineral kind, and this is the experience of the majority of the Profession. I have put the treatment before you in this way to prevent you supposing that such remedies as iron or zinc act in any specific manner; they are useful, but operate as nervine tonics. I believe Dr. Elliotson many years ago acquired great fame by his success in the treatment of chorea, his remedy, as you know, being the red oxide of iron. We still give it, and it is one of the best of remedies; our children very willingly take half-drachm doses in treacle. Probably an equally favourite remedy here is the zinc—in fact, it is the medicine most commonly given, beginning with grain doses, and increasing to any amount, as a scruple three times daily. A favourite remedy of my late colleague Dr. Hughes was rhubarb steeped in port wine; the children were thus well kept up at the same time that the stomach and bowels were improved in condition.

In very chronic cases, and those where a part of the body only is affected, medicines are of little use. In some of these electricity has been sometimes curative; in some cases shower-baths have acted with the best success. One writer has advocated the use of liniments, as of chloroform, to the spine. Often nothing less than a thorough change of scene will suffice to break the habit. If this opportunity do not occur, gymnastic exercises are of use. They not only strengthen the muscles and nerves, but they break the bad habit; they convert, in fact, an irregular movement into a regular one. If the arms are constantly moving, and are then employed in grasping a beam for swinging, a new and altered condition of the whole machinery accrues, and in time the habitual irregular actions are worn out. I am sorry that we have not a gymnasium here, and therefore all I am able to do is to order my patients a skipping rope. I believe the only method by which the chorea, which at one time prevailed in religious houses, was sometimes able to be cured was by making the ladies dance to the notes of music.

(a) Since the above was written I have given conium in several cases, and I think with some success.

As sequelæ of small-pox, the following condition of parts was seen in a patient:—Atrophy of both eyes and dense leucoma on the right, right forearm anchylosed at right angles to the humerus, the left arm atrophied, but the joint partly movable. In another patient, Chung, 26 years of age, who had small-pox at 7 years of age, there was leucoma in both eyes, both forearms greatly shortened, especially the radial portion, the ulnar projecting, and the hand at an obtuse angle to the forearm.—*The Sixth Annual Report of the Peking Hospital, by Dr. Dudgeon.*

ORIGINAL COMMUNICATIONS.

THE VENOM OF SERPENTS.

By S. WEIR MITCHELL, M.D.,

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THE subject of snakebites and the toxicology of venom poisoning have of late attracted so much attention in English Medical journals, that I need not apologise for intruding my opinions. I am prompted to write at present because I have received several letters from English Physicians, asking where copies of my papers could be procured, or requesting information on doubtful points. I am probably indebted for this interest to a very courteous and kindly review of my toxicological contributions in the October number of the *British and Foreign Medico-Chirurgical Review*. The critic carries his summary of my views up to my latest paper, the contents of which he mentions, but had not space to analyse. As they are only accessible in the original journal, *New York Medical*, January, 1868, I am desirous of laying some of them before your readers. They contain an important advance towards discovering the mode of action of venom, and are supported by later observations that I have not hitherto published. The remarks and experiments upon the copperhead are also for the first time in print. I have worked so long at this mysterious question of venom poisoning that I welcome with pleasure the presence in the same field of other observers in British India and Australia. Their observations will soon enable us to know if the venom of various serpents be identical in form and force of toxic action or not. These studies have long since opened a new and interesting path of research in blood-poisoning, and one, I think, whose future will be valuable alike to the Physician and the toxicologist. The space I can ask for is, of course, too limited to allow of a wide discussion of the numerous questions I have solved or tried to solve, so that for most of the answers I must refer to my Smithsonian essay. I wish just now to enter upon those only that I have lately studied.

The relative power of the various snake poisons is difficult to settle. I know of no other poison the activity of which seems to be more distinctly affected by the individual peculiarities of the animal poisoned. The age of the animal has a good deal of influence in this question, the young suffering most readily —so swiftly sometimes, in the case of pigeons, as to make me fancy that shock or terror might have influenced the speed of the fatal result.

I have come to the conclusion that, as a rule, one-fourth of a drop of venom is fatal to pigeons under one year of age, and that, with less, escapes become frequent. This conclusion may not prove accurate for all seasons and latitudes, but at present may serve as an approximative test to be used in comparing the powers of Indian and Australian snakes with those of our own crotali. I have tried to aid these researches by sending to Professor Halford, of Melbourne, a quantity of dry rattlesnake venom, and hope to receive in return like specimens from the serpents he is studying.

Applying this standard of toxic power, I have found that the copperhead, popularly reputed to be more deadly than the rattlesnake, is not at all its equal in power to poison. Thus, when each one of a dozen of pigeons received under the skin one-fourth of a drop of venom—that of the *Crotalus* (rattlesnake)—very few got well; when the copperhead poison was used, there were commonly more escapes, so that, apparently, the rattlesnake is the deadlier reptile. It would be well, however, to try this question at different seasons, and with snakes previously treated alike. My experiments on copperheads date back several years, but the exact season of the year is not noted. Those on rattlesnakes were made in June, July, and September, 1867. I examined at this time the question of the harmlessness of venom when ingested. Since all of my experiments were made on pigeons, I have lately tested the question anew in mammals—as the guinea-pig—but with no different result, so that all I have determined for the birds may probably stand as true of higher classes. Of the necessity for extreme caution in trying poisons on only one species of animal I have lately had a curious lesson. It resulted in the strange discovery of the incapacity of pigeons to be poisoned by opium.(a)

There seems to be no limit to the extent to which venom can be taken internally, nor does it matter whether the animal be digesting or fasting; all alike escape. This was a nearly settled question two hundred years ago, and has been placed beyond doubt by the more recent experiments of Mangile with viper venom. Neither he nor any preceding observer has attempted to determine the reason for this impossibility of poisoning by ingestion of venom. In fact, until, in 1867, I myself went over the subject anew, I had still supposed it possible that venom might be in this respect on the same footing with woorara, and be competent to poison only in certain states of stomach. I soon discovered, as I have already stated, that it is indifferent whether digestion be active at the time, or the stomach empty; in every case the animal escapes, nor does the amount of the poison seem in any way to affect the result. I have given a pigeon day after day a hundred times the dose that would kill if put beneath the skin, and have in no case observed any symptom of the venom. The experiment becomes very striking when made in the following way:—A pigeon's crop is opened and carefully cleansed, and a few drops of pure venom poured into one of the lateral pouches remote from the line of wound. An hour passes, the pigeon remaining unaffected. With a fine needle I twice puncture the mucous membrane on which lies the venom; in five minutes the pigeon's head falls; in a quarter of an hour it is dead.

The series of experiments by which this curious immunity was settled and its causes studied is too long for detail here. It showed that all mucous membranes refuse passage to venom, save only the lining of the lesser bronchi and air-cells, if, indeed, their membranes can be said to be mucous in character. This was one answer; but it turned out that when I had given a pigeon a teaspoonful of venom, and came to collect its fæces and intestinal contents, they were in two or three days altogether free from the toxic power of venom. These experiments, seemingly so simple, were full of difficulty, because the infusions made from the intestinal contents were themselves often competent to kill if no venom was present. These interfering results were variously avoided, and I finally reached the conclusion above stated. Whether the poison be absorbed as a harmless peptone, being an albuminoid, or, so altered as to be innocuous, escape with the stools, I cannot say.

While the mucous membranes deny passage to venom, the serous membranes allow it to go through them with a singular ease; and to this there is no exception. Since, whenever the venom comes into contact with blood-vessels, blood escapes, we obtain admirable evidence of the swift flow of venom through serous tissues by the quick occurrence of extravasation beneath them. For instance, I etherise a rabbit, open its belly, and draw out a loop of gut. On this I trace a letter with a pencil dipped in venom. For a little while it remains invisible; but presently points of red appear, and in five or ten minutes the letter traced comes out sharply defined in red. I wash away the venom, and pass a finger over the peritoneum, or touch it with white bibulous paper. There is no blood stain to be seen on these; the bleeding lay beneath the serous cover.

This fact led to one of larger interest. I had often tried to poison the web of the frog's foot, but the frog is slow to suffer from any mode of venom-poisoning, nor will venom pass at all through the skin of this animal, so that I failed always; now, however, it occurred to me to me to look at the circulation in the mesentery, and then to envenom the part watched. The results of this experiment I have already published; but Cohnheim's repetitions of Waller's experiments caused me to take up my own research anew, fancying or fearing that what I had seen was merely what these observers had witnessed, and that I might have misunderstood the appearances I saw. I was pleased to find that I had not been so mistaken.

When the eye looks through a microscope at the circulation in the mesentery of a rabbit, and venom is then placed on the field, for a while no change is seen, no congestion or stoppage takes place. Presently a large number of blood-corpuscles appear outside of a capillary; they run swiftly along and around it, and pressed on from without, its circulation is stayed or lessened; very soon a second vessel offers the same appearance, and in five or ten minutes such effusions are numerous, and obscure the field. In no case is there a slow exit of globules, one by one, or of white corpuscles first; the vessel is entire at one moment, and at the next covered with its own blood. The eruption is too large and too sudden to allow me for a moment to suppose that the corpuscles emerge through pores or between overlapping epithelia. I have been unable to find or see these ruptures which, I think, exist; but this need create no surprise, as it is almost impossible to get rid of the overlying corpuscles that mask the view.

This strange weakening of the small vessels by venom goes far to explain the continuous hæmorrhage from fang wounds

(a) *American Journal of Medical Science*, January, 1869.

and the secondary extravasations which usually have been laid to some blood alteration alone. Here, then, we have a poison that causes bleeding directly, and destroys the natural means of arresting it by putting an end to the coagulating power of the escaping blood. This appears to me to be the most ingeniously mischievous of all the ways of injuring by poison described by the toxicologist. I fancy that a like explanation will be found to apply to all of the serpent venoms. It is true, as I have shown, both of the copperhead and rattlesnake, and, I should have no doubt, would answer for the rest, if it were not that Dr. Halford has recently described the tiger snake as producing little or no local symptoms. Some one in the East should examine the venom of the poisonous water-snakes, and we should then be in a position to compare the symptoms caused by the poisons of a number of distantly related serpents. For those who may wish to repeat my observations on capillary bleeding, I ought to state that the frog will not answer, even if its peritoneal folds be used and the temperature elevated so as to approximate its vital status to that of warm-blooded creatures. In no case will the poisoning be speedy enough, because, as hours must elapse, the circulation in such delicate membranes is apt to cease from drying or injury of handling, despite every precantion. Setting aside all the other questions which I have recently examined, I wish to say a few words in regard to the use of remedies, about which I am sorry to see Physicians everywhere indulging in the most absurd statements and sanctioning views long ago abandoned by the best informed Doctors in our own snake regions.

I suspect that observers will soon discover for other serpents, as I have done for the rattlesnake, that the mortality of their fang wounds has been grossly exaggerated. Let this be properly understood, and we shall hear less of the high value, as antidotes, of the many innocent substances—such as olive oil, snake root, or common salt.

Let the Physician called to see a bitten person calmly estimate the chances for his patient, noting if he have one or two fang marks, and ascertaining if the snake were a captive, and had been a long time without nsing his teeth. Thus prepared, and aware that the bite is not of necessity fatal, he will be less apt to resort to the frantic therapeutics of quarts of strong whisky and the like. In a recent case, which took place in this city, a German, bitten in the finger, was given a pint and a half of strong whisky within a half-hour, but died within two hours, despite this heroic stimulation.

I mention this case without comment other than that at the time he took the whisky no well-marked symptoms of serpent-poisoning had made their appearance. When any one has been bitten, as this man was, in the end of a finger by a snake long captive, the presumption is in favour of a large dose of venom, and therefore it would be perfectly justifiable to amputate the finger instantly if the patient were seen within an hour of the hurt.

If a man has been so injured, the finger should be at once surrounded by a broad band on the cardiac side of the injury, or the like precaution taken on the arm; then the bitten part should be cut out, or the finger amputated or burnt with a red-hot iron. No other local means are worth much at this stage of the poisoning. In any case free incision is proper, and the use of a cupping glass, where this can be had in time, and where the point attacked allows of its employment. The next step is to reassure the patient as much as possible, so as to lessen his alarm, and as soon as he feels sick or weak, and the pulse flags, he should be stimulated with enough alcohol in some shape to restore his powers and increase the heart-force. By this time the part bitten will most likely be swollen. We relay the ligature, and as soon as the poison begins to tell on the general system we tighten it again, and give the stimulus afresh. Under any circumstances of local treatment there will be left in the wound poison, which must at some time enter the general blood current, and by this plan of intermittent ligature and successive stimulations we are best providing for the patient's safety and for that of the part hurt, which of course suffers under a too prolonged separation by ligature from the rest of the body. I believe that if it were well understood that the thousand local remedies in popular repute are valueless, and that the simple and decisive means above described should alone be used, very few deaths from snak bite would occur.

In a recent French pamphlet by Lemaire I saw carbolic acid described as of value in snake-bites, and the sulphites have been over and over advocated as having probably a like efficacy. I have thoroughly examined both, and neither is of any real use. Carbolic acid, however, offers one peculiarity which I am sure would mislead any one who had not a full knowledge of the facts related early in this paper. When, mixed with venom, it is thrown into a tissue, or is so injected after the venom, it delays death, and certainly lessens the local symptoms. The reason for this comes out distinctly when the weakest carbolic solution is allowed to run over the living mesentery while the microscope is turned upon it. There is instant arrest of the local circulation wherever it goes. Check circulation, and you check absorption, or retard it, and this is why carbolic acid "slows" the venom poisoning. Let me add that many other fluids have the same power, but that carbolic acid is efficient in weaker solutions, and as the tendency of the bite is towards decomposition, it is of course indicated as a wash, and constant dressing after the fang wound has been laid open. In no internal dose was it of any use to bitten animals; I succeeded in killing a good many of them with the remedy while trying to effect a cure. Indeed, I have wondered at the freedom with which it has been employed in Great Britain in and on wounds, and have constantly expected to hear of deaths from its external application.

I trust I may be pardoned for occupying so much space with a subject having no practical value to English Practitioners. It has, however, pathological interest, and a curious bearing upon many of the mooted questions of the day, especially in connexion with the passive hæmorrhages of the blood-poisoning of disease. Moreover, to East Indian and Australian Doctors it has quite another value, and as it is to these that we must look for future researches, I shall be excused, I am sure, if I urge upon such of them as enter this field of research the propriety of examining the subject with all the aids now familiar to the modern toxicologist. We have already a multitude of simple observations where this or that snake was allowed to bite dog or bird, and the barren exterior symptoms duly noted; but as concerns the Indian snakes, unless I am misinformed, we have had no analysis of venom, and no comparative testing of the effects of venom on various classes of animals, no investigation of the many questions which at once suggest themselves in this connexion. Considering the number of able and educated observers in the Indian army, there seems to be no reason why toxicology should long rest under this reproach.

ON THE EARLY PROGRESS OF ARMY SANITATION IN INDIA.

By C. A. GORDON, M.D., C.B.,
Deputy Inspector-General of Hospitals.

(*Continued from page* 64.)

Barracks and Hospitals.

In offering the following remarks on the steps by which, up to a certain point, improvements were effected in the accommodation provided for the British soldier in India, the more convenient plan appears to be to commence with the capital, and thence proceed, as it were, towards the interior of the country, taking station after station in our survey.

According to this order, then, let us consider—

1. *Fort William, Calcutta.*—Towards the end of the rainy season of 1830, fever of a typhoid character occurred among our troops quartered in Fort William. The chief cause of the outbreak was speedily detected by the then principal Medical officer, who, in his reports (a) at the time, thus expressed himself:—"Besides the unfavourable season"—it was thus he wrote—"another cause of the sickness among his Majesty's troops at Calcutta was the crowded state of Fort William." The regiment which occupied Fort William was the 16th Foot, the men of which, according to the reports of Dr. Burke, were not only too much crowded together "in too small a space" in barracks, but laboured under the additional disadvantage of being in rooms "without the possibility of proper ventilation," the consequence of which was that the human effluvia became thus daily more concentrated, their effects daily more malignant. (b) It is true that Dr. Burke entertained very moderate views in regard to the amount of space necessary for maintenance of health in an Indian climate. Yet it is apparent from the representation which he made on the subject that when he wrote the principle of allotting a specific amount had not come to be recognised. "There should," he wrote, (c) "be a regulation that commanding officers, and every officer concerned in quartering his Majesty's troops in barracks, and for the due execution of which they should be held strictly responsible, that the cubic contents of each room be divided by 900, thus to indicate the number of men who should be quartered in it." With regard to the arrangements of the barracks,

(a) For 1830, p. 290. (b) *Ibid.* p. 490. (c) *Ibid.* p. 406.

there were, at the time to which these notes refer, two ranges—namely, the King's and the Artillery. The former was two stories high, and formed three sides of a square, the ground floor being described as not sufficiently raised above the surrounding level; the ceiling of the lower and upper flats not nearly so lofty as a due regard for ventilation and protection from the great heat of the weather during the greater part of the year at this station would necessarily imply. Of the Artillery barracks, we learn that they consisted of but one story. The apartments were arched, low-roofed, and very close in the warmer months. "The same objections," said Dr. Burke,(d) "which have been urged against the floor and ceiling of the King's barrack apply with equal force to the Artillery barracks; and in both," he adds, "their proximity to the ramparts and large buildings greatly obstructs their free ventilation, particularly in the lower range; and the nearness of the privies to the King's barrack occasionally vitiates the atmosphere, notwithstanding the greatest attention to cleanliness. Most of the married men, with their families, occupy the lower apartments of the barracks, as do the band, drummers, and staff sergeants."

With regard to the range of buildings for officers still known as the "Rampart Barracks," Dr. McLeod in 1834 wrote as follows:—"Several officers and their families had suffered severely since the beginning of the year from alarming attacks of fever, which are almost exclusively confined to those quarters in the Rampart barracks which are immediately over the ditch, and therefore the best criterion of the malaria from it. For twelve months past that portion of the barracks allotted for accommodation of officers (of the 49th Regiment) has been by far the most unhealthy. In fact, it may be said that the insalubrity of this location would seem to depend either on its proximity to the ditch or imperfect ventilation and hotness of the rooms from the constant reflection of heat during the day from the chunam terrace in front of the quarters."(e)

It is only necessary to add to these remarks that a magnificent range of barracks now occupies the site of what were once known as the triangle ones, and that the artillery and married soldiers occupy scarcely less capacious buildings. The rampart barracks, although patched and in some degree improved, are still occupied, and possess in only slightly diminished measure the objections that in 1834 were described as belonging to them. No year elapses that fever or cholera, or both, do not claim their victims from among the occupants of this range.

Regarding the means of ablution for the troops quartered at Calcutta, so recently as 1830, we read as follows:—"Two rooms for bathing in one of the barracks exist, but no supply of water, so that they are useless as such. From the want of baths contiguous to the barracks," Dr. Burke further observes, "personal cleanliness, so necessary to health, is at all times difficult." "What is difficult will seldom be attempted to be overcome, and the cleansing of the body cannot be attended to without exposure and total disregard of decency."(f) An interval of nine years intervenes before we again meet with any allusion to these glaring defects. It is evident, however, that, in the period which had intervened, the Medical officers had not been silent, for in the report for 1839 we find it recorded that "baths for the men are also urgently required, and though plans and estimates for them were furnished in the government of Lord William Bentinck, no steps have been taken for erecting them." Parsimonious, therefore, as were many of Lord William Bentinck's measures, we have here, at any rate, one liberal measure authorised by him which, evidently through the apathy or opposition of subordinate officers, was permitted to remain in abeyance, to the great personal discomfort and injury to health of the soldier.

2. *Chinsurah.*—The barracks at this station, high, broad, airy, and consisting of two stories, were in their nature so exceptionally good, that in the earlier reports no remark adverse to them appears. Very different was the case, however, in regard to the Hospital, the erection of which seems to have been begun, not prior to the commencement of the barracks, but after they had been finished. A few brief remarks will indicate that the defects not only did not escape the notice of the Medical officers, but that their continued existence was in opposition to their urgent representations.

Dr. Burke, in 1829,(g) mentions that the building used for the purposes of a military Hospital there was a private house, "which, in many respects, had become objectionable, but chiefly so from its local situation." "Men admitted into it with fever, dysentery, or other serious attacks of acute disease are liable to repeated relapses, or to the supervention of other complaints, as was the case," he remarks, "with four out of the six fatal seizures of cholera," regarding which he was then writing. "Patients," he continued, "convalesced very slowly and imperfectly, so much so as to render it frequently necessary to discharge men to their barracks prematurely as a means of re-establishing their health." A new Hospital was at this time in course of erection, and, with reference to it, Dr. Burke reports(h) that the site chosen for it "was that of an old Mussulman burying-ground, near the western end of the soldiers' barracks." The result of this injudicious arrangement, he further adds, "was the sinking of the foundations and giving way of the main walls before the lower story was completed." As a consequence, the works were stopped for some months, and the building left in an unfinished state. Finally, however, the work was resumed, and the existing Hospital completed.

3. *Berhampore.*—The finest barracks in India were unquestionably those erected at Berhampore in 1757, the East India Company having expended on their construction no less a sum than £302,278. They consisted of double-storied buildings, high and well-ventilated, nor was it long before the advantages of accommodating troops in upper floors were rendered apparent here. In 1829 the Surgeon of the 14th Foot recorded the fact that the men occupying the upper floor were more healthy than those on the lower, having there "a purer atmosphere and less humidity." The lower stories were moreover described as difficult to clean; it was stated that filth "will accumulate in the vicinity of the sewers," producing a damp and noxious effluvium, particularly during the rains. Cholera had at various times committed great ravages among the troops here, and the men on the ground floors having always suffered most severely on these occasions, it was in this year recommended that the upper floors only should thenceforward be used.(i)

But although the barracks were built on the magnificent scale that has just been described, no attention seems to have been bestowed upon the vicinity. Adjoining the barracks, on the eastern side and immediately behind them, was a large tank, of which it was stated that "the water is not drinkable; during the hot season it has a scum upon its surface that may be in a great measure attributable to the great quantity of filth from the drains of the cantonment, which *pour their contents into it*, and becomes stagnant. When the water is low," it is further added, "the fish, which are in great abundance, die; and in consequence of the decomposition of vegetable and animal matters, a very offensive effluvium arises, and altogether is a cause of mischief. No attention of any kind," Dr. Burke further adds, "seemed for a length of time to have been paid to it, till it was represented by me in 1826." At this place also a Hospital for the sick was the last building erected; and we find that years after the new barracks had been in occupation, the building in which the soldiers were treated was described by Dr. Macqueen,(k) of the Buffs, as "not adapted for sick." He moreover urged that it should be abandoned, and added, "Many lives would be saved by doing this." It is right to add that the large and handsome Hospital which still exists was shortly afterwards erected.

4. *Bhaugulpore.*—This station has long since ceased to be occupied by troops of the line; yet the study of some of the circumstances connected with the barracks and Hospital there—if such a term can be with propriety applied to the places in which soldiers were penned—may not even now be without its lesson. These may be briefly recorded. In 1827 the Buffs arrived in Bengal from New South Wales, and proceeded to Bhaugulpore. There "some stables that had been built for cavalry were the only buildings available for their accommodation. These were fitted up as well as haste and the rains would permit, so that the last of the men who arrived were obliged to sleep upon earthen floors till cots could be got from the next station, Dinapore, distant nearly two hundred miles."(l) The nature of the Hospital accommodation provided at this station is also best described in the words of Dr. Burke. It was "also defective; and the building designated by that appellation was a small one, only capable of holding forty patients, close, confined, and near the bazaar. On two sides it was confined by trees and mango topes, and on the other rendered unpleasant from its vicinity to the barracks, privies, cook-rooms, etc., with a hard mud floor saturated with such discharges from the patients as it is impossible in this country to guard against at present." Cholera, as might have been anticipated, speedily occurred, and raged with great severity among men so situated.

(d) Report, 1831, p. 471.
(e) Report for 1834, p. 88.
(f) Report, 1839, p. 316.
(g) Report, page 257.
(h) *Ibid.* page 259.
(i) Inspector-General's Report for 1829, page 173.
(k) Report, 1833.
(l) Report for 1827, page 162.

Dr. Burke wrote and protested against the arrangement by which the troops were retained at the place, with what result is best learnt from his own pen. "The barracks," he stated, in his report for 1828,(m) "are slight, chopper,(n) temporary buildings, which *I have three times* officially, and as strongly as possible, represented and remonstrated against being used as barracks for Europeans, in which it is almost a crime to put them." Comment on these remarks could but impair their force.

5. *Dinapore.*—Dr. Burke, in 1829, had occasion to allude to the great prevalence of, and the mortality by, dysentery at Dinapore, and in allusion to these expressed it as his opinion "that the site and construction of the barracks and Hospital have had their share in the production of disease and its fatal effects." For many years after he wrote soldiers quartered here suffered terribly from that disease. Time after time were the site and the construction of the barracks protested against. Troops were sent there as before; nor was it until the erection of additional barracks in 1858 permitted the men to have a much larger amount of superficial space than they had previously enjoyed, that the station became less notorious than it had hitherto been for the prevalence of that and other serious diseases.

(To be continued.)

FURTHER REMARKS ON THE

PROPERTIES OF THE ALBUMINOID, WAXY, OR LARDACEOUS CHANGE.

By J. WICKHAM LEGG, M.D. Lond.,
Assistant-Curator of the Anatomical and Pathological Museum at University College, London.

THE appearance of this paper has been greatly delayed by the difficulty experienced in finding organs affected with the albuminoid degeneration. The post-mortem examinations at four large London Hospitals have been carefully watched since the end of September last, but no instance of the disease occurred until late in December.

In a paper by Dr. Dickinson, which appeared in the *Medical Times and Gazette*, September 19, 1868, the statement is repeated that the peculiar reaction with iodine of the albuminoid tissues is permanently destroyed by immersion in solutions containing caustic alkali of different strengths. Some months ago, when investigating the action of alkalies on the albuminoid tissues, I arrived at the conclusion that potash or soda had no power of destroying the reaction of these tissues with iodine; but in these experiments I used much stronger solutions of alkali than Dr. Dickinson recommends, and also allowed the sections to remain in the alkaline bath a much shorter time—only two or three minutes. In the investigations that I am about to describe, alkaline solutions were employed of the same strength as those used by Dr. Dickinson—viz., one containing one-half per cent. of caustic potash, and the other being the liq. potass. of the Pharmacopœia, diluted with twenty times its bulk of water. In these solutions I laid sections of albuminoid organs, and, after an immersion lasting over ten minutes, I proceeded to test them with a weak solution of iodine. At first I thought that my previous observations were incorrect, as no staining was observed for the first few minutes; but within a quarter of an hour the staining was as well marked as if no alkali had been used, and the result was the same if the previous immersion in the alkaline solution had been continued for fifteen or thirty minutes, or even as long as an hour or two. The colour was produced much more rapidly when the section was well washed with water after immersion in the alkali and before the application of iodine. Both this and the delayed appearance of the staining may perhaps be due to the formation of two colourless salts, the iodate and iodide of potassium, which are, of course, always formed when caustic alkali and free iodine are brought into contact.

In the same paper it is complained that I have dealt in an "ingenious manner" with the figures relating to the chemical analysis. My object in placing the quantity of alkali in albuminoid and healthy livers in parallel columns was to show that in four out of six cases—two-thirds of the whole number—no inference could be made as to the diminution of alkali in albuminoid disease, the remaining two cases containing so very small a percentage of alkali that these two alone were the cause of the percentage of the six diseased livers being so much smaller than that of health. The analysis of the seventh liver cannot be taken here into account, as it does not give the very point in question, the amount of soda and potash salts, but only the amount of soluble and insoluble ash. But even if this analysis pointed in an unmistakable manner—which cannot be admitted—to a diminution of alkali, nothing would be proved generally. No good induction can be based on so small a number of cases, and a very great many more albuminoid organs must be analysed, and the results compared with the analysis of the same number of healthy parts, before any inference can be made as to the diminution of alkali in all cases of albuminoid degeneration. The number at present examined is far too small.

With regard to suppuration being an almost invariable antecedent of the albuminoid degeneration, I may venture to point out that the degeneration in question is not by any means an invariable consequent of protracted suppuration. In cases of diseased bone and of phthisis, where immense quantities of pus are daily evacuated, the organs are not usually found to be albuminoid, and I am informed that it is somewhat uncommon at the Hospital for Consumption to find at the post-mortems there the change in question. Again, if suppuration be an invariable antecedent to the albuminoid change, there are other constituents of pus besides salts of alkalies, and the degeneration may as reasonably be attributed to the loss of albumen, cholestearin, or any other constant constituent of pus, as to the loss of alkali.

It is also stated that, "where the change is extensive, the affected organs have been found to give an acid reaction to test-paper, instead of an alkaline reaction, as in health." It is a well-established fact in physiology that most organs in the living body have an alkaline reaction, which, however, they lose almost immediately after death; so that any healthy organ examined a few hours after the death of the animal would invariably give an acid reaction. As no post-mortem on a human being is usually made until at least twelve hours after death, it would be interesting to know under what circumstances the fact mentioned by Dr. Dickinson was ascertained.

But all discussion as to other points appears to me to be useless if the great point on which rests the whole theory of dealkalisation can be disproved. It is asserted that, by treating fibrin or albumen with dilute hydrochloric acid, "which necessarily deprives the fibrin of its alkali," a body is produced identical with the substance of the albuminoid degeneration. If these two bodies are identical, they will of course behave in a similar manner with chemical reagents; but if they differ in any one point in their chemical behaviour they cannot be regarded as identical, and I think I shall be able to prove that they differ not only in one but in many points.(a)

In the first place, it is a well-known property of the albuminoid substance that it possesses in an eminent degree, and thereby differs from all other members of the protein group, complete insolubility in the gastric juice, and, after prolonged digestion, can be easily recognised by its peculiar reaction with iodine.(b) The "dealkalised fibrin," on the other hand, is most readily soluble in gastric juice, and, after digestion for a few minutes, is completely dissolved, not giving any reaction whatever with iodine. Secondly, the "dealkalised fibrin" boiled with caustic potash readily produces sulphide of potassium, none whatever being formed with the albuminoid substance. Thirdly, the "dealkalised fibrin" is insoluble in ammonia, but soluble in acids and some alkaline salts. The albuminoid substance is soluble in very dilute ammonia, but absolutely insoluble in almost every other reagent. Lastly, there is a most important difference in their behaviour with acids after staining with iodine, the "dealkalised fibrin" being completely unaffected, the albuminoid substance giving the black-blue colour. This is not a "useless complication," as asserted: it is of great use practically to distinguish true albuminoid degeneration from the staining produced by the mixture of blood and iodine.

It has been seen, then, that the addition of potash to albuminoid organs does not permanently destroy their reaction with iodine; that the number of organs submitted to chemical analysis has been too small to allow of a satisfactory inference to be drawn from it; that the figures, as they are, prove little or nothing; and, lastly, that the albuminoid substance and the "dealkalised fibrin" are perfectly distinct bodies, since they differ so completely in their chemical properties.

(m) Page 29. (n) Wicker.

(a) It may be remarked in passing that the mode of preparation of the "dealkalised fibrin" is absolutely identical with that for the artificial production of syntonin from fibrin or albumen, as may be seen by reference to any elementary work on physiological chemistry.

(b) Kühne's "Lehrbuch der phys. Chemie," p. 413.

CASE OF CARBUNCLE ENDING IN EMBOLISM OF MIDDLE CEREBRAL ARTERY.

By CAREY P. COOMBS, M.B. Lond.

J. S., aged 70, first applied to me on December 5, 1868, on account of numerous boils which he had about him; in other respects he said he was well. A week after he asked me to see a large boil which had appeared on his back. There was a carbuncle about an inch in diameter in the left upper lumbar region. With poultices the slough soon became exposed, but the hardness round the swelling extended rapidly.

In the evening of the 16th I was asked to see him because he had fallen from his chair, and it was thought that he had had a fit, but by the time I saw him nothing was observable beyond slight shock caused by his fall. Two or three days later, however, he could not use his right hand, there being acinesia of both flexors and extensors of the forearm. I attributed this to the fact of his lying on the right side to avoid pressing on the carbuncle, but it did not pass off, although he changed his posture.

On the 20th I removed a large slough like soaked brown paper; it left an open sore about two inches square. After this the discharge, which had been reddish brown, and horribly fœtid, improved in colour and smell.

About the 27th his tongue began to be dry and brownish, but his appetite had been rather better than during the earlier part of his illness; his urine was scanty, but I did not get a specimen for examination. He had no pain, no delirium, no cerebral symptoms whatever besides the motor paralysis and somewhat impaired sensation of the right hand.

On the 31st, at 6 p.m., his attendant found him unable to speak or make any sign, and his right eye was closed. At 10.30 p.m. I saw him. He was, as usual, lying on his back; both eyes opened and followed the light as it moved; the pupils were equal and contracted well; he seemed unable to hear; he could move his arms and legs, and he appeared able to feel pressure and heat. He died quietly two hours later. I examined his head twelve hours after death. The veins of the pia-mater were full, and on the left side the arachnoid was opaque over nearly the whole of the hemisphere, with much serum in the subarachnoid space. On cutting into the brain, I found a spot of softening about the size of two walnuts above and outside the left ventricle; it extended to the surface of the hemisphere at a point as nearly as possible in the centre of the middle lobe. The softened tissue was of a pale red colour, and under the microscope showed exudation cells, red corpuscles, granular matter, and fragments of nerve tubes. The middle cerebral artery and the posterior communicating on that side each contained a firm plug a third of an inch long, and somewhat attached to the internal coat. I could not find any trace of disease or deposit of fibrin in the other cerebral vessels. Nearly half a pint of serum escaped from the head during my examination. I failed to find any urea in some which I collected. The rest of the body was not examined.

Remarks.—This case is published because much attention is now given to the subjects of separation of fibrin and obstruction of vessels, and because in this instance it appears as though the hyperinosis causing the carbuncle had also caused the embolism. I consider the succession of events interesting, and the small amount of perceptible effect of the destruction of so much cerebral substance remarkable. Cases have been related to me where there was a connexion between carbuncle and disease of the brain; in these cases both forms of disease probably had a common origin in albuminuria.

Castle Cary, Somerset.

FORCED AND PROLONGED FLEXION OF THE LIMBS IN TRAUMATIC HÆMORRHAGE.—M. von Adelmann, of Dorpat, in a paper laid before the Belgian Academy of Medicine, and founded upon ten cases occurring in his practice, arrives at the following conclusions:—1. Forced flexion is a valuable means of arresting traumatic hæmorrhage. 2. It should be employed before having recourse to other hæmostatic agents. 3. It may be resorted to even in cases in which ligature of the artery has failed. 4. A knowledge of its mode of application should be popularly diffused, so as to allow of its being at once adopted while awaiting the arrival of the Surgeon. 5. Such knowledge may also be very useful in armies. 6. It is very desirable that manuals of Surgery should bring the subject into prominent notice.—*Presse Belge*, January.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

RADCLIFFE INFIRMARY, OXFORD.

UNSUSPECTED DIPHTHERIA — DEATH EIGHT WEEKS AFTERWARDS FROM NERVE LESIONS SIMULATING BRAIN DISEASE—AUTOPSY.

(Under the care of Dr. GRAY.)

E. P., a boy aged 9 years, was admitted into the Radcliffe Infirmary in December last under the care of Dr. Gray. Besides great general debility, there were specially noticeable (1) a peculiar dull pallor of the skin, (2) marked vacancy of expression, with (3) ptosis of left upper eyelid, and slight outward squint of left eye; pupils large, but not sluggish nor unequal; vision clear, but very limited in range; (4) an ataxic gait. In walking he has to be firmly supported by both hands, and also to keep his eyes on his feet, which even then are jerked about in an unsteady manner, and always brought down heavily and flat on their soles. This peculiarity of walk is found to depend not upon mere feebleness, nor yet upon loss of voluntary motor power in either leg, but upon inability to control and co-ordinate their movements; for, as he lies in bed, he can move either leg steadily and with considerable force in any direction, even without looking at it; the sensibility, also, both cutaneous and muscular, of both legs and feet seems quite normal.

Along with these symptoms there is no complaint of pain. The tongue is furred, but appetite and digestion are fair. Throat clean; pulse 112, full, soft, regular; heart and lungs seem healthy; no albumen in urine; no lack of intelligence; no hydrocephalic conformation of skull; no vomiting, headache, constipation, or heat of skin.

The history given by his father, who brought him to the Infirmary, was unsatisfactory as affording any explanation of the case. It was to the effect that the boy had been quite well up to seven or eight weeks previously, when he was laid up with a bad "cold in his chest," not, however, of such severity as to induce the parents to have Medical aid. There was no other illness in the house before or afterwards. At end of a fortnight he seemed to be convalescing favourably, but in the course of another week or so his left eyelid began to droop; his sight got dim, and he complained of difficulty in walking—"from weakness of the knees," his parents thought. The latter trouble has been steadily progressive up to the present.

From time of admission he gradually sank, no new symptom being observed in addition to those above detailed, except that for two days before death he swallowed with difficulty, and the bronchi became loaded with mucus, which he could not expectorate. He died on the sixth day after admission, more (it seemed) from rapid loss of nervous power than from muscular weakness. He was free from suffering, and retained his consciousness almost to the last. There was no opisthotonos, nor spasm, nor convulsion in the ordinary sense of the word—merely a little convulsive working of the mouth just before death.

The diagnosis made at first was that of some cerebral mischief, probably of a tubercular nature. At the same time the case was felt throughout to be wholly wanting in some of the most constant features of such disease—the features, that is to say, of *nerve irritation as well as of nerve paralysis*. The day before his death, however, it was ascertained from his mother that during the primary illness (the cold in the chest) his throat had been very sore, and that besides the symptoms above mentioned he had had for a time difficulty of swallowing, with regurgitation of fluids through the nostrils. The nature of the case now seemed clear. A sore throat, followed later on by impaired sight, with strabismus and ptosis; paralysis of the soft palate; a sort of ataxic paralysis of the legs; anæmia; and at last destroying life apparently from sheer nervous exhaustion—could hardly be other than a case of diphtheria proving fatal in its secondary toxic effects on the nerve centres. And this view was borne out by the post-mortem examination; for except slight congestion of Peyer's patches and a little enlargement of the mesenteric glands, no disease whatever could be found. The cerebrum and cerebellum, both in their substance, membranes, and ventricles, were to all appearance quite healthy. There was no softening, and no effusion either of serum or lymph. Spinal cord not examined; kidneys healthy; no tubercles in lungs; no ulceration or exudation about throat.

Treatment.—After a single aperient given at the outset, nothing was attempted except to support strength with wine, milk, beef-tea, and ammonia.

Remarks.—This case well illustrates most of the usual forms of nervous lesion following diphtheria. The affection of the legs, however, was very different from ordinary diphtheritic paralysis, and seemed to me to be capable of description only by such a term as I have applied to it—viz., ataxic paralysis. It is worthy of notice that all these nervous lesions came on after what seemed to be a diphtheria of no unusual severity or persistence; also that they proved fatal *per se*—*i.e.*, without renal or other complication—two facts which invest the prognosis of any case of this disease with grave anxiety. Lastly, the occasional close resemblance of such symptoms to those due to actual brain disease is a point of much clinical interest; for where the history of the case is such as to mislead rather than guide, the diagnosis between the two becomes a matter of much difficulty. My colleague, Dr. Tuckwell, has since drawn my attention to the record of a very similar case of diphtheria in the practice of the late Professor Trousseau, where the secondary nerve lesions, of which the patient died, were attributed during life to tubercular disease of the brain. (Trousseau's *Clinique Médicale*, vol. i. 1868, p. 426.)

BELFAST GENERAL HOSPITAL.

WOUNDS OF JOINTS TREATED ON THE ANTISEPTIC METHOD BY CARBOLIC ACID.

(Under the care of Dr. WILLIAM MAC CORMAC.)

Case 1.—*Compound Comminuted Fracture, with Wound, of the Elbow-joint—Fracture of the Leg—Recovery.*

Patrick K., aged 40, a plasterer, fell from a scaffold of no great height, and was admitted into the Hospital on July 31, 1868. Has been very intemperate, and in 1851 was partially paralysed on the left side. On examination the right leg was found to be fractured at the junction of its lower and middle thirds, and the soft parts around were much contused. Just above the inner condyle of the left humerus is a wound through which the finger might be easily passed through the joint to the opposite side of the limb. The lower end of the humerus was much comminuted, and a considerable piece of bone, a portion of the internal condyloid ridge, lay partially detached in the wound.

Dr. MacCormac was strongly urged to attempt excision of the elbow-joint, and to resort to amputation in case the extent of the injury should appear too severe to warrant such a procedure. The patient, however, refused to submit to operative interference. The wound was therefore dressed with lint soaked in carbolic oil, and the limb was placed upon an angular splint. Some oozing of blood took place, which coagulated upon the dressings. These were daily soaked in fresh oil, but were not disturbed until August 8, nine days after the injury. The patient complained of no suffering from the arm, and there was no local inflammation. The leg was put up on an outside splint, and, in consequence of the extensive bruising of the soft parts, proved more troublesome than the arm. When the dressings were removed from the wound a small quantity of matter was seen, below which healthy granulation appeared to fill up the cavity. Carbolic lotion was now used in place of the oily dressing, and the wound continued to do well, the patient being reported convalescent six weeks after his admission.

When he left the Hospital he had regained very considerable power of extension and flexion of the affected joint, and retained the movements of pronation and supination.

Case 2.—*Compound Fracture of the Patella, with Wound of the Knee-joint—Recovery.*

B., aged 45, of intemperate habits, fell whilst drunk on the edge of the footpath, and was admitted on July 12, 1868, into the Hospital with an extensive contused wound, six inches long, stretching from one condyle of the femur across the front of the knee-joint to the other; the patella was fractured transversely, the tendon of the quadriceps extensor was torn, and the knee-joint was laid open, the articulating surfaces of the femur appearing through the wound. The limb was placed on a straight splint, and the wound was carefully cleansed and washed with carbolic oil, and then covered with lint soaked in the same. The circulation through the femoral artery was controlled by a tourniquet, and ice applied around the joint. On the following day the parts were somewhat swollen; the patient suffered some pain; pulse 112; tongue furred. These symptoms, however, gradually subsided, and five days later the pulse was only 100, the tongue was cleaner, and the swelling diminished. A slight amount of sloughing took place round the edge of the wound, but this was shortly followed by healthy granulation. Bony union took place between the fragments of the patella, and no anchylosis of the knee-joint occurred. The patient was discharged cured on September 28, and was then able to flex the limb at an angle of fifteen or twenty degrees.

Case 3.—*Lacerated Wound of the Wrist-joint—Recovery.*

A lad of 15 had his hand caught in a fluting-machine in a linen mill. On admission into the Hospital a wound opening the wrist-joint was found to extend from the palm round the base of the thumb as far as the metacarpal bone of the index finger; the soft parts had been torn away, the trapezius and trapezoid were both injured, the scaphoid displaced backwards, and the joints of the second row of the carpus were laid open. The wound was dressed with carbolic oil, and a splint applied to the palm and forearm. Very little inflammatory action and suppuration occurred, and the wound healed rapidly, so that in a fortnight there was only a superficial granulating wound at the seat of injury. In five weeks the boy left the Hospital with only some stiffness of the wrist-joint and impaired movement in the thumb.

Remarks.—These three very interesting cases of recovery from severe injuries to joints without resorting to operative procedures, and without any considerable degree of impaired function remaining in the parts affected, go far to prove the value of the antiseptic treatment of wounds, when carried out in strict accordance with the rules laid down by Mr. Lister. We ourselves had an opportunity of witnessing the progress made by the first two cases a few weeks after their admission, and can testify to the remarkable rapidity with which granulation had occurred, and the marvellously small amount of discharge which accompanied this process. It must, however, be borne in mind that similar results were sometimes obtained before carbolic acid was thought of, and therefore we cannot consider that this is necessarily an essential element in these cases; but it will probably be admitted that the occurrence of three such cases at one time, and the uniformly satisfactory results obtained in all of them, would indicate something more than a mere coincidence. We shall take another opportunity of reporting cases treated upon this system at other Hospitals, but would at present merely call attention to the fact that the antiseptic method has hardly had a fair trial in the London Hospitals, and has been employed with far too little care and attention to small details upon which its success or failure so much depends. The second case is also interesting as illustrating the employment of the method of subduing acute inflammation by pressure upon the main artery of the limb in accordance with the suggestion of Mr. Maunder. In some remarks made by Dr. MacCormac, he stated that he had no desire to mete out to the different plans adopted in this case the exact measure of credit which might be their due; but he stated that he considered that the compression of the main artery of a limb by a tourniquet might often prove a valuable aid in reducing acute inflammations, especially those following wounds of joints.

Suicides at St. Petersburg.—Dr. Hübner gives the following particulars of those which occurred during the years 1858-67. They were 544 in number, 461 men and 83 women. During the same period there occurred 477 (384 males and 93 females) sudden deaths, and 424 (346 males and 78 females) deaths from drunkenness. Hanging was the most frequent form of suicide; officers, students, and man-servants chose shooting in preference; officials and clerks chose sharp instruments, and the inhabitants of Finland and the Eastern maritime provinces preferred drowning. A suicide took place as early as 11 years of age. Twenty was the most frequent age, then came 30, and lastly 40. In the period 1858-67 there occurred 198 suicides (31 females) from hanging and strangling, 117 (31 females) from cutthroat or suffocation, 103 (22 females) from drowning, 54 from gunshot, 49 (11 females) from precipitation, 22 (4 females) from poisoning, and one man fractured his skull; total, 544. As far as the causes can be ascertained, Dr. Hübner arranges them in 4 categories, which attribute 112 suicides to insanity, 21 to bodily suffering, 114 to drunkenness, and 15 to family differences.—*Beilage zur deutschen Klinik*, Nov. 2.

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Medical Times and Gazette.

SATURDAY, FEBRUARY 6, 1869.

LIMITATION OF BIRTHS IN FRANCE.

It is unnecessary that we should invite attention to the most interesting document on the "Progress of Population in France" which appears in another column. Its bearing on numerous questions concerning morals, religion, social habits, and national prosperity is obvious. We have already expressed ourselves fully on the moral aspect of the case in our remarks last August on the discussion at the Dialectical Society. We may say, however, that it can be little less than a national calamity that the practice of a population should be persistently and diametrically opposed to all the religious teaching which they receive.

Amongst Catholics, it is well known that contrivances for rendering married life childless are sedulously denounced by the clergy in the privacy of confession. But it is a great mistake to suppose that creed has any more influence on the prevalence of the customs in question than race has; for we know on indisputable authority that the Protestant pastors of the half-German Alsace preach openly on the matter, and that in spite of them the women express their determination to bear no more than two children. The effect of such customs on the health of the weaker sex has never yet been fully stated. As for national prosperity, it is quite true that a redundant population has its evils. There is the wretchedness arising from want of occupation, and if this be relieved by emigration, it may be said that every parent state may have to fight for its colonies first, and to fight against them afterwards. The history of the English possessions in North America in the last century is illustrative enough of this. On the other hand, it must be conceded that all wars are not voluntary, and all are not the effect of a restless population unable to keep within its own borders. It is conceivable that the French of the twentieth century might find themselves menaced by invading hosts from the North and East, whom a population artificially limited, and looking to comfortable existence in France as their *summum bonum*, might find it difficult to resist.

We will only point out one duty which we think is overlooked by our neighbours. Man has relations to the Kosmos, and a debt to posterity. We come into a world cultivated and prepared by the labours of our predecessors; we are bound to do our share to make it better for our posterity. A man who strives to support as many children as Nature provides him with must do more work than he who limits his family to two. Human beings have spread by emigration, and will continue to do so; large tracts of the world remain unpeopled; and the resources of skilful industry in adding to the means of comfort, health, and enjoyment seem as yet to have been drawn upon in but the rudest degree. If the surly democrat sets up the earthly happiness of humanity as the highest end of his aspirations, we think limitation of population a mistaken means. It is not a redundant, but an ill-educated, ill-governed, selfish population that is to be feared. There is plenty of employment in England if the "hands" would but stoop to accept it. "Increase and multiply, fill the earth, and subdue it." "Happy is the man who hath his quiver full: he shall not be afraid to meet his enemies." Such we hold to be sounder maxims of social economy than those which are acted on by the French democrat.

PRELIMINARY SCIENTIFIC TRAINING.

We have a suggestion to make to the Medical Council which, perhaps, may serve as a basis for the reconciliation of the two parties now in conflict on the question of the study of those sciences which are regarded as properly preliminary to the strictly Professional education. We write from some little experience when we say that the grand deficiency of young men who enter the Medical schools is that the habit of mind which is of all others most essential to the Medical man, which ought to constitute part of his very self, is for the most part totally uncultivated. This is the great drawback to his taking full advantage of his privileges as a Hospital student. Not only is it uncultivated, but so much of the tendency towards its ready acquisition as is inherent, we believe, in every boy, is tolerably well crushed out of him in the course of his school life. The only advantage which the old apprenticeship system could boast was that it placed an interval, too long, indeed, in many cases, between school and the entry at a Hospital—a period during which the dependent habit of mind of the schoolboy might be exchanged for the independent. Sadly too often was this opportunity thrown away heedlessly by the newly emancipated youngster, or filched from him by a rapacious master; but the instances were not few in which the one had the good sense to avail himself of it, and the other to facilitate the exchange. What is especially required as a preparation for Medical study is the power of accurate observation and some readiness in putting likes together and distinguishing between unlikes, and of recognising and of separating in a heap of observed facts the important from the trivial. Now, if a boy fresh from school is required to bring to a preliminary examination not only a sufficiency of Latin, Greek, modern languages, history and mathematics, but an elementary acquaintance with three or four "ologies" besides, the latter can only be obtained by a system of objectionable cram. What is really needed, to our mind, is not so much elementary scientific knowledge, as some little advance in scientific training—a training which would necessarily embrace some useful acquaintance with one or more of the sciences used to impart it. After all, the amount of acquaintance with physics, zoology, and botany really required as preliminary to a satisfactory study of Materia Medica and human physiology, in the time allotted to a Medical curriculum, is very small. What little physics may be needed is easily acquired from some such book as Lardner's "Natural Philosophy for Schools," and the zoology requisite is merely so much as may suffice for comprehending the basis of a zoological classification, and might be readily introduced when needed into the Materia Medica course. It occurs to us that the object of the preliminary examination, putting ordinary school knowledge aside, would be sufficiently gained if a lad were required to show that by the *practical* study either of chemistry or botany he had acquired such training in the arts of observation and classification as would enable him to describe systematically any British plant placed before him, and to give its natural order, or to apply *systematically* the tests necessary for the determination of the constituents of some substance containing a metal in combination with some inorganic radical. If he were permitted the choice of the sciences in which his training should be accomplished, the science selected might fairly be

omitted from the list of those which he is required to take up in the first year of his curriculum. He might have the choice either of botany or chemistry, or, if he took up both for his preliminary, both might be excused from his subsequent examinations. Such training as would enable a boy to pass an examination of this sort would be of far more service to him than such a course of elementary study of science as has been proposed in the Medical Council. It is such a training, too, as a lad could, with very little direction, give to himself. It would constitute an interesting diversion in the intervals of his school studies, and three or four months in the summer might specially be devoted to it before his entering the Medical School in October.

THE *TIMES* ARTICLE ON HOSPITALS AND DISPENSARIES.

Four columns of the supplement of the *Times* of last Saturday are devoted to a discussion of the defects, shortcomings, and abuses of the London Hospitals and Dispensaries. The writer shews an intimate knowledge of the subject, which, not less than the Medical style and phraseology to be found in the article, indicates that he belongs to our Profession. We do not complain that the whole subject is thus brought before the public, for no class can be so thoroughly aware of the abuses of Hospitals as their Medical officers. Unfortunately the practical evils of the system have been specially reaped by the Profession who have been instrumental in founding it. When it is an indisputable fact that a number of Medical and Surgical patients equivalent to four-sevenths of the population of London are seen and supplied with the necessary medicine at Hospitals and Dispensaries for nothing, can we wonder that Medical Benevolent Asylums and Societies for the Aid of the Widows and Orphans of Medical men are needed, or that a Doctor who leaves a moderate estate amassed by the practice of his profession is a rare exception, and in most instances a man who has deprived himself during the whole or the greater part of his life of all that yields domestic happiness? This diversion from the Medical Profession of the wealth which is fairly its due is not, however, the evil on which the writer of the *Times* article dilates. He looks on the system from the side of the general public, of the subscribers, of the recipients, and finds it everywhere equally rotten. He shows that Medical education, and consequently the public, suffer from particular diseases being attracted to, and particular modes of investigation and treatment being pursued at, special Hospitals, where the majority of men being educated for the Medical Profession cannot or will not attend; he shows that the cost of in-patients at small Hospitals is necessarily much greater than at large; he argues that two millions of people cannot be encouraged to be dependent on alms of any sort without being more or less demoralised; and he refers the origin of special and small Hospitals to three causes—the failure of the great Hospitals to do their duty; the exclusive jealousy which has refused to admit the Profession liberally to their offices; and, thirdly, to the requirements of men who, having failed to get on the staffs of the larger Hospitals, have been prompted by their talents, ambition, and self-reliance, to make fields of practice for themselves. The amount of force and money wasted, the evils of the system of begging for governors' letters, the mockery of out-patient treatment where two or three hundred have to be seen in a less number of minutes, and the general bad effect on the people who are thus made recipients of "charity," are exposed with a merciless hand. Of course it may be answered, as it has been, that the statistics of the Medical Directory, which form the basis of the article, are not trustworthy, and that in many cases the numbers represent attendances of patients and not fresh cases. But, allowing this, the fact still remains that the number of gratis prescriptions given at the London Hospitals and Dispensaries in the year approximates, as we have said, to a number representing four-sevenths of the whole population. We do not hold this to be the weak point of the article. There are, however, defects, and grave ones, in it. In the first place, the writer does not allow sufficient credit for the efforts which are made to establish special departments in several of the large Hospitals. Of course, the movement in this direction is not so general as it might be, but it is a *bonâ fide* one, and it has been set on foot to obviate many of the abuses which cluster round special Hospitals. Secondly, it is a libel on the Medical teachers of London to say that most of them treated the laryngoscope "much as the captain of a Chinese junk is said to have treated the sextant; it was altogether barbarian and entirely useless." This is smartness at the expense of truth. The laryngoscope, considering the difficulty of its application, rapidly came into vogue, and its usefulness is now as generally acknowledged as that of the stethoscope; were, indeed, the cases in which it is capable of aiding diagnosis as numerous as cases of lung and heart affection, we may safely say that it would be as frequently used as was the stethoscope six or seven years after its introduction. Thirdly, the system of provident Dispensaries, which receives the warm approbation of the author, is liable to as many abuses as any other. Persons who could well afford to pay their shillings or their guineas would consider that in subscribing pence they are conferring a favour on the institution and its Medical officers. This, indeed, leads us to what we consider the weakest part of the article—we mean the writer's scheme of reform. He proposes that the sixty-four small Hospitals should be changed for twelve large ones of 400 beds each, available for teaching; that the out-patients should be attended by a large number of Assistant-Physicians and Surgeons, who should be paid, and who, in turn, should attend to special departments; from whom should be elected by the students, by ballot, the Physicians and Surgeons for the in-patients; that each out-patient should pay a shilling, which, at the present rate of admissions, would produce £67,940, or an income of £100 per annum for 679 Assistant-Physicians and Surgeons. Charitable dispensaries should either be changed into self-supporting ones, or else be swept away altogether. These are the salient points of a scheme which seems to us, if not impracticable, at least nearly as open to abuses as the present. Still, we owe the author a debt of gratitude for having brought to light so faithfully, but, on the whole, so temperately, the evils under which we labour. We cannot say that we are sanguine on the subject of speedy reform. We believe that, if it come at all, it must come from the public. Our Profession, Frankenstein-like, are powerless to lay the monster they have raised, and which threatens their existence. Our brethren in general practice complain that they are injured on every side by Hospitals and Dispensaries; but whilst the number of general practitioners seems steadily diminishing, the number of "pure" Surgeons and Physicians and specialists is rapidly increasing, and these reply that they have no chance of getting into practice without public appointments. Thus the miserable system of sham charity is kept up, and money for the treatment of servants and dependants which ought to flow into the Profession is diverted to pay the house-rent of special and small Hospitals and Dispensaries, and to maintain the porters and dispensers. Moreover, the means fail to the end. These appointments no longer prove the sure road to fame and practice which perhaps they once were. The public have long found out that the man who can afford to sit unpaid three or four hours twice a week at a Dispensary or in the out-patients' room of a Hospital can have but little else to do, and it is not to be wondered at if they do not set a higher value on his time and talents than he seems disposed to set himself. But we have little confidence that this gigantic evil will receive its death-blow from the Profession. Individual interests are too powerful amongst us, and unanimity has never yet distinguished Medicine. We are therefore heartily glad that public attention has been thus forcibly drawn to the evils of Medical charities from points of view which are not exclusively Medical, and if the discussion thus begun bear fruit in the appoint-

ment of a Royal Commission, we shall hope that at least some abuses which have become well nigh intolerable will no longer be veiled under the name of charity.

THE TENT SYSTEM IN GERMAN HOSPITALS.

Tents and marquees have always been in use in time of war for the wounded; but recently they have been added to some existing Hospitals in Germany to accommodate patients who had undergone grave operations. Frankfort-on-the-Maine was one of the towns where a tent was first temporarily used. A wooden structure, covered with canvas, and provided with ridge ventilation, is found in the garden of the Berlin Charité Hospital, being also a recent addition: it receives more than twenty patients. In Dresden, tents were used during the late epidemic of hospital gangrene. It is scarcely a year since two such structures were added to the Hamburg General Hospital, of which we may be allowed to give a description. The Hospital is large, contains usually 1200 patients, and is built in horseshoe form on the corridor plan. The large space between the two receding wings contains the washhouse, post-mortem rooms, and also the tents—one on the male, the other on the female side of the Hospital. The tent for males stands in an enclosure; it is of strong canvas, nearly 40 feet long, about 18 feet wide, and 17 or 18 feet high at the ridge. The floor is of asphalt, sloping a little to the centre from both sides to facilitate drainage. The principal entrance is under an awning. The windows are apertures, which are not closed, but may be closed by canvas. They are about 3 feet square, and on each long side.

There are thirteen bedsteads, one being for the male attendant, who is always in the tent. They are of wood, and contain a paillasse, and a woollen mattress wrapped in blankets. There are hand-grasps suspended from the framework. No curtains are found. The bedframe has oilcloth drawn over its top, so that a protection from the wet is formed in addition to the canvas. In hot weather the flies annoy the patients a little.

The tent may be lighted by gas; there is no means of warming, as it is only used from May to October. In addition to the windows, the ventilation is by a ridge the whole length of the top of the tent. This was an addition, and not part of the original structure. Hot and cold water are laid on, and supply a lavatory in the corner, as also a bath. A hose may be brought into connexion with them to wash the canvas and produce a cool atmosphere. Side tables are placed for each bed, and a water-closet stands in a corner.

The structure for the women is of wood, similarly arranged, but for six patients only. There is also a ridge for ventilation at the top, and open spaces in the place of windows, which, however, the patients request more frequently to be closed than the men do.

So far as present experience goes, the Surgeons are more satisfied with the results of operations treated in the tents than with those in the wards.

THE WEEK.

TOPICS OF THE DAY.

It is not perhaps generally known that the Council of the Royal College of Surgeons are bound by no law to select members of the Court of Examiners from their own body. The fact of being elected a member of Council by the suffrages of the most eminent Surgeons in the land is undoubtedly a proof that a man has achieved Surgical eminence and is presumably well qualified as an examiner in Surgery. But it does not follow that he is, in any modern sense of the words, a good anatomist, a good histologist, or physiologist. In fact, the very seniority which, in the majority of cases, helps a man to a seat in the Council justifies the presumption that he is none of these. We noticed with regret that on a late occasion the Council of the College decided by a small majority against the appointment of special examiners in biological science. The question, however, we hear, is not to be allowed to rest. The present vacancy in the Court of Examiners, caused by the expiration of Mr. Partridge's period of service, has given occasion, it is said, to another movement within the Council in favour of greater freedom of election. We believe that a proposition is to be brought before the Council for due notice of expected vacancies in the Court of Examiners being given to each member of Council, so that members may have the opportunity of selecting either from within the Council or from the general body of the Fellows outside it, such persons as they may think fit for the office. We hope that, at least, the time has gone by when the election to so important a function was considered a mere matter of routine. No body, not even so powerful a one as the College of Surgeons, can afford to run the risk of public accusations such as that launched at them by Professor Beale in the *Times* the other day. We need not forget that the Court of Examiners of the College has done much to improve and reform its examinations. But it is well known that the examinations in Physiology have never been on a par with those in Surgical Anatomy and Surgery. Considering that a knowledge of the first, together with that of the second, form the only reasonable basis on which to build the last, this is a grave and evident defect. But we cannot expect it to be remedied by a court of examiners who never learned physiology in their younger days, however well they may have taught anatomy, or however eminent they may now be in the Hospital wards.

Mr. Myers, of the Coldstream Guards, broached a subject not only of pathological interest, but of national importance, at the Pathological Society on Tuesday last. He exhibited a specimen of aneurism of the abdominal aorta obtained from the body of a soldier, and, taking the specimen as a text, went on to invite the attention of the Society to the great prevalence of aortic aneurism amongst British soldiers as compared not only with the civil population, but also with the sailors of the Royal Navy. The higher mortality from aneurism of the aorta amongst soldiers has been noticed by Aitken, and has been ascribed by him to the prevalence of syphilis; but, as Mr. Myers observes, sailors suffer as much as soldiers from syphilis, and aneurism is far less common amongst them. Mr. Myers's explanation that the effect of army drill, exercise, and mode of clothing is to interfere with the passage of the blood through the arteries seems probable. Syphilis, on the other hand, may take its place as a predisposing cause, although there was no direct evidence of its causative influence brought forward by the various speakers on Tuesday night. The Pathological Society cannot do a greater service than by gathering and publishing information on the subject, for if our mode of drill and training be that which specially favours a fatal disease, the sooner the attention of the authorities is called to the fact the better.

A case of starvation, at first sight of the most heart-breaking description, occurred in the Isle of Dogs last week, and was made the subject of a coroner's inquest and reported in the daily papers. It seemed clear from the evidence given at the inquest that a woman of 34 years of age and her male child had died from absolute starvation. The clergy of the parish, however, have published a letter wherein they state that, to their knowledge, the man with whom the woman cohabited had earned £1 6s. 8d. within sixteen days before her death, that she received from the district visiting fund 7s. in the month before her death, that on the day before she died her male companion had brought home 6s. 6d., and that she was seen drinking at a public-house the same evening. The clergy further state that the starvation cases recently reported, or likely to be reported, as occurring in the Isle of Dogs, have been, and probably will be, of the same character as the present one. The letter is signed by three clergymen.

The Poor-law Board have published a table, from whence it appears that the sums expended on the poor in twenty-one Metropolitan Unions have risen from £117,935 in the parochial

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year 1859 to £270,898 in 1868. In the face of these figures the ratepayers are to find £316,206 for the Leavesden, Caterham, Hampstead, and Homerton Asylums, and the purchase of a site at Stockwell, and are consoled with the assurance that this enormous sum only represents the fraction of a penny in the pound, and that the payment will be spread over a number of years. Even it, however, does not include the cost of the fever and small-pox Hospitals, the plans for which have not yet received the sanction of the Poor-law Board.

Dr. Bateman's paper on Aphasia, read at the last meeting of the Medical Society of London, aimed another blow, if one were necessary, at Broca's defunct theory of localisation of speech in the third left frontal convolution. Dr. Bateman gave a good *résumé* of opinions on the subject, and stated, in conclusion, that he doubted the existence of any centre of speech. He believed that aphasia might depend on want of co-ordinate action as well as upon appreciable lesions of the nervous system.

The case of the Queen *v.* Pattison, which was settled in the Court of Queen's Bench on Monday last, was one in which a gentleman, Mr. Charles A. Frewen, applied for a criminal information against one John Pattison, M.D. of New York, for certain libellous letters and the publication of libellous matter. Mrs. Frewen had suffered from cancer, and had been attended by Pattison, who, after receiving 150 guineas, claimed 100 guineas more, and, on being refused, wrote to Mr. Frewen a series of letters of an offensive character, wherein he threatened to publish all the particulars of his wife's illness. On these letters being returned, they were sent to Mr. Frewen's residence open, and Pattison threatened to have them written on cardboard and sent to the prosecutor's club. It is of course unnecessary for us to say that no respectable Medical man would have been guilty of such conduct as Dr. Pattison acknowledged and apologised for. We can only say that we share the regret of the judges that the case was not in the hands of a public prosecutor, when, instead of the matter being cut short by an apology, the rule for a criminal information would have been made absolute. Mr. Frewen's character and honour having been cleared, the rule was discharged, on condition of the payment by the defendant of all the expenses incurred.

NAVAL MEDICAL SERVICE.

It is gratifying to see, by a semi-official announcement in the *Times*, that there is no intention of amalgamating the Medical Service of the Navy with the Transport and Victualling Departments, under Admiral Mends as the responsible head. Such a step would have been most injudicious and injurious to the Medical Service. The unanimous protest of the various Medical journals against the reported intention had, doubtless, due weight with the authorities. The other report, as to the intended reduction of the salary of the Medical Director of the Navy by £300 per annum, has not yet met with a similar contradiction, and we would strongly advise gentlemen who may now be thinking of offering their services to the Admiralty, owing to the temporary withdrawal of the Army Medical Department from the competitive market, to wait until this question be finally decided. It will not augur well for the future prospects of the Department, if thirst for office should tempt any of those officers named, as likely to succeed to the vacant post, to accept it on reduced terms. The appointment of Medical Director-General of the Navy and Army is already the worst paid one in either Service, no commensurate increase of salary having been made at the reorganisation of the Departments, and, taking into consideration the nature and responsibility of the duties, the pay at present is really insufficient. We could hardly, therefore, expect any one willing to accept this Naval appointment on lower terms to be very zealous or independent in his efforts to maintain the efficiency of the Service and the interests of his subordinates.

The report on the health of the Navy in 1867, which has just come out, affords evidence that the power of the Medical branch requires invigorating to enable it to cope still more successfully with that great amount of invaliding and death that occurs on our foreign stations. We also hope to see the future Medical Director-General endowed with fuller powers than hitherto, which may enable him to procure throughout the service a careful attention to the means of preventing disease in ships.

The *Times* has dispelled the belief in the offensive rumours that gained currency, and we are more than ever disposed to believe that the Admiralty will, as soon as practicable, convince the public of its having the health concerns of the Navy truly at heart by appointing to the post of Director-General a Medical officer of the highest standing, service, and repute, who will fearlessly make himself the responsible agent for the duties of the department. We hear that Dr. Armstrong is a candidate for the office, and should the claims of seniority be not considered paramount, we believe that few better selections could be made.

THE MEDICAL TEACHERS' ASSOCIATION.

At the adjourned meeting of this Society, held in the rooms of the London Medical Society, George-street, Hanover-square, the report of the Council was finally discussed and adopted. The chief business of the meeting was to consider a motion by Mr. Heath, seconded by Mr. Holmes, to the effect that physics should be banished from the first or matriculation examination to the second or preliminary scientific examination, whilst from the last he proposed to expunge zoology altogether, and to restrict botany to the first or matriculation examination. Mr. Heath thought it better to take a moderate standard and adhere to it, than to make an impossible standard and have to be content with an approximation to it. The amount of science required for the first examination he considered much too high, since the subjects were to be learned in very few of the schools which would prepare the candidates. Physics, therefore, he proposed to confine to the second examination, in which it appeared in the present plan as well as in the first, since that subject could be best learned from the lectures of the professor of chemistry. Botany and elementary chemistry he did not propose to remove from the first examination, on the condition that only the elementary parts of botany should be required. He had specified the amount of anatomy in order to insure that the student should really dissect during his first year. Mr. Holmes observed that their first object was to make examinations thorough and practical, while the preliminary examination which had been sketched was impracticable, and its result would be that schools would spring up for the purpose of cramming. He would even like to do away with that examination altogether, and simply ask the student to pass one in the English language, so as to insure that all students should speak and write it correctly, as now a large proportion of students could not. The great point was to make practical work compulsory, practical anatomy, practical chemistry, and especially work in the wards of the Hospital. The great defect of the present system was, that it bound men to the lecture-room without giving them time, or affording them a motive, for going into the wards of the Hospital. In accordance with their motion, which was virtually adopted, the programme stands thus:—For the first or matriculation examination, in addition to the ordinary branches of education, a knowledge of elementary chemistry and of a certain portion of botany is required. For the second, advanced chemistry, physics, and the anatomy of the bones, ligaments, and muscles, will be necessary. It was objected to this that chemistry could not be understood without a knowledge of a certain amount of physics—as, for instance, the relations of a dry gas to one saturated at a given temperature, the phenomena of heat as bearing on chemical change, and so on. Still it was insisted that, if the examination on physics was

confined to the first examination, the knowledge acquired as to electric conditions, the movements of the body, and so on, would be insufficient for any good purpose; whereas, were the examination deferred until a year after the student entered the Profession, much more might be expected of him, and a corresponding amount of good result to himself. It was overlooked that these subjects really belonged to the study of physiology, not to that of pure physics. Nevertheless, the majority was in favour of the motion, and the measure was passed. It was with regard to botany, however, that the battle was most fiercely fought, some contending that, as botany was practically useless, enough could be acquired previous to entering the Profession to satisfy what was held to be rather a crotchet of the upholders of botany than anything really necessary. On the other hand, it was pointed out that a knowledge of botany was necessary to the understanding of the Materia Medica, whilst its physiological portion furnished a key to the more complex phenomena of animal life. Those, however, who were most anxious for the study of physiological questions in connexion with physics contradictorily held that botany had better be taught along with Materia Medica, as it used to be, and along with physiology, than by itself. Finally, Mr. Heath's motion was carried; but as it was strongly objected that to send such a programme out to the world without any reference to zoology or advanced botany might mislead people who did not thoroughly understand that these subjects were intended to be included in physiology, it was proposed by Dr. Anstie, and seconded by Dr. Alexander Silver, that the examination in physiology include the necessary illustrative parts of physiological botany and zoology. Thus ended this prolonged discussion, and the report will soon be ready for publication, somewhat shorn of its apparent precision and exactness, but perhaps more practically useful than when it first came before the Council.

FROM ABROAD.—MORTALITY OF BERLIN IN 1867—M. VACHER ON THE MEDICAL CONSTITUTION OF EUROPE.

Geh. Med.-Rath Müller has just published his report on the mortality of Berlin during 1867. To the cholera year, 1866, he observes, a highly favourable year succeeded; for while in that year there occurred 27,102 deaths, in 1867 these amounted to only 19,994, and were even 1963 less than in 1865. Estimated by the amount of population (which in 1867 was, including the military, 702,437), there occurred 2·84 deaths per 100 inhabitants in 1867, 4·11 in 1866, and 3·38 in 1865. The number of births was also diminished in 1867, amounting to 27,061, being 182 less than in 1866. The proportion of sexes in 1867 was that usually met with, 53 male deaths taking place to 47 female deaths. In the cholera year, there were 51 male to 49 female deaths. The diminution of mortality was observable at all ages up to 80, such diminution being most remarkable between the 20th and 60th years, this being the period of life at which cholera was especially fatal in 1866. The diminution observed in general applies to almost every disease, and even those diseases (as phthisis) which manifest an increase do so only in proportion to increased population. Scarlatina, however, exhibited a positive increase. The number of deaths from variola diminished from 215 to 149: for, notwithstanding all care taken, there are in Berlin a considerable number of unvaccinated children. Among the remarkable deaths, there was one patient who died from hydrophobia and six from trichiniasis, of which there occurred between sixty and seventy cases confined to one part of the town. There were 205 suicides, 175 in males, and 30 in females; in 106 hanging was adopted, in 38 shooting, in 29 drowning, in 22 poisoning, in 8 cut throat or other wounds, and in 1 charcoal vapours. Among the accidental deaths, too, as many as 42 arose from inhaling these; and this description of death, notwithstanding all warnings that have been given, is on the continual increase.

The proportion of deaths varied remarkably in the different quarters of the town; for, while in the second half of 1867, in 33 police districts, there died 5·75 per 1000, in 10 there died 24·07 per 1000, the mortality fluctuating between these extremes in the other 41 districts, the average for the entire districts during the half-year being 15·72 per 1000. The districts in which was the greatest mortality were also, almost without exception, those in which there were also the greatest number of births, the years of childhood, in fact, supplying the largest contingent of deaths. Although the districts in which the greatest number of deaths and births occur are usually the poorest, yet there are exceptions; and several districts show how much less influence is exerted on the rate of mortality by the conditions of the soil, supply of water, etc., as compared with the influence exerted by the social position of the inhabitants.

M. Vacher, in a communication to the *Gazette Médicale*, states his intention to give from time to time a succinct account of the sanitary condition of the principal European capitals and of any epidemics that may be prevailing in them. In the present communication he refers to the months of November, December, and January, during which a Medical constitution has existed which has been remarkable for its general prevalence and its uniformity. Embracing almost all Europe, it would seem connected with an assemblage of atmospherical conditions well-nigh identical throughout the Continent, and especially characterised by an exceptional mildness of temperature, and as exceptional an amount of humidity. Three epidemics have prevailed on the Continent—puerperal fever, scarlatina, and diphtheria. In Paris, puerperal fever began to appear in November, and has prevailed epidemically during that month, December, and the first half of January. Of course it showed itself most virulently in the Hospitals, and at the Cochin, which has been termed the "model maternity," the mortality assumed such proportions in December that the lying-in wards had to be closed. It appeared also at the Lariboisière, and caused six deaths; but on the fall of temperature in the middle of January the epidemic ceased. In London, during the three months, there was also a considerable mortality among lying-in women, but far below the proportion observed in Paris—a fact which M. Vacher attributes, in a great degree, to the practice adopted here of having only a few women together in place of the wards with forty beds of the Paris Hospitals. Scarlatina, which has proved so fatal in London, has also prevailed very extensively in Paris, but has exhibited itself in a remarkably benign form. At Breslau, petechial typhus has been the predominant disease; while at Berlin both puerperal fever and diphtheria have committed great ravages.

Not only has the Medical constitution been characterised by the prevalence of epidemics of scarlatina, puerperal fever, and diphtheria, but it has exerted a remarkable influence on other affections. Thus, at Paris, typhoid fever, and especially pneumonia, although of less frequency than usual at this time of the year, have been remarkably severe. In the majority of cases there has been a marked tendency to adynamia, and a greater mortality than ordinary. This is the result of observation in private practice; that concerning Hospital practice has not yet been published.

M. Vacher points out the great utility of international Medical statistical returns, and calls upon the Paris Municipal Government to co-operate with Dr. Farr in his endeavours to this end, which have been successful as regards Berlin and and Vienna. M. Dumas, of the Institute, has interested himself in the matter, and the Municipal Council has already resolved to publish weekly instead of monthly returns.

ST. MARY'S HOSPITAL DRAMATIC ENTERTAINMENT.

(*From our Fast Contributor.*)

On Thursday, January 28, the students of St. Mary's Hospital gave their now, we might say, annual dramatic entertainment in aid of the funds of the Hospital. This was in every way a success, for the acting was remarkably good, considering the

nature of the pieces selected, and the audience was almost too large for the Hanover-square Rooms, where the entertainment was given. The first piece was Burnand's laughable "Turkish Bath," the second Byron's burlesque on the "Miller and his Men." Between the two came an address, well delivered by Mr. Myers. The selection of the last piece was not very happy, compared at least with that chosen in former years; it wants power, and drags along somewhat heavily. The puns are so numerous and so bad that it requires a close attention to follow them, and in these it may be said that the whole strength of the piece lies. Still, the St. Mary's men struggled along bravely, and did their utmost to redeem a bad choice. Some of the songs were very well done indeed, and the young lady they had selected from among their number reflected credit on their taste. It might be remarked, however, that ladies do not, as a rule, wear signet rings on their little fingers; still, the young gentleman-lady looked very modest, and acted very well. A numerously attended ball concluded the proceedings. We shall not discuss the propriety of giving theatrical entertainments during the session, which is only too short for the work to be done, but shall rest satisfied with congratulating the actors on the way they accomplished a project which abstractly we might be inclined to condemn.

LETTSOMIAN LECTURES

DELIVERED BEFORE THE MEDICAL SOCIETY OF LONDON IN 1869.

By WILLIAM ADAMS, F.R.C.S.,
Surgeon to the Royal Orthopædic and Great Northern Hospitals, etc.

Lecture I.

ACUTE RHEUMATIC AFFECTIONS OF THE JOINTS: THEIR PATHOLOGY AND TREATMENT.

After referring to the great advance made in the modern treatment of joint diseases—a result obtained by our more exact knowledge of structural anatomy and the physiology of nutrition, as well as the study of inflammation in its physiological and pathological bearings—Mr. Adams proceeded to consider whether the classification and description of joint diseases should be made upon an anatomical or pathological basis. He preferred the pathological arrangement, considering that the anatomical basis might lead to a much too narrow view of the pathology of diseases of the joints in reference to the constitutional conditions upon which they depend.

As some authors consider the synovial membrane and the cancellous tissue of the bone to be the only structures liable to primary inflammation, Mr. Adams produced some evidence to show that both the ligaments and articular cartilages were frequently the primary seat of disease, *the ligaments* suffering from inflammation after sprains and injuries, which, when occurring in strumous constitutions, frequently led to complete destruction of the joint, as seen in hip-joint disease, which, Mr. Adams believes, generally commences in the round ligament.

The articular cartilages are liable to changes of nutrition, scarcely separable from the effects of inflammation in its more chronic form, such as fibrous degeneration, and also hypertrophy and subsequent ossification, which Mr. Adams first pointed out as occurring in the production of osteophytes in chronic rheumatic arthritis. They are also believed to be the seat of true inflammatory changes, as represented by the textural changes of cell nutrition; and Professor C. O. Weber considers that suppuration may occur in the texture of articular cartilage. Mr Adams, however, expressed some doubt upon this point, though admitting the other inflammatory changes.

A very large proportion of all the cases of joint disease met with in practice are associated either with a rheumatic or strumous constitutional condition, and the influence which these constitutional conditions exert on the local affection Mr. Adams proposed to make the special subject of the present lectures, thus regarding joint diseases from a constitutional point of view.

The first, and indeed the great question to be considered is—To what extent is the inflammatory process, when affecting the joints, modified with respect to its results or so-called terminations in adhesion, suppuration, and ulceration by the constitutional conditions of rheumatism and struma? Mr. Adams believes the general law of rheumatic and strumous inflammation to be, that, in the rheumatic form, whether acute, subacute, or chronic, there is no disposition to the destructive processes of suppuration and ulceration, whilst a disposition to these destructive processes constitutes the chief pathological characters of the strumous inflammation.

Does suppuration ever occur during the progress of acute rheumatic inflammation in the joints, the eye, the pericardium, or pleura, or in any other structures of the body? Mr. Adams considers that suppuration never does occur as the result of rheumatic inflammation in any organ or tissue of the body, but that rheumatic inflammation always exhibits the same tendency to terminate in the effusion of serum and plastic lymph, and that by the organisation of the latter adhesions are formed.

In the eye, the ophthalmic Surgeon has no fear that rheumatic iritis will terminate in suppuration or ulceration; its termination in adhesion is constantly seen, and its prevention is the chief object of treatment. In the pericardium and pleura, when attacked by rheumatic inflammation, the Physician looks forward to the same termination. Rheumatic inflammation, therefore, exhibits itself essentially as a productive process, and strumous inflammation essentially as a destructive process.

In the general pathology of rheumatism it is of importance to ascertain whether there are any modifying influences which may alter the ordinary progress and termination of rheumatic inflammation. The most important modifying influences are those of struma, syphilis, gonorrhœa, and leucorrhœa. Of these it may be said that none of them produce any essential modification as to the results of the rheumatic inflammation. No tendency to suppuration or ulceration is induced by any of these complications, but still each of them exerts some special influence on the progress of the rheumatic inflammation.

Mr. Adams then proceeded to the description of

ACUTE RHEUMATIC SYNOVITIS,

its general characters, symptoms, and progress. The doubt expressed by the late Dr. Todd as to the true inflammatory nature of the joint affection was removed by reference to the post-mortem examinations of several patients who had died from cerebral or cardiac complications of rheumatic fever, from the fourth to the twenty-fifth day. In all these examinations the morbid appearances were essentially of a similar character—viz., inflammation of the synovial membrane, with effusion into the joint of serum, with albuminous shreds or flocculi of lymph floating in it. In no instance was the existence of pus or of any ulceration of the articular cartilage described. Mr Adams regretted that so few post-mortems were on record in which the joints had been examined in patients who had died during an attack of rheumatic fever.

In the treatment he spoke of the value of the hot-air bath, applied whilst the patient is in bed, and alkaline fomentations to the inflamed joints. The action of alkalies, both externally and internally, he believed, was not so much in neutralising the excess of acid in the system as in their tendency to fluidise the blood by their direct chemical action upon the fibrin, which is known to be much increased in quantity in this affection. The effect of this in the local application was to remove the condition of stasis of the blood corpuscles, always existing in inflammation. The action of mercury was also discussed in reference to its power of diminishing the quantity of lymph effused, of preventing its organisation, and promoting its absorption, especial reference being made to the experience of ophthalmic Surgeons in the treatment of rheumatic iritis.

The next affection described by Mr. Adams was that of

ACUTE RHEUMATIC SYNOVITIS, IN AN AGGRAVATED FORM, LOCALISED IN ONE JOINT DURING THE EARLY STAGE OF RHEUMATIC FEVER—GONORRHŒAL OR GENITAL RHEUMATISM.

These cases at their commencement exhibit the ordinary symptoms of rheumatic fever, but instead of metastasis of the articular inflammation occurring, the inflammation in an aggravated form quickly localises itself in one joint, usually the knee or the hip-joint, so that the joint affection quickly becomes the predominant feature. The acute symptoms generally continue from three to five months. Suppuration is often feared, but no liability to this process exists. It terminates neither in suppuration nor ulceration, but in the effusion of lymph, and organisation of adhesions within and surrounding the joint. A specimen exhibiting these conditions was shown to the Society.

The most frequent cause of this affection is the previous existence of gonorrhœa, but sometimes a history only of leucorrhœa can be traced. Hence the propriety of the term genital rheumatism.

The explanation of these cases depending upon a mild form

of purulent infection, was considered by Mr. Adams as very doubtful, as only one joint is usually affected, and there is no tendency to suppuration; whilst in pyæmia several joints are generally involved, and suppuration constantly follows. The pathology is therefore obscure.

The constitutional and local treatment are the same as in the ordinary form of acute rheumatic synovitis, but the intense pain can be best relieved by the subcutaneous injection of morphia. Possibly the American plan of extension by weights, proved to be so successful in removing the most acute pain of hip-joint disease, and also the pain in some cases of inflammation of the knee-joint, might meet with equal success in this affection, and is worthy of trial.

For the removal of the remaining stiffness of the joint the use of the steam-bath, shampooing, and passive motion was recommended to be commenced early, and, if these failed, forcible extension under chloroform was to be used, and repeated every two or three weeks, very little being attempted each time; the restoration of motion thus being very slowly and gradually obtained.

REVIEWS.

RECENT FOREIGN WORKS ON ZOOLOGY AND NATURAL HISTORY.

Manuel d'Histoire Naturale Médicale. Par H. Bocquillon, Professeur d'Histoire Naturelle au Lycée Napoleon. 1866-7. Paris: Baillière. London: Williams and Norgate.

Handbuch der Zoologie. Von Jul. Victor Carus, Professor der vergleichenden Anatomie in Leipzig, und C. E. A. Gerstaecker, Docent der Zoologie au der Universität zu Berlin. 1863-68 (incomplete). Leipzig: Engelmann. London: Williams and Norgate.

Synopsis der Naturgeschichte des Thierreichs. Bearbeitet von Johannes Leunis, Professor der Naturgeschichte am Josephinum in Hildesheim. Zweite Auflage. 1860. Hannover: Hahn. London: Williams and Norgate.

The three works whose titles we have just written down are all written with somewhat different objects, and addressed to somewhat different readers, and we shall therefore give them a brief separate notice.

Dr. Bocquillon's manual includes Medical zoology and botany. Medical natural history seems to us a misnomer, unless it is strictly confined to the history of the articles of the *Materia Medica*, and in that case many subjects of general importance run the chance of being omitted. We have had Stevenson's *Medical Zoology* and Lindley's *Medical Botany*, Moquin-Tandon's *Medical Zoology* (translated by Hulme), and Van Beneden and Gervais' bulky volume on that subject, which is in many respects a work of great value, but none of them have succeeded in establishing a standard popularity. The author of this manual very properly begins with the lowest animals, and gradually ascends to the mammals, but, in order to include the whole range of zoology in the short space of 426 small pages, many important groups get very scant notice. Thus the groups of protozoa, sponges, polyps, and echinoderms are disposed of in thirty pages. The parasitic worms are well described and figured; their life-history is clearly given; the symptoms they induce, and the remedies required, are explained, and a useful table is given containing the entozoa inhabiting man, the ox, sheep, and rabbit. Under Annelids we find a satisfactory sketch of the anatomy of the leech. In the chapter on the Articulata, we have descriptions of various acarides (the simplest form of arachnidans) which are dangerous or annoying to man—such as the *demodex* or *acarus folliculorum*, the *sarcoptes* or itch-insect, the *ixodes* (of which a Brazilian species, falling off grass or coppice-wood, often causes great irritation to travellers), the *argos* (which in Persia attacks the human skin, but in France confines itself to pigeons), etc. The chapter on insects contains some excellent figures which have not yet found their way into English text-books. The Mollusca and Vertebrata are discussed in a style in which there is nothing specially to praise or condemn. On the whole, this is decidedly the least satisfactory of the three works whose titles are attached to this article, and it cannot be regarded as presenting any decided advantages over Milne-Edwards's popular volume.

Carus and Gerstaecker are producing a work (for it is not yet completed) that will prove of inestimable benefit to the student of comparative anatomy and zoology. As is not uncommon in Germany, the first volume in this case appears last. Nearly five years have elapsed since the appearance of the second volume, in which the Arthropoda were described by Gerstaecker, and the Radiata, Vermes, Echinodermata, Cœlenterata, and Protozoa by Carus. The first half of the first volume, written by Carus, has just appeared, and is devoted to Mammalia, a subject which it leaves uncompleted in the section Reptilia at page 432, and we are promised the concluding portion, containing the remainder of the Vertebrata and the Mollusca, almost immediately. Nothing will serve better to show the excellent plan on which this work is designed than to give a very condensed view of the manner in which each subkingdom is treated. All are treated in precisely the same fashion, and it is immaterial which we select. Let it be the Arthropoda, with which the second volume commences, and which extends over more than 400 pages.

The author begins with a definition of Arthropoda; this is followed by a general sketch of their anatomy—as their segmentation, outer covering, body and limbs, muscular and nervous systems, organs of the senses, digestive canal, circulating, respiratory, and generative organs, the various forms of development of the egg, and the varieties of metamorphosis—extending over eight pages. This is followed by their arrangement into four classes—Insecta, Myriapoda, Arachnoidea, and Crustacea—and by a list of the best authors on the subject. The Insecta are similarly treated. We have their definition, their special anatomy, extending over twenty-four pages, their classification into orders, and their literature, which extends over a page and a half, and is divided into (*a*) manuals, etc., as those of Kirby and Spence, Lacordaire, etc.; (*b*) periodicals; (*c*) systematic works and faunas; (*d*) biology, physiology, and anatomy, as the works of Swammerdam, Roesel, Bonnet, Reaumur, De Geer, etc.; and (*e*) palæontology. These tables, headed "Literatur," are a most valuable addition to the work. But to proceed with our analysis: let us take the first order of Insecta—the Orthoptera. These are first separated by a definition from the other orders of insects, and a few pages are devoted to their anatomical peculiarities, after which we have the systematic arrangement of the order into sub-orders, families, groups, and genera. To any insects of this, or the orders that have special claims to notice, a concise life-history is given, as the white ants, dragonflies, bees, cantharides, etc. If the general parts of this work, treating of the anatomy and physiology of animals, were published independently of the systematic portion, they would constitute an excellent little manual of comparative anatomy, the value of which would be enhanced by a wise selection of illustrative figures.

Lastly, we turn to Leunis's *Synopsis*, which, as it was published as long ago as 1860, hardly claims a notice in this article. We have, however, for so long employed it as a nsefnl book of reference that we wish to make known its utility as widely as possible. In meeting with any generic name with which we are unfamiliar, we are almost sure to find it in the index to this work, and on referring to the section and sub-section indicated, we find its place in the zoological scale, its popular name, habitat, characteristics, uses, etc.; and, in addition, the doubtful long and short syllables are marked, and the derivation is given in a footnote.

FOREIGN CORRESPONDENCE.

FRANCE.

ON THE PROGRESS OF POPULATION IN FRANCE.

(*From a French Correspondent.*)

When two nations, inhabiting the same quarter of the globe and separated only by a narrow arm of the sea, exhibit this remarkable contrast, that population on the one side increases with extraordinary, we might even say with fearful rapidity, while it remains almost stationary on the other, it becomes highly interesting, for the philosophical observer, to inquire into the agencies which give rise to so singular a difference—to wit, whether it depends upon the race, the soil, the climate, the wealth, or the institutions of each respective country. Nor is this to be viewed as a matter of mere idle curiosity, for the practical utility of such an investigation will be self-evident if we reflect that, however deep the real causes of this state of things may lie, it is not entirely beyond the power of man to control them. To an English reader, therefore, the state of population in France cannot fail to be the object of an interesting and instructive study, as exhibiting a strongly marked contrast with the present condition of his own native land. The

subject has already attracted the attention of the public in both countries; but as considerable ignorance prevails in England with respect to the real state of society in France, and as much false reasoning has been grounded on an imperfect acquaintance with the facts of the case, we shall begin by laying down a few statistical results, derived from official returns.

Section I.—Facts.

While the Anglo-Saxon race has been filling continents and islands with its superabundant numbers, the population of France, from 1801 to 1865, has only exhibited an increase of 10,000,000 (about 36 per cent.). The following table, in which Nice and Savoy are not included, will show the results ascertained from the beginning of the present century:—

1801	27,349,003	1846(a)	35,400,486
1805	29,107,425	1851	35,783,170
1820	30,461,875	1856	36,139,364
1831	32,569,223	1861	36,717,254
1836	33,540,410	1864	37,392,737

The fluctuations exhibited in the rate of increase, according to this table, accurately coincide with the political and social conditions of the country. The period intervening between 1801 and 1805 was one of great prosperity; the troubles of the great Revolution were over, and order was restored under the rule of the First Consul, while, the feudal system being entirely broken down, all the ancient abuses which acted as restraints upon individual exertion were swept away. The increase of population was in consequence very rapid (about 6½ per cent. in four years). Then came the destructive wars of the Empire, and the long period of fifteen years comprised between 1805 and 1820 barely shows an increase of 4½ per cent. Between 1820 and 1846, during a long and prosperous period of peace and constitutional government, the progress is regular, without being rapid. But the revolution of 1848 seems to have acted as a check upon the growth of population, since 1851 scarcely shows any increase upon the numbers of 1846. And lastly, whatever may be thought of the present imperial despotism, and its influence upon the prosperity of France, it has most decidedly proved unfavourable to the multiplication of its inhabitants, as the following table, exhibiting the results of five successive years, will sufficiently prove(b):—

1861	37,386,313
1862	37,522,463
1863	37,658,613
1864	37,794,763
1865	37,930,914

While, therefore, the early years of the first Napoleon's reign exhibit an increase of 6½ per cent. during a period of four years, the same lapse of time under the second empire hardly realises a proportion of 1½ per cent.

During the same period the annual number of marriages has been steadily diminishing, as appears from the following figures:—

	Number of Marriages.
1861	305,203
1862	303,514
1863	301,376
1864	299,579
1865	298,838

The fertility of married couples has also been decreasing during the last forty years; the average number of children produced by each marriage being 4·24 in 1821, and only 3·07 in 1865. In 1821 one child was born for every 31·5 inhabitants, and in 1865 one child for every 37·5 inhabitants.

The same facts may be exhibited in a different light. Before 1847 the annual surplus of births, as compared with deaths, amounted to 200,000. This difference, some years later, fell to 75,000, and even 50,000. In 1854-55, on account of the Crimean war and the prevalence of cholera, the number of births was actually inferior to that of deaths. But since that date there has been, on the average, an increase of 135,000 per annum.

The influence of emigration and immigration is hardly perceptible; the two opposite currents nearly counterbalance each other. The total number of foreigners residing permanently in France varies between six and seven hundred thousand.

It cannot, therefore, be denied that the tendency of the French population is to remain stationary—a result, however, which must not be attributed to any extraordinary rate of mortality, seeing that it has been statistically demonstrated that the average duration of life(c) is now much longer in France than it ever was before. We cannot, therefore, resist the conclusion that fewer children are born within the limits of the French Empire than in most of the neighbouring countries. The cause of this indisputable fact now remains to be ascertained.

Section II.—Fallacies.

To assert a progressive diminution of the *vis vitæ* in the French population and a gradual degeneracy of the race may be conceived to be palatable to the pride and national antipathy of John Bull of the old school. But the impartial observer will readily perceive that a nation in which the ordinary duration of human life has been steadily increasing for the last fifty years can hardly be supposed to be in a state of physical decrepitude. Military critics will, no doubt, object that the height of the average Frenchman, as exhibited by the conscription returns, has considerably diminished, and that, apart from all other considerations, this single result may be viewed as a positive sign of physical inferiority. Naturalists themselves have caught at the idea, and we find Professor Darwin giving the gradual deterioration of the French race as a proof in favour of his doctrine of natural or unconscious selection—the taller and stronger men having been constantly drained off for military purposes, leaving only the inferior males to propagate the breed. But this ingenious view, resting as it does upon one of the numerous fallacies which pass current upon this subject in England, is found to melt like snow in the sun before Professor Broca's searching criticism. This celebrated anthropologist has proved by indisputable facts and figures that the average height of the French recruit has not diminished by $\frac{1}{25}$th part of an inch since the beginning of the present century, while the quality of the material has visibly improved. This is seen from the fact that in 1824 no less than 276 young men were required to furnish 100 soldiers—that is to say, out of this former number only 100 passed muster, the remaining 176 having been declared incapable to serve in consequence of their deficiency of stature or their bodily infirmities; while in 1866 we find 100 soldiers furnished by 203 men.

If, on the other hand, it is advanced that, without supposing any positive degeneracy to have arisen in the external appearance or physical health and average longevity of the French, their fertility may be supposed to have diminished, we will beg leave to lay down, with Dr. Trélat, an all-important distinction—viz., that the actual fertility (*i.e.*, the birth rate) of a nation or race is a totally different thing from its virtual or latent capacity for procreation. This latter faculty is a natural boon, which, like the other gifts of nature, may or may not be improved to the utmost extent; while the statistical results, which the census enables us to ascertain, are entirely dependent upon the will of each individual in his private capacity. In other words, a couple who only have one child might possibly have had ten or twenty had it only suited their purpose.

That the capacity of the Celtic, Gallic, or French race for procreation has nowise diminished is abundantly proved by the existence of very large families in numerous individual cases, and by the superabundance of population in certain departments. Another interesting fact testifies to the same effect. During several years the number of illegitimate children born in France has remained almost constantly the same, the lowest figures during the five years comprised between 1861 and 1865 being 73,919, and the highest 77,003. This regularity in irregularity can only be accounted for by the supposition that there are about as many illegitimate children brought into the world as there are fathers willing to support them.

The real cause, then, of the slow progress of population in France resides in the will of the people; and in this case at least the will of the people is truly supreme. No rules, however absolute, no legislative means, can exert the slightest influence upon this vital point. All the efforts of Augustus, in a similar case, were utterly thrown away. But however broad the difference between the political organisation of ancient and modern societies, the social conditions which led to the depopulation of ancient Rome have, in some measure, their counterpart in the social conditions of modern France.

Let us, therefore, give up all shallow reasoning and flimsy pretences, fit only to satisfy superficial observers, and let us, in spite of conventionalism and false delicacy, plunge resolutely into the heart of the question.

Section III.—The True Causes.

In all investigations connected with the progress of population, the habits, manners, and situation of the lower classes, are of paramount importance, since in questions con-

(a) No census was taken in 1841, on account of the resistance of the population, which, in many localities, led to acts of open violence.

(b) The population of Nice and Savoy is this time included.

(c) The average duration of life in France is stated at 37·85 by Dr. Trélat, at 40·15 by Dr. Bertillon, and at 42·08 by Baron Dupin.

taining a numerical element they must evidently exert a preponderating influence.

What, then, is the leading feature which strikes us at the present day in the lower orders of the French population? Social equality, and a strong feeling of it, are written in every man's face; but this tendency, if we may judge from what we have seen ourselves, scarcely corresponds to the celebrated declaration—"All men are born free and equal;" it answers rather to the Irishman's definition—"One man is as good as another—and better too." *Better too* is the feeling which rankles at the bottom of the heart of almost every intelligent French workman in all large centres, and more especially in Paris. His natural organisation predisposes him to appreciate elegance, luxury, and *bien-être;* and he is apt to think himself ill-used because only a moderate share of these advantages falls to his lot, while he firmly believes himself to be a better man than most of the young spendthrifts who enjoy them in full. In many cases this state of mind leads him to plunge into disorderly habits, but the more sober characters are smitten with an intense desire to improve their situation and raise themselves to a higher rank in society. No one can read the reports of the Workmen's Committees (*délégations ouvrières*) on the late exhibition without being struck by the manly and dignified tone of these documents, and the energy with which they insist upon the working man's claims to a better place than he has hitherto occupied. In a country where universal suffrage is the law of the land, no *political* change can possibly improve the situation of the lower orders, and a *social* revolution is the sole object to be aimed at. In the meantime, each individual labours for himself, and if it be true that nothing hinders a man's progress in life so effectually as an early marriage and a large family, who can be astonished at the small number of births annually registered in French towns?

In the rural districts of France, where the most laborious and frugal of mankind are perhaps to be found, the well-known ambition of each peasant is to become the legal owner of a patch of ground, and to enlarge his small piece of land when once he has secured it. The law, therefore, which prescribes an equal division of the father's property among his children, acts directly as a check upon population, and limits the increase of families. It is no wonder, then, that, under the operation of these causes, the fertility of marriages should have progressively diminished, while, at the same time, people are induced to marry much later than they formerly did. In 1821, the average period of marriage (both sexes included) was 27; it is now 31. Nor can the military law be viewed as the cause of this, since, under its most unfavourable provisions, soldiers have always been allowed to marry long before 30. And since we have been led incidentally to touch upon the French military system, we will seize the opportunity to say that it may doubtless be viewed as one of the causes which retard the progress of population, but not the only, nor even the principal, one. It is true that, since the establishment of the second empire, five hundred thousand lives have been expended in fighting the battles of the country and of its Government; and it is equally true that these five hundred thousand men, if allowed to live, would doubtless have become the fathers of numerous children; but a difference of a million or so in the figures which we have just quoted would scarcely modify our conclusion. It is not because the deaths are many, but because the births are few, that the population remains stationary; and the prudence of individuals sufficiently explains the latter result.

That abundance of wealth exists in France cannot for an instant be questioned, although a great part of it lies buried in damp cellars, or concealed in old stockings, and only makes its appearance when a Government loan is raised or a piece of land put up for sale. But these riches are disseminated among a very large proportion of the population instead of being concentrated in a few hands. Now, nothing is so likely to lead to the limitation process as the possession of a *little property*. Both opulence and poverty render a man indifferent as to the number of his children, but a country where most people are neither rich nor poor closely resembles (in one sense at least) those ancient republics where the national territory was equally divided among a certain number of families, so that any sudden increase of population was considered as a national calamity. Emigration was in such cases the resource of the Greeks; but the superstitious veneration and instinctive attachment of the Celt for the land of his birth will not suffer this remedy to be ever applied on a large scale. Many a time have we heard Frenchmen declare that they had rather starve in France than live in luxury in any other part of the world; and their sincerity cannot possibly be doubted.

A comparison of the results observed in separate departments will confirm the conclusions to which a general survey has led us. The provinces lying at the foot of the Alps, and especially of the Pyrenees, are, together with Brittany, the most poverty-stricken regions of France. In these departments, the progress of population is extremely rapid, while in Normandy, one of the most fortunate and fertile regions not only of France, but of all Europe, the number of inhabitants has been steadily diminishing for several years. As a rule, it may be asserted that the poorest departments are precisely those in which the rate of increase is the highest. There are, however, some exceptions. The Lower Rhine, for instance (Strasburg), and the North (Lille), have a large and rapidly increasing population, in spite of their great prosperity. But, in the first of these departments, the fact is accounted for by the military temper of the people. All the young men enter the army, and, when they become too old to serve in the ranks, enlist in the sedentary corps. It may be truly stated that Alsace furnishes the empire with nine-tenths of its gendarmes and two-thirds of its *remplaçants*.(d) A permanent outlet is thus secured for superabundant numbers. In the department of the North, the existence of enormous manufactories naturally creates a very large and very poor manufacturing population. To this latter element the large number of births is mainly attributable, so that, in this case, an apparent exception only strengthens the general rule.

Our limits will not allow us to pursue this subject further; but those of our readers who might wish for fuller information on these points will find an abundant supply of official (and, we believe, trustworthy) documents in the *Annuaire de Statistique* published under the auspices of the French Government. Our purpose has been to show that individual prudence and foresight are the real causes which lead, in France, to the almost universal limitation of families.

The process by which this result is attained is by no means a mysterious or novel one. It seems to have been currently employed in the most primitive of human societies, and is coeval with the earliest of all historical records, since we find it fully described in Gen. xxxviii. 9. It is perfectly clear that a system adopted in the poorest workman's garret or in the meanest peasant's cabin cannot rest on any complicated mechanism, and must be simple to be at all available.

It seems to have been supposed by some of the writers who have already discussed the subject that abortion was largely employed for the same purpose. We are thoroughly convinced that such is not the case. Abortion is a crime severely punished by the French legislature, and which, we have every reason to believe, is confined to cases of illegitimate pregnancy. If it is ever resorted to by married people, it can only be in very extraordinary and altogether unusual cases.

Section V.—Conclusions.

The conclusion to which we are inevitably led is, that the rise of democracy, the dissemination of property, and the general improvement of the social condition of the lower classes are the real causes which check the progress of population in France—a result which neither the promoters of the great Revolution nor their opponents had foreseen.

There is nothing particularly new in the idea that a certain degree of prosperity will generally be found to coincide with a certain degree of foresight, while extreme poverty renders people indifferent to the consequences of their imprudence. But it is really striking to find a whole nation (the immense majority of which never read Malthus, and could scarcely be brought to understand his arguments) adopting instinctively, as it were, the views of the Malthusian school of political economists, and carrying them out in practice.

If it were objected that a different state of things appears to prevail in the democratic communities on the other side of the Atlantic, we would beg to observe that no comparison can possibly be established between an old and densely populated country and a continent where immense spaces of fertile and unoccupied land extend before the white man, who has only to remove a few wandering Indians to take possession of an almost unlimited surface. Besides, the current of emigration, which for so many years has been steadily flowing towards the United States, has so powerful an influence upon the growth of population that it is almost impossible to say whether of late years the original American stock has or has not been increasing in numbers—in fact, several observers appear inclined to answer in the negative.

With the moral aspect of the case we have not to deal for the present; our purpose has been to lay down certain indis-

(d) A *remplaçant* is a young man who, when liberated from the service, agrees to serve in another man's place for a determined sum of money.

putable facts before the reader, leaving him to form his own opinion. We may, however, be perhaps allowed to say that if it were less generally admitted that "a nation's importance is measured by the number of soldiers she can bring into the field," there would be strong arguments to bring forward in favour of the limitation system. Capitalists and conquerors are apt to view with unmingled satisfaction the superabundance of population—cheap labour being the object of the one, while an unlimited supply of "food for powder" is the object of the other. During the American civil war the North was glad enough, no doubt, to get Irish and German recruits at a moderate price to fill the ranks of the Federal army, but it may be questioned whether the bargain was a profitable one for the men themselves. The Yankees boast, with legitimate pride, that every rail of the Panama line is laid upon an Irishman, but did the progenitors of each individual Paddy intend their offspring to be used as railway sleepers? A philanthropist may be permitted to express the wish (which perhaps will never be realised) that no child should be brought into the world before a place has been provided for it. Such, at least, would be the *beau idéal* of a highly civilised and well-ordered society.

GENERAL CORRESPONDENCE.

"THE COMMUNICABILITY OF PHTHISIS."

Letter from Dr. Cotton.

[To the Editor of the Medical Times and Gazette.]

Sir,—My attention has but just now been directed to an abstract of a paper by Dr. Elliott upon the communicability of phthisis, in the last number of last year's *Medical Times and Gazette*. Dr. Elliott appears to be a firm believer in Dr. Budd's theory of the zymotic character of consumption, and supports his views by asserting "the frequency of phthisis amongst the nurses of the Brompton Hospital." As such a statement (given, I would observe, without any authority) is quite opposed to fact, and the question is of grave importance, I hope you will allow me, although somewhat late in doing so, to refer Dr. Elliott and those of your readers interested in the subject to a detailed report of mine on this very matter published in the *Lancet* of November 2, 1867, as a reply to Dr. Budd's views. It will there be seen that the nurses and other resident and non-resident officials connected with the Hospital for Consumption at Brompton have been always remarkably free from phthisis, affording in this respect very evident and strong testimony in favour of the non-communicability of the disease.

I am, &c. R. P. Cotton, M.D.,
Senior Physician to the Hospital for
Clarges-street, Piccadilly. Consumption, Brompton.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

Letter from Mr. J. B. Blackett.

[To the Editor of the Medical Times and Gazette.]

Sir,—By desire of the President of the Society for Relief of Widows and Orphans of Medical men, I beg to forward you the following particulars, thinking the information may be acceptable to the members of the Profession.

During the last year the total amount distributed in relief was £2504 10s., the number of recipients being 54 widows and 26 children. Additional relief was granted to two widows and 2 children from the Copeland Fund. This fund the directors were enabled, through the great liberality of the late Thomas Copeland, Esq., to form for giving additional assistance to widows and orphans already in receipt of ordinary relief, under special circumstances of unusual distress from great bodily or mental infirmity. The Society, although at present able to meet the demands made upon its funds, cannot continue to do so unless well supported by the richer members of the Profession. The number of applicants is yearly increasing, and likely to do so, as a reference to the list of members will clearly prove. Trusting you will kindly accord a prominent notice in your journal of the foregoing statement,

I am, &c. J. B. Blackett, Secretary.

53, Berners-street, February 4.

THE CONTAGIOUS DISEASES' PREVENTION ACT.

Letter from Mr. D. O'Brien.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have read with some interest in your last number a review of the "Medical Statistics of the French Army for 1866," and it appears that the number of soldiers treated for venereal diseases in that year amounted to 110 per 1000, and in the British army to 102 per 1000 during the same period. The reviewer says:—"We may here conclude that this class of disease prevails nearly to the same extent in both armies—an impression which is strengthened by the statement that, of the sick treated *aux hôpitaux* in the French army, in every seven patients there was one suffering from syphilis—a proportion almost identical with that of the British army in 1866."

I think this an extraordinary fact, for it appears that the French army is no better off, with respect to syphilis, than the British, though the police regulations with regard to the inspection of prostitutes in France are carried out in the most stringent manner, and, if my memory serves me rightly, a police report appeared in the same country a few years since, saying that the effort to prevent the spread of venereal diseases was frustrated from the number of women practising prostitution privately, whom the police could not get at—indeed, it may be asserted that syphilis, at the present time, is more prevalent in France than in England.

As an effort, I have no doubt, will be made in the coming session of Parliament to get the Contagious Diseases' Prevention Act extended to the civil population, I think that the advocates of this measure, with these facts before them, should seek in the first instance for a commission to proceed to the Continent, and make a searching inquiry into the police regulations with respect to prostitution, and whether such regulations have lessened the amount of venereal diseases, or increased or decreased the number of prostitutes. A vast amount of useful data may be gathered by this step, which would serve as a guide for future legislation.

The advocates for the further extension of the Contagious Diseases' Prevention Act give two isolated places as an example of what good may be done by the present Act—namely, Malta and Sheerness; but isolated districts are not to be depended on in coming to a safe conclusion in this matter. If two commissioners are sent by Government to France and other countries to make inquiries and collect evidence, the question will be set at rest, and all parties be satisfied, for at present a one-sided view of the subject is only brought under our notice.

Meantime, say in next session of Parliament, a strenuous effort should be made to keep prostitutes off our streets; in no other country are they allowed to promenade the thoroughfares and solicit passers-by. The United Kingdom forms an exception to Europe and America in this respect; the sights to be witnessed in this metropolis and in our provincial seaport towns are a disgrace to a civilised country, and must have a most demoralising effect on the population, especially on the younger portion.

I am, &c.

February 1. D. O'Brien, M.R.C.S.

LIEBIG'S EXTRACT.

Letter from the Manager of the Australian Meat Company.

[To the Editor of the Medical Times and Gazette.]

Sir,—Referring to your article on Liebig's extract of meat, perhaps you will allow me (being practically acquainted with the manufacture) to make one or two remarks.

You are quite right in your supposition that the breeding and the condition of the animals when killed have a good deal to do with the percentage and quality of extract that the flesh will yield. It is a mistake to suppose that coarse wild cattle will give as much or as good a quality of extract as prime oxen. For the purposes of your argument, it is near enough to state that it requires from 33 lbs. to 40 lbs. of beef, free from bone or fat, to make one pound of ordinarily pure extract. It is quite possible to obtain 1¼ lb. from 33 lbs. of meat, but the extra quarter of a pound will be gelatine.

The sample of extract analysed by Dr. Letheby, and found to contain from 45 to 49 per cent. of water, can hardly have been made either by the South American Company, the Australian Meat Company, or Mr. Tooth, as these extracts have been repeatedly analysed by competent chemists, and found to contain from 15 to 19 per cent. only of water. The following

is the result of a recent analysis published in the *Lancet* January 9, 1869, showing the percentage of water:—

Liebig's Extract of Meat Company.
Water . . . . . 18·56 grs.

Australian Meat Company.
Water . . . . . 17·83 grs.

Tooth's Sydney.
Water . . . . . 17·06 grs.

Your suggestion that the "staff of one of our large Hospitals should give the Australian and South American extracts a comparative trial on a large scale" is a capital one. The Australian Meat Company will be glad to supply the requisite quantity to any Hospitals without charge.

Those who are curious on this point I would refer to the authorities at the Bristol Infirmary, Royal Berks Hospital, Reading, Charing Cross Hospital, where the experiment has been tried for some time.

At the prices now charged by the three principal makers, the use of extract of meat is equivalent to making beef-tea from butcher's meat at from 2d. to 2½d. per lb.

I am, &c.

THE MANAGER OF THE AUSTRALIAN MEAT COMPANY.

52, Gracechurch-street.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JANUARY 6, 1869.

Dr. HALL DAVIS, President, in the Chair.

ANNUAL MEETING.

DR. E. L. FERGUSSON and Mr. W. H. Lydall were elected Fellows.

Dr. J. B. HICKS exhibited the Head of a Fœtus which had been delivered after perforation by the assistance of the cephalotribe. The antero-posterior diameter of the maternal pelvis was about three inches, the fœtus very large, and the head highly ossified. The instrument had seized it obliquely over one orbit and the occipital bone on the opposite side. The calvarium was crushed in on to the base, and the delivery was effected without difficulty. Dr. Hicks pointed out the great facility and safety with which the head was abstracted after crushing, compared with the use of the crotchet or craniotomy forceps, which he thought it was destined in a great measure to supersede. He remarked that there seemed to be a difficulty with some writers in disassociating cephalotripsy from utter crushing of the head; whereas, in most cases, the effect was rather to crush down the vault into the base, the fact being that it was impossible to secure the base steadily between the grip of the blades. Very frequently the base tilted so that the flattening of the skull was effected in a vertical rather than a lateral direction. This effected the same advantage, because in this case the instrument would compress down to an inch and a half, through a pelvis of which size it would rarely be possible to deliver by the cephalotribe, while in lateral pressure the long diameter of the head would remain, instead of the transverse as in vertical pressure.

Dr. MEADOWS exhibited a new Vaginal Speculum. It resembles Cusco's in regard to the two blades, upper and lower, whose divergence is effected by a simple act of pressure, but to prevent the lateral folds of the vagina from falling down between the blades, and obstructing vision, Dr. Meadows has adapted another narrow blade to each side, making four blades in all. These latter, when the instrument is closed, fall within the two larger blades, and are so hidden as not to interfere with easy introduction. The same act of pressure expands all four blades at once.

Dr. GERVIS exhibited a large Polypus Uteri. This specimen was taken from a patient whose labour, owing to its large size and unusually extensive attachments to the cervix uteri and vaginal walls, had to be terminated by craniotomy. On the fifth day after the confinement, the tumour was removed by the single-wire écraseur. The patient did well for some days, but ultimately succumbed to an attack of peritonitis, which, as it appeared from the post-mortem examination, was unconnected with any pelvic mischief. The section of the cervix was healthy, and healing, and the structure of the uterus, its peritoneal surface, and that of the broad ligaments, was free from any trace of inflammation, while, on the other hand, the coils of the small intestines were extensively agglutinated together by effused lymph. On section the polypus displayed in its interior an oval fibrous tumour, enveloped in a capsule of true uterine tissue, which had been at its upper part continuous with that of the cervix uteri. It is worthy of note that during the first four months of her pregnancy the patient had been subject to profuse hæmorrhage.

Dr. ROUTH exhibited for Dr. Griffith a curious Monstrosity. Extreme difficulty had been experienced in the delivery of this child, owing to the projection from the chin of a large bag containing fluid, and, in spite of craniotomy, the delivery could not be effected until this bag had been tapped. The mother did well.

Dr. ANDREW BROWN exhibited the Uterus, Fœtus, and Parts concerned in a case of Extra-uterine Pregnancy, in which death had occurred when gestation was advanced to about the fifth month. The illness, which followed an accidental rupture of the cyst, was short; during life she was not attended by any Medical man. Details of the post-mortem were given.

Dr. GREENHALGH read a paper on a case of probable Rupture of the Uterus. The patient had reached the seventh month of her sixteenth pregnancy, when, after lifting a heavy weight, she was suddenly seized with agonising pain in the abdomen, followed by collapse. Acute peritonitis set in, and symptoms of a typhoid character ensued. The uterus then became greatly distended, and, in the umbilical region, resonant on percussion, evidently from gaseous accumulation internally owing to the decomposition of the fœtus. The membranes were punctured, giving exit to a large quantity of fœtid gas and turbid liquor amnii, and in about ten hours the fœtus was expelled. The patient regained her former health. The points of interest in the case were discussed at length.

The business of the annual meeting then commenced. The Scrutineers, Dr. Brunton and Mr. Mitchell, declared the following to be the result of the ballot for the election of officers for the ensuing year:—*Honorary President:* Sir C. Locock, Bart., M.D. *President:* Graily Hewitt, M.D. *Vice-Presidents:* Dr. Langmore, Dr. Leishman, Glasgow; Dr. Priestley, Dr. Tilt, Mr. Spencer Wells, and Dr. Whitehead, Manchester. *Treasurer:* Dr. Meadows. *Honorary Secretaries:* Dr. Murray, Dr. Gervis. *Honorary Librarian:* Dr. Playfair. *Honorary Members of Council:* Dr. Tyler Smith, Dr. Oldham, Dr. Barnes, Dr. Hall Davis. *Other Members of Council:* Dr. Braithwaite, Leeds; Mr. Burton, Mr. Clay, Birmingham; Dr. Copeman, Norwich; Dr. Cory, Dr. Cumberbatch, Mr. Ellis, Dr. Greenhalgh, Mr. Haden, Dr. Hicks, Dr. Holman, Reigate; Mr. Jonathan Hutchinson, Mr. Nunn, Dr. Parson, Dr. Roberts, Manchester; Mr. Scott, Dr. Smith, Weymouth; and Dr. Charles Taylor.

The report of the Auditors (Dr. Rogers and Dr. Sansom) for the year ending December 31, 1868, was read, from which it appeared that the receipts had been £842 13s. 6d., of which £62 7s. 2d. had arisen from the sale of the *Transactions*. The expenditure for the year was £751 0s. 9d., of which £406 4s. 6d. had been expended in furnishing and maintaining the Library and Museum, £217 17s. 3d. on the *Transactions*, and £128 19s. on general expenses. There was a balance in the Treasurer's hands of £91 12s. 9d.

The report of the Hon. Librarian for the year 1868 was read. After referring to the completeness with which the suite of rooms at 291, Regent-street were furnished, and the arrangements made for the convenience of the Fellows, it stated that 96 volumes had been added during the year, 34 by purchase, 62 by gift. In the museum there was now a tolerably complete collection of all modern instruments connected with obstetrics. The report concluded by referring to the formation of an interesting collection of portraits of Presidents and Hon. Fellows, and to the gift of a handsome marble clock by Dr. Hall Davis.

The adoption of the reports of the Auditors and of the Hon. Librarian was moved by Dr. AVELING, seconded by Dr. BRODIE, and carried unanimously.

Dr. BARNES then, on behalf of the Council, moved the following resolutions, which were seconded by Mr. MITCHELL, and carried unanimously:—"1. That it is the opinion of the Obstetrical Society of London that the obstetric department of Medicine, and therefore the interests of the public, are inadequately represented in the General Medical Council. 2. That in the event of any revision of the constitution of the Council, provision should be made for the direct representation of obstetric Practitioners and teachers. 3. That the Council be requested to draw up a memorial embodying these resolutions, to present it to the Home Secretary, the General Medical Council,

and the British Medical Association, and to take such other measures as they may think useful in giving effect to them."

The PRESIDENT then delivered the annual address. He commenced by congratulating the Society on the increase in the number of its Fellows, of whom there were now more than 600. During the year past, forty-four new Fellows had been elected. He then paid a tribute of respect to the memory of those Fellows who had died during the year—Dr. Turnbull, of Melbourne; Dr. Ray, of Dulwich; Mr. Tutin, of Ripon; Dr. Mackenzie, of Thetford; Dr. Ramsbotham, of Leeds; Dr. Lamb, of Maidahill; and Dr. Pagan, of Glasgow. Reference was also made to the death of Dr. Francis Ramsbotham, to whom, although not a Fellow of this Society, many obstetric Practitioners owed much. The President next touched upon the many gratifying circumstances in connexion with the funds of the Society, the institution of its library and museum, and its steadily increasing reputation. He then urged the importance of there being a special representative of the obstetric interest in the Medical Council, so that the education of students in obstetrics might be better cared for than at present, the time now given to the teaching of midwifery and the diseases of women and children being quite inadequate to the importance and extent of the subjects. After referring to the high character of the papers read during the year, to the work being done by the committee appointed to investigate the subject of infant mortality, and expressing a hope that other subjects connected with obstetric science would also be investigated from time to time through the action of committees, the President concluded by tendering to the Fellows of the Society his sincere thanks for the courtesy they had shown him during his tenure of office, and to the various officers for their never-failing services in furthering its prosperity.

On the motion of Dr. SEDGWICK, seconded by Dr. MARTYN, a cordial vote of thanks was given to the President for his address, and to the various officers of the Society for their valuable services.

CLINICAL SOCIETY.

FRIDAY, JANUARY 22.

Mr. PAGET, President, in the Chair.

MR. HOLMES, after referring to the various conditions under which an operation might fail to find a stone in the urinary bladder after cutting, related a case in which he had operated at St. George's Hospital, but could discover no calculus after freely opening the urethra, and after careful examination of the bladder; his impression, confirmed by the opinion of those of his colleagues who were present, was that the stone, probably a small one, must have escaped unnoticed with the first gush of the urine.

After some remarks from Mr. HOLTHOUSE, and a suggestion from Mr. MAUNDER respecting certain rare instances of a stone lodging behind the pubes,

Mr. LEE related a case in which, no stone being found in the bladder, it was subsequently discovered that one had lodged in the urethra anterior to the incision.

Mr. HEATH remarked that somewhat similar experiences had been met with at other Hospitals. He drew attention more particularly to the error committed by many operators in cutting upwards in children, misled by the prevalent notion that the bladder lay higher in them than in adults. There was but one rule—to cut along the groove in the staff to the end.

Mr. THOMAS SMITH thought Mr. Holmes's the only reasonable explanation. He commented upon the severe symptoms often connected with the presence of small vesical calculi, and referred to the ease with which some of those might be crushed between the sound and the finger introduced into the rectum.

The PRESIDENT thought they were all greatly indebted to Mr. Holmes for bringing forward this experience. He directed attention to an instance in which error had arisen from striking the sound against the pelvic wall, an accompanying quiver of the bladder aiding the deception, and he thought such errors were apt to occur with the use for sounding of the staff, and recommended adherence to the rule that a sound should always be passed immediately before the operation, prior to the introduction of the staff.

Dr. GREENHOW communicated a case of Rheumatic Chorea in a child aged 14, treated successfully by bromide of potassium. The case was principally remarkable for its severity. The special treatment was commenced nine days after the more severe symptoms had set in, ten grains of bromide and two grains of iodide of potassium being given three times a day, while four ounces of port wine and two of brandy were ordered daily. The improvement was immediate, and the patient was soon after discharged convalescent.

A second case of Chorea was narrated by Dr. HALL DAVIS. A married lady, aged 20, in her fourth month of pregnancy, had suffered from general choreic movements for three weeks. Having been unsuccessfully treated with valerianate of zinc, bromide of ammonium was given in doses of five grains every four hours, along with five minims of liq. arsenicalis. The result was satisfactory. Dr. Davis referred to a second case of chorea complicating pregnancy, in which he had found the same drug generally useful.

Dr. WEBER referred to three cases of rheumatic chorea, in one of which bromide of potassium had been given in larger doses than those employed by Dr. Greenhow, without appreciable effect. In the other two cases the bromide seemed to do harm, for recovery was more rapid after it was discontinued, although no other medicine was given. Dr. Weber pointed out that in rheumatic chorea, as in acute rheumatism, absence of movement ought to be the chief aim of the Physician, in promoting which opium and its alkaloids are the most important therapeutic agents.

Dr. DOWN drew attention to the fact that in Dr. Greenhow's case the patient was put on stimulants at the same time with the bromide of potassium.

Dr. SIMS objected to the employment of anti-spasmodic medicines in chorea, alleging that, when so treated, the disease is more likely to recur than when iron or cod-liver oil is given.

Drs. BROADBENT and BUZZARD had tried bromide of potassium without success in numerous cases. Dr. Buzzard attributed the marked improvement in the patient entirely to the alcoholic stimulants.

Mr. KESTEVEN related a case of rheumatic chorea in which the bromide of potassium was given with success.

Dr. POWELL thought that the cure in Dr. Greenhow's case might with great plausibility be attributed to the iodide of potassium with which it was combined.

Dr. GREENHOW, in reply, stated that he did not think that bromide of potassium was applicable in any cases of chorea excepting those of rheumatic origin, and in illustration related three cases of chorea occurring in children of the same family, in which he regarded the disease as developmental rather than dyscrasic, and had found the bromide of potassium entirely useless. They were cured by the valerianate of zinc.

Mr. HINTON read the history of an interesting case in which a solid mass was removed from the tympanum by incision of the membrana tympani.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, JANUARY 20.

Mr. GEORGE YATES in the Chair.

THE first meeting of this Society since its reconstruction was held in the Council Room of the Midland Institution, at 3 o'clock on Wednesday, January 20. The routine business having been disposed of,

Mr. SAMPSON GAMGEE exhibited a Calculus which he had removed by the lateral operation from the bladder of a child 8 years of age. He had performed a similar operation on the same subject five years before. Although the incision in the second operation was directly through the old cicatrix, union had been most rapid, the urine passing through the penis the second day, and continuing to do so. Mr. Gamgee also exhibited, amongst other vesical calculi, one which he had removed last summer by the lateral operation from the bladder of a man 58 years of age. The case was remarkable in that the patient was able from the first day to hold his water, voiding it at will into a vessel held between his legs as he knelt on the bed. The recovery of this patient was extremely rapid, as the urine ceased to pass through the wound on the eighth day, and he walked four miles on the fourteenth day after the operation.

Dr. SAWYER showed a specimen of Mitral Valvular Disease following rheumatic fever. The posterior portion of the valve was perfectly useless, being shrivelled up into a firm fibrous cord half encircling the mitral orifice.

Mr. FURNEAUX JORDAN then read a paper, entitled "New Surgical Remedies." He commenced his paper by referring to the innumerable current modes of treating inflammations in

defiance of the pathological law of the unity of the inflammatory process, and then dwelt at some length on the principles which he believed ought to guide us in the treatment of individual cases of inflammation and of other diseases which are accelerated in progress by local vascular repletion. Space does not permit any accurate view here of this portion of the paper. He contended that the great object of treatment should be to discover and to remove the conditions which permit the occurrence and the progress of inflammatory diseases. Thus, no given part of the body can inflame without occupying an increased amount of space; prevent or diminish the encroachment on adjacent space, and the inflammation itself is prevented or diminished. No part can inflame with the "health quantity" of blood only; prevent or diminish any increase in the quantity of blood, and inflammation is prevented or diminished. Another condition of inflammation is that there shall be no other prosperous inflammation in the same individual; set up another inflammation (in an independent vascular territory) sufficiently acute, sufficiently extensive to quell the first. Other less essential or more obscure conditions were adverted to, but we pass on to look for a few moments at the practical issues to which the principles he laid down tended. There are two classes of remedies, all of which should, if possible, be used in every inflammation. The negative (but all-important) remedies—removing the cause, elevated posture and complete rest, assist nature by removing obstacles out of the way. The positive remedies, pressure and counter-irritation, are additional to nature, and do what she cannot do. In boil, carbuncle, abscess, erysipelas, phagedænic or sloughing ulcer, and other inflammations on the surface of the body, the author establishes a zone, or circle, or adjacent patch of counter-irritation, and applies uniform, efficient, and carefully arranged pressure, generally over a thick, consistent, large linseed poultice, with bandage or shot mattress. Counter-irritation is at the present time used occasionally in certain stages of certain isolated inflammations, and pressure is occasionally used in a few other isolated cases, but neither on any definite principles. The author applied these remedies in every stage of every inflammation; in reality, he proposed and practised a new treatment in each surgical disease. In the cases referred to, comprising illustrations of every class of surgical inflammations, the arrest of the disease was often a question of hours only. It needed but to widen or intensify the zone, or stripe, or other patch of counter-irritation, to immediately subdue a carbuncle, boil, or abscess. A threatened nose, or glans penis, or femoral artery might now be saved when all other means failed. The author then showed the application of the same principles in other inflammations of the bones, of the joints, of the cranial, thoracic, abdominal, and pelvic viscera. The paper was illustrated by a large number of diagrams. These principles, together with practical details and numerous illustrative cases, will be given to the Profession in due course.

NEW BOOKS, WITH SHORT CRITIQUES.

The American Journal of Obstetrics, November. New York: Townsend and Adams.

*** The number for November, which has just come to hand, contains some valuable articles, especially one by Professor Elliot, consisting of clinical memoranda; by Professor Storer, on the rectum in its relations to uterine disease; and a translation from the German on polypi and fibroids of the uterus. There are also capital reviews of the literature relating to diseases of women, the pregnant and puerperal state, and diseases of children.

A Treatise on the Principles and Practice of Medicine: designed for the Use of Practitioners and Students of Medicine. By Austin Flint, M.D., Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College. Third edition, thoroughly revised. Philadelphia: H. Lea. Pp. 1092.

*** This is in some respects the best text-book of Medicine in our language, and it is highly appreciated on the other side of the Atlantic, inasmuch as the first edition was exhausted in a few weeks. The second edition was little more than a reprint, but the present has, as the author says, been *thoroughly* revised. Much valuable matter has been added, and by making the type smaller, the bulk of the volume is not much increased. The weak point in many American works is pathology, but Dr. Flint has taken peculiar pains on this point, greatly to the value of the book.

Brief Remarks on the Causes and Nature of African "Lethargus." By Albert A. Gore, M.D. Queen's University, Ireland, L.K. and Q.C.P., Staff Surgeon, etc. Dublin: Fannin. Pp. 8.

*** Dr. Gore makes some interesting remarks on this curious affection, which is not unusual in Western Africa. In the first stage there is drowsiness, but not continuous sleep; in the second the patient only wakes when roused; in the third a persistent stupor is present, there is relaxation of the sphincters, and for some days before death the patient will take no nourishment. There is no marked post-mortem phenomenon. In a case narrated by Staff Surgeon Morphew the patient never awoke for eleven days before his death.

OBITUARY.

MR. THOMAS ORTON, M.R.C.S.

We deeply regret to record the death of Mr. Thomas Orton, M.R.C.S., on January 30, at his residence, 5, Brunswick-terrace, Commercial-road E., aged 63. Mr. Orton was Medical Officer of Health for Stepney, and acquired a good deal of celebrity from the courage with which he withstood Dr. Farr's demonstration of the origin of the cholera of 1866 in the foul water of the East London reservoirs. The ability displayed by Mr. Orton was undeniable, even by those who espoused the opposite side. Mr. Orton was an amiable and conscientious man, and succumbed, after a week's illness, to an attack of typhoid fever, which, it is believed, he contracted in the discharge of his duties as Medical Officer of Health.

THE MARSHALL HALL MEMORIAL SCHOLARSHIP.

A meeting of the General Committee, formed to found some suitable memorial, commemorative of the labours of the late Dr. Marshall Hall, was held at the rooms of the Royal Medical and Chirurgical Society on Friday, the 29th ult. Dr. Burrows presided. Amongst those present were Dr. Gull, Dr. Risdon Bennett, Mr. Solly, Dr. Sibson, Dr. Wakley, Dr. Russell Reynolds, Mr. Erasmus Wilson, Dr. Langdon Down, Dr. Dobell, Dr. Glover, Mr. Gower, Mr. Curling, Dr. Yearsley, Dr. F. Winslow, Mr. Gay, Dr. Webster, Mr. E. Saunders, Sir D. Gibb, Dr. Hare, Dr. Dickinson, Dr. Buzzard, Dr. Aldis, Dr. Ramsay, Dr. Nicholls (Chelmsford), Dr. Grailly Hewitt, Mr. Charles Hunter, Dr. Tilbury Fox.

Dr. Burrows said he was glad to see so many distinguished members of the Profession prepared to join in establishing a memorial to Dr. Marshall Hall which should also serve as an incentive to young men to devote their energies to original research. Dr. Marshall Hall's character was peculiarly distinguished in three ways. First, there was a great originality in all his inquiries and researches. Secondly, he had a happy power of turning the results of his scientific investigations to practical purposes. He did not allow them to be merely barren scientific results. They were more or less quickly applied to the improvement of the diagnosis as well as of the treatment of disease. The third feature of his character appears to me to have been his great benevolence. The future reputation of Dr. Marshall Hall as a scientific man will rest principally upon his original researches into the functions of the nervous system, particularly into the functions of the spinal cord. By those researches he established the existence in that portion of the nervous centres of a function or property which seemed to reside in it independent of the brain itself, and first noticed under the name of the reflex function of the spinal cord. This was soon applied to the improvement of diagnosis. Many must remember cases during their student life—cases of paralysis and other affections of the nervous system—phenomena of which, before the discovery of Dr. Marshall Hall, were absolutely unintelligible. And yet, through the discoveries of Dr. Marshall Hall, these symptoms and phenomena become perfectly intelligible. Those who are younger, and have had the advantage of modern physiological knowledge, can hardly appreciate the great improvement which took place in the diagnosis and the treatment of various nervous affections subsequently to these researches, not simply in cases of paralysis, but in the numerous cases of spasmodic affection. But Dr. Marshall Hall went into researches of a different kind—quite as original, and attended with important practical results—into the effects of the loss of blood. Forty years ago his sagacious mind foresaw evils that result from the prodigal flow of blood. No sooner had Dr. Marshall Hall carried out his investigations than he laid down a series of rules for Practitioners as to the use of venesection in acute diseases. Those rules were most highly satisfactory and rational. There is yet another service rendered to our Profession and to humanity by Dr. Marshall Hall—"The Ready Method" for the resuscitation of those apparently drowned. No doubt this subject has advanced since his days. Here is seen most strikingly that the tendency of Dr. Marshall Hall's mind was to make science subservient to the alleviation of suffering, and the restoration of individuals to health and life. Much more might also be said upon the great benevolence of Dr. Marshall Hall's mind, but it is unnecessary upon the present occasion.

Dr. Tilbury Fox read the report of the Preliminary London Committee. It stated that the proposal to found a memorial originated with Dr. Ellis, and that it had met with the most remarkable acceptance at the hands of a large number of the leading members of the Profession in London, Edinburgh, Dublin, and the provinces. At the outset of the present movement the foundation of a scholarship seemed best calculated to interest the Profession, and it was desirable, if this form of memorial be adopted, to place it upon the broadest basis—to make it, in fact, an open scholarship, so as to interest as many Medical schools as possible. The amount of support which has been, and is likely to be, given, may be inferred from the fact that the General Committee-list comprises the names of more than 150 gentlemen, a large number of whom are connected with the schools of the metropolitan cities, and those of Leeds, Manchester, Newcastle, and Birmingham.

Dr. Gull, in proposing the first resolution, said—It is certainly a very wonderful thing that we should have been so long in recognising that most marvellous discovery of the excito-motor system of nerves—one which ranks quite equal with that of the circulation of the blood. Previous to the discovery of the circulation of the blood, all must have been dark as to the minute changes which went on in the tissues, and how the blood got from veins to arteries; and so up to the time of the discovery of the excito-motor system as a great physical fact of nervous action, we were truly in the dark as to how the phenomena came about. There is no doubt that the future development of Medicine rests entirely upon these physical researches. Up to very recent times, as we all know, symptoms were regarded as the data upon which we had to form our opinions. Now symptoms are slowly, day by day, sinking into insignificance, and we are getting our data from fact. These excito-motor phenomena were essentially symptoms, and had no intelligible significance till the discovery of the excito-motor system. I think, therefore, we do well to acknowledge how much we owe to such a labourer in the field of science, and to establish such a memorial to him that he, though dead, may still, as it were, live, and that new work and new results may ever spring from his labours. I am inclined to think that, on the whole, it might be better to put this memorial upon a higher basis than to give a scholarship to students. I would only suggest that if we could get the College of Physicians or Surgeons or Royal Society to take charge of such sums as may be subscribed, and apply the proceeds, year by year, to fresh investigations as to the physiology and action of the nervous system, that, I think, would be the greatest honour we could do to Marshall Hall. Without further remarks, therefore, I will propose to the meeting the resolution which has been placed in my hands—"That the physiological labours and other scientific researches of the late Dr. Marshall Hall on the nervous system are worthy of especial recognition, and that it is desirable that steps should be taken for the foundation of some suitable memorial."

Mr. Erasmus Wilson, in seconding the resolution, alluded to the varied character of Dr. Marshall Hall's labours. In Surgery he had given great attention to the operation for the cure of nævus; while a paper on an interesting form of skin disease—namely, erythema iris—they owed to the same active mind.

Dr. Buzzard reminded the meeting that the form of the memorial would necessarily depend entirely upon the amount that might be raised; and, till that was known, it would be premature to attempt to decide the shape which the memorial would assume.

Dr. Webster suggested that the memorial might take the form of a prize for an essay on a physiological subject. Of Dr. Marshall Hall he would say, in the words of Dr. Johnson, "He touched many things"—history, poetry, Medicine, and so on—"but he touched nothing which he did not adorn." And they might go further and say he touched nothing which he did not improve.

Dr. Sibson proposed the second resolution, which was as follows:—"That the following gentlemen—viz., Dr. Burrows, Dr. Risdon Bennett, Mr. Lockhart Clarke, Dr. Dickinson, Dr. Gull, Professor Huxley, Mr. Prescott Hewett, Mr. Seymour Haden, Mr. C. Hunter, Sir Wm. Jenner, Bart., Mr. Paget, Dr. Sibson, Mr. Solly, Dr. C. J. B. Williams, Mr. Erasmus Wilson, and Mr. Webber (with power to add to their number), be requested to act as members of an Executive Committee, and to arrange, in conjunction with Edinburgh, Dublin, and provincial representatives, some plan for carrying into effect the foregoing resolution."

The resolution was then carried unanimously.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

A quarterly meeting of this Association was held at the Freemasons' Tavern, Great Queen-street, on Friday evening last.

Dr. Rogers, the President, took the chair, and delivered an excellent address, the length of which prevents our publishing it *in extenso*, drawing a comparison between the Irish and English systems, and the statistics of population, poor rate, and Medical relief of various towns. He contended that one cause of the increase of local taxation is the insufficiency of Medical facilities at the command of the sick poor. He thought the Irish system should be made the basis of any alteration in England and Wales. In conclusion he said:—"I have striven to place before you, in the clearest way in my power—first, the position of the Poor-law Medical officer in this country at the present time; secondly, to point out the extent of his grievances, and the causes to which I believe them to be due; thirdly, to show, by the letters that we have received from many eminent sources, that our cause has secured the attention and enlisted the sympathy of intelligent people; fourthly, to give you figures necessary for the elucidation of the question, and a comparison of two systems in operation together in the empire; and to show you, from that comparison, that the principle of increased Medical facilities which we advocate is founded, not only on sound theory, but borne out by absolute and, I believe, incontestable experience."

The Council presented their quarterly report, in which they announced the accession of many new members, and detailed their labours in obtaining parliamentary support. They stated that promises of support had been received from eighty-nine members of the new House of Commons, and that a mutual interchange of good offices had been agreed upon with the Irish Medical Association, who were very desirous of obtaining superannuation allowances.

Dr. Rogers moved the adoption of the report.

Dr. Fowler (East London Union) seconded the same, and, in so doing, expressed his concurrence in the president's opinion, that liberal Medical treatment of the sick poor was the ratepayers' best economy. If this had been attended to before, Gathorne Hardy's lavish Act would not have been needed. The figures under the item of Medical relief in the Poor-law returns were very fallacious, and unjust to the Medical officers. The public fancied that all, or at least the greater part, of this amount went into their pockets, whereas under this head were set down not only Medical officers' salaries, but also drugs, appliances, wine and spirits, subscriptions to Hospitals and institutions—in fact, anything spent over the sick.

Dr. Dixon (Bermondsey) moved the first resolution:—"That the salaries of Medical officers had been fixed by the guardians without regard to any uniform standard of remuneration, and that, for the most part, they are inadequate for the onerous duties they had to perform." In support of the resolution, Dr. Dixon entered into statistics to show that, when the cost of medicine had been deducted, the Medical officer's average pay in the metropolis was 6½d. per case, and in the country districts 1s. 9½d. To show the utter want of uniformity, some were receiving nearly 3s. per case, while others received only 3d. Their pay was worse, he contended, than that of skilled mechanics. Medical officers in the navy, and even in gaols, were far more liberally treated and better considered.

Dr. Welch seconded the resolution. He had been fourteen years Medical Officer in Bethnal-green. His work had very largely increased. In 1865 the number of cases was 1213, and they had risen in 1868 to 2198. During the prevalence of an epidemic the guardians retained the services of a Professional man, and paid him for a very limited period £106 4s. He had made a calculation based on this gentleman's rate of payment, and he found that, according to the same scale, he (Dr. Welch) was entitled to £1600 a year. And yet the guardians demurred to raising his salary of £120 a year.

Mr. Hogg (a member of the St. Giles's Board of Works) moved that the President's address should be printed and extensively circulated, in order that the facts might be put well before the public.

Dr. Firth (of Rotherhithe) seconded it.

Dr. Goddard moved the third resolution, which concerned permanency of appointment. He maintained that, to make a Medical officer free and independent in the exercise of his duties, and not merely time-serving, he ought to be permanently appointed. He considered this quite as essential in a Medical officership as in a chaplaincy.

Dr. THOMAS seconded the motion.

Mr. BENSON BAKER moved the fourth resolution—"That Medical officers were justly entitled to superannuations in common with the members of the Civil Service." Medical officers had no half-holiday, no vacation; their occupation was uninterrupted. Therefore they were as much entitled, he considered, to superannuation allowance, if not more so, than any other class of public servants.

Dr. SMYTHE seconded the resolution.

The fifth resolution was moved by Dr. SMYTHE and seconded by Dr. CLAREMONT, "That a petition embodying these resolutions should be presented to the House of Commons." It was likewise resolved to send a copy of the Council's report and of the proceedings of the meeting to the Right Hon. the President of the Poor-law Board.

The meeting closed with a vote of thanks to the President and the Council.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a general meeting of the Fellows held on Thursday, January 28, the following gentlemen, having undergone the necessary examination, were duly admitted Members of the College:—

Corfield, William Henry, M.B. Oxon., University College.
Fox, Alexander, 10 Finsbury-pavement.
Mayo, Charles, M.B. Oxon., 121, Belgrave-mansions, Grosvenor-gardens.
Ord, William Miller, M.B. Lond., Streatham-hill.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, January 28, 1869:—

Banks, Richard, Cockermouth.
Burroughs, Benj. Power Beames, Flax Bourton, near Bristol.
Dean, Edward, Slaithwaite, near Huddersfield.

As an Assistant in compounding and dispensing medicines:—

Job, Thomas, Tavistock.

The following gentleman also, on the same day, passed his First Examination:—

Morris, William, Birmingham.

At the Preliminary Examination in Arts, held at the Hall of the Society on January 29 and 30, 1869, thirty-five candidates presented themselves, of whom ten were rejected, and the following twenty-five passed and received Certificates of Proficiency in General Education. In the First Class:—

Boyson, Henry.
Foreman, Joseph.
Jones, Arthur.
Woodward, Frederick Edward.

In the Second Class:—

Channell, William Robert.
Chapiin, Matilda.
Corney, Bolton George.
Davies, Lewis.
Godfrey, Charles Walter.
Gravely, William Homewood.
Hodgson, Keith Foster.
Jones, Thomas.
Kellie, Robert H.
Lewis, Frederick William.
Lloyd, Edward James.
Page, Herbert.
Pilgrim, Alfred P.
Pocock, Walter.
Raye, Thomas M.
Rees, Charles.
Saunders, Everard Home.
Seilan, Charles Louis Isidore de
Seymour, Charles.
Slater, George Augustus.
Scoffern, John Douglas.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BROCKLEHURST, THOMAS HOWARD, M.R.C.S. Eng. and L.S.A. Lond.—Resident Medical Officer to the New Dispensary, Hulme, Manchester.

FIELD, GEORGE, M.R.C.S.E.—Aural and Ophthalmic Clinical Assistant to St. Mary's Hospital.

SMITH, WILLIAM JOHNSON.—Assistant-Surgeon to the Hospital Ship *Dreadnought*, *vice* Mr. R. J. Bedford, resigned.

VINCENT, OSMAN, M.R.C.S.E.—Chloroformist to the Middlesex Hospital, *vice* Dr. John Murray, resigned.

WILLIAMS, H. LLOYD, M.R.C.S. and L.S.A.—House-Surgeon to St. Bartholomew's Hospital.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—The following appointments have been made:—Robert Turner, Acting Assistant-Surgeon, to the *Hector;* John White, Acting Assistant-Surgeon, to the *Pembroke;* John B. Isaac, Acting Assistant-Surgeon, to the *Donegal;* W. H. Goode, Acting Assistant-Surgeon, to the *Ganges;* Dr. Gordon Price, Acting Assistant-Surgeon, to the *Royal Adelaide;* and Edward T. Lloyd, Acting Assistant-Surgeon, to the *Boscawen.*

MILITARY TRAIN.—Surgeon Alexander M'Arthur, M.D., having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of April 1, 1867.

42ND FOOT.—Surgeon James Edmund Clutterbuck, M.D., having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of April 1, 1867.

94TH FOOT.—Surgeon Andrew Acres Stoney, having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of April 1, 1867.

BIRTHS.

HULKE.—On January 31, at Admiralty House, Deal, the wife of Dr. Fred. Thos. Hulke, of a daughter.

KAVANAGH.—On January 27, at Deptford, Kent, the wife of P. Kavanagh, M.D., of a daughter.

KIDD.—On January 29, at 6, Newton-terrace, High-road, Lee, the wife of Staff Surgeon Leonard Kidd, M.B., Army Medical Department, of a daughter.

WATSON.—On January 24, at 16, Charlotte-square, Edinburgh, the wife of Patrick Heron Watson, M.D., of a daughter.

MARRIAGES.

ANDERSON—HOSACK.—On December 2, 1868, at Mont Pelier, in the parish of Portland, Jamaica, Izett W. Anderson, M.D. Edin., to Helena Jane, eldest daughter of the Hon. Wm. Hosack, Custos Rotulorum, of the parish of Portland, and late member of the Executive Committee of the Island of Jamaica. No cards.

BAUDE—LANGWORTHY.—On January 28, at the British Embassy, Paris, Alfred Edmond Baude, Officier Démissionaire du 1er Régiment de la Garde Impériale, to Maria Frances Talbot Langworthy, daughter of the late Robert Austin Langworthy, M.D.

BURN—NEWMAN.—On January 28, at the parish church of St. Anne, Limehouse, William Barnett Burn, F.R.M.S., M.R.C.S. Eng., L.S.A., eldest son of W. W. Burn, Esq., and grandson of Thomas Wm. Barnett, M.R.C.S. Eng., to Helen Elizabeth, youngest daughter of the late Arthur Atherley Newman, Esq. No cards.

LATTER—HAYES.—On January 30, at the parish church, Bromley, Kent, Walter Latter, R.A.M., organist of Bromley Church, second son of William Latter, Esq., of 16, Belmont-hill, Lee, Kent, to Marion, fourth daughter of Georges Hayes, M.D., of 66, Conduit-street, Regent-street, and Bromley, Kent, S.E.

TRAVERS—POCOCK.—On January 28, at St. Peter's, Notting-hill, Dr. Travers, F.R.C.S., of 19, Lower Phillimore-place, Kensington, to Annie, youngest daughter of Thomas Pocock, Esq., of 24, Ladbroke-gardens, W. No cards.

WOODHOUSE—CHAWNER.—On February 1, at the parish church of Newton Valence, Hants, Thomas James Woodhouse, M.D. Lond., F.R.C.S., of Ranelagh Lodge, Fulham, to Florence, youngest daughter of the late Captain Edward Hoare Chawner, 4th Dragoon Guards, of the Manor House, Newton Valence. No cards.

DEATHS.

ARMSTRONG, GEORGE HILLAS, M.R.C.S. and L.S.A., at 32, Duke-street, St. James's, of bronchitis, on February 1, aged 66.

BETHAM, MARY ALICE, second daughter of J. Betham, Esq., M.R.C.S., L.S.A., at Sandhurst, Victoria, of malignant diphtheria, on November 14, 1868, aged 6 years.

BLYTHE, WM. F., M.D., at Brompton-park, on January 15, aged 27.

DYCE, R. M., of Aberdeen, on January 11, aged 70.

HARDEN, G. F., M.B., of Bolton, Lancashire, on January 23, aged 29.

LITTLE, JUDITH ANNA, relict of the late Daniel Little, Surgeon, Devonport, at the Medical College, Epsom, on February 2, aged 76.

MADGE, ALICE ELIZABETH, the fourth and youngest child of M. Madge, M.D., at 32, Fitzroy-square, on January 27, aged 18 months.

MISKIN, ESTHER, the beloved wife of Nicholas Miskin, Surgeon, at 160, York-road, Lambeth, on January 31, aged 56.

PETTINGAL, FREDERICK JAMES, M.D., Surgeon Bengal Army, at Clapham, Surrey, on January 24, aged 40.

SYME, JEMIMA BURN, wife of James Syme, Professor of Clinical Surgery in the University of Edinburgh, at Millbank House, Edinburgh, on February 1.

TAUNTON, EMILY LUCY, daughter of the late John C. Taunton, Surgeon, of Hatton-garden, at 17, John-street, Bedford-row, on January 29, in the 19th year of her age.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BOLTON INFIRMARY AND DISPENSARY.—House-Surgeon; must have registered Medical and Surgical qualifications. Testimonials to the Secretaries, Infirmary and Dispensary, Bolton, on or before Thursday, January 11.

BUCKS COUNTY LUNATIC ASYLUM, STONE, NEAR AYLESBURY.—Assistant Medical Officer; must have a legal qualification. Testimonials to Acton Tindal, Esq., County Hall, Aylesbury, on or before February 12.

INFIRMARY FOR EPILEPSY AND PARALYSIS, CHARLES-STREET, PORTMAN-SQUARE.—Assistant-Physician; must be a Graduate in Medicine and a Member or Fellow of the Royal College of Physicians. Applications and testimonials to the Secretary at the Infirmary. Election on February 18.

KENT AND CANTERBURY HOSPITAL.—Physician; must have been in practice as a Physician for two years previous to his election, and be a Graduate in Medicine of some university of Great Britain or Ireland, and F. or M.R.C.P. Lond. Applications and testimonials to the Secretary at the Hospital on or before February 25. Notice will be given of the day of election.

KENT AND CANTERBURY HOSPITAL.—House-Surgeon; must be unmarried, and between 23 and 41 years of age, and have the diploma of some British College of Surgeons, and be L.S.A. and L.R.C.P. London, Edinburgh, or

Dublin. Candidates must produce their diplomas of qualification both from the College and Hall, likewise their certificate of baptism, at the meeting of the Board on February 26; election on the same day.

Kent and Canterbury Hospital.—Assistant House-Surgeon; must be unmarried, and under 40 years of age, and either M.R.C.S. or L.S.A. Testimonials to the Secretary at the Hospital on or before February 26. The election will take place on the same day. Personal attendance of the candidates is desirable.

Leicester Borough Lunatic Asylum.—Resident Medical Superintendent; must be qualified to practise Medicine and Surgery, and be legally registered under the Medical Act, 1858. Applications, enclosing testimonials and stating age and qualifications, to be sent to Mr. S. Stone, Town Clerk, Leicester, on or before March 11 next.

Liverpool Infirmary for Children.—House-Surgeon; must be unmarried, and be on the Medical Register of Great Britain, and possess at least one Medical and one Surgical diploma, licence, or degree recognised by the Medical Council. Send testimonials to the Hon. Secretary, on or before Saturday, February 13. Selected candidates will receive notice requiring their attendance.

Parish of Lambeth.—Resident Medical Officer and Dispenser; must be unmarried. Certificates of qualification and testimonials to Mr. W. B. Wilmot, Clerk's Office, Lambeth Workhouse, on or before February 8. Election on Wednesday, February 10, at 11 a.m.

Royal Kent Dispensary.—Resident Medical Officer; must possess the double qualification and be registered. Applications and testimonials to C. J. Carttar, Secretary, Catherine House, Greenwich, on or before February 16; election on Thursday, February 25.

POOR-LAW MEDICAL SERVICE.

*** The area of the district is stated in acres. The population is computed according to the last census.

RESIGNATION.

Halstead Union.—Mr. Duncan Sinclair has resigned the First District; area 9039; population 7862; per case. Also the Workhouse; salary £30 per annum.

APPOINTMENTS.

Merthyr Tydfil Union.—Thomas Griffiths, M.R.C.S.E., L.S.A., to the Workhouse.

Newton Abbot Union.—Walter S. Gervis, M.D. Aber., M.R.C.S.E., L.S.A., to the Ashburton District.

University of Cambridge.—The authorities of Trinity College have determined to give henceforth a Fellowship, once in three years at least, for proficiency in Natural Science. The examination will be open to all graduates of the University whose standing, after the B.A., B.M., or B.L. degree, does not exceed three years. It will take place at the usual time of the examination for the Fellowships—*i.e.*, early in October. Clare College offers a scholarship for Natural Science of the value of £50 a year, tenable for three years and a half. The examination will take place on March 17, and will be open to all students who have not commenced residence in the University. Further information may be obtained from the Rev. W. Raynes, tutor of the College.

The will of the late Dr. Edward Scholfield, of Doncaster, has been proved under £18,000 personalty.

Mr. Andrew Moir, who was bracketed second wrangler in the Cambridge Mathematical Honour list, is son of the late Dr. A. Moir, Demonstrator of Anatomy in the University of Aberdeen.

Bradford Infirmary and Dispensary.—At the last meeting of the governors and subscribers the resignation of Dr. Macturk, as Physician, was received, whereupon he was appointed Consulting Physician and a Vice-President.

Naval and Military Intelligence.—The deaths of the following officers have been officially reported at the War Office since January 1:—Surgeons Anthony C. Colclough and James Davidson, 50th (Queen's Own) Regiment; Assistant-Surgeon George M'Iver Campbell, M.B., 85th Regiment.

Mr. John Angus, Surgeon, of Frith-street, Soho, has obtained a verdict of £1000 damages against the Great Northern Railway Company.

Typhoid fever is raging at Brussels. The inhabitants say it was imported from Russia; but there are good reasons for ascribing its origin to a source nearer Brussels. Mrs. Barnard (better known as Claribel) died on her way home, at Dover, from typhoid which she had contracted at Brussels.

At the next meeting of the Metropolitan Association of Medical Officers of Health, on Saturday, February 20, Dr. Guy will read a paper on "Indiscriminate Almsgiving as a Source of Disease and Crime." No subject better deserves full discussion at the present time.

Professor F. Le Gros Clark will resume his lectures in June next, by giving a course of six on the "Principles of Surgical Diagnosis, especially in relation to Shock and Visceral Lesions," in continuation of his subject of last year; and the College lectures will be completed in June by Mr. J. W. Hulke, who will deliver three lectures on the "Minute Anatomy of the Eye."

Dr. Wiltshire, Government Inspector, has been visiting the town of Wombwell, Yorkshire, where there was an outbreak of fever in August, September, and October last, which was fatal to many persons, for the purpose of inquiring into, and reporting upon, its sanitary condition.

Royal Infirmary of Glasgow.—Appointment of a Vaccinator.—At a meeting of the managers of the Royal Infirmary, held on the 1st inst., Dr. R. D. Tannahill, Bath-street, was appointed to the newly established office of Vaccinator to the institution.

Contagious Diseases Act at Colchester.—The Hospital for the treatment of women under this Act at Colchester was opened on the 27th ult. Seven women were admitted for treatment. The visiting Surgeon is Mr. W. Waylen. Colchester has long been notorious for the prevalence of enthetic diseases among the troops stationed there—principally the 4th and 8th depot battalions.

Dr. Graily Hewitt's work on Diseases of Women has just appeared in a German form. The translation has been made by Dr. Hermann Beigel, who has added some new matter on the pathology of ovarian tumours, and some very excellent diagrams illustrating the changes which may take place in the position of the uterus. The work has been excellently printed on toned paper, and will enhance the reputation of both the author and translator. It has one feature rarely found in German works—viz., a very exhaustive index.

Royal Institution of Great Britain.—At the General Monthly Meeting on the 1st instant, W. R. Grove, Esq., Q.C., in the chair, Edward Armitage, Esq., A.R.A., Geoffrey Bevington, Esq., Frederick Leighton, Esq., The Master of Lindsay, Frederick Nettlefold, Esq., Frederick J. Toulmin, Esq., R. O. White, Esq., William Edward Wilson, Esq., and Philip Wright, Esq., were elected members. The special thanks of the members were returned for the following additions to "the Donation Fund for the Promotion of Experimental Researches:" Alfred Davis, Esq. (3rd donation), £21; W. D. (3rd donation), £5 5s.

Medical Benevolent Fund.—At the January meeting of the Committee of this excellent charity there were fourteen applicants for assistance, eight of whom were relieved at a cost of £80, while the remainder stood over for further inquiry. Among the contributions received since our last notice are the following:—Miss A. B., £10; Miss M. B., £10; J. Morgan, Esq., £10; T. Taplin, Esq., £5 (annual); D. De Berdt Hovell, Esq., £5 5s.; J. F. France, Esq., £3 3s. (annual). We are requested to state that the address of the new Hon. Secretary (through whom all applications should be made) is Stamford Felce, Esq., 12, Chippenham-road, Paddington, W.

Queen's Hospital, Birmingham.—On Friday last the Governors of the Queen's Hospital proceeded to elect a Physician in the room of Dr. Foster, who resigned to accept a similar appointment at the General Hospital. There were only two candidates—Dr. Heslop and Dr. Dickson. The latter gentleman withdrew his name just when the proceedings were about to commence; Dr. Heslop was, therefore, unanimously, and by acclamation, elected. By this addition the Medical Staff of the Hospital is complete, and the deservedly high character which it enjoys as a clinical school must be raised by subsidising the splendid tutorial abilities which Dr. Heslop is known to possess, and which will make this one of the best clinical Hospitals in the kingdom.

The late Dr. Peskett.—Two meetings have been held in the Council Chamber, Beccles, at the first of which the following resolutions were passed, and at the second confirmed:—"That this meeting, deeply impressed with a sense of the great loss sustained by the town of Beccles and its neighbourhood in the death of the late Dr. Peskett, are of opinion that measures should be taken for providing a suitable public tribute to his memory." "That a subscription list be at once opened; no subscription to exceed five shillings." At the second meeting an influential committee was nominated, with the Mayor at the head of it, for carrying out the resolutions.

The Prizes at the Académie de Médecine.—A writer in the *Berlin. klin. Woch.*, after observing that at the last distribution of prizes it was found that, of the seven prize questions, five had not elicited any response worthy of the prizes offered, goes on to say that among the works rewarded you find none but those of Frenchmen. It is hardly probable that the natives of all other countries abstained from taking part in the contest, and it is to be suspected that foreign candidates did not receive the same consideration as native ones. The Academy professes to bestow prizes annually for the best works that have been published in Medicine and Surgery; and

how comes it that insignificant French works are so rewarded while solid German and English works remain unnoticed? The Academy has a perfect right, if it choose, to encourage thus national Medical science, but then it should openly declare that foreign works are excluded from the competition, and not act as though the only works of a high character and worthy of prizes are produced in France.

Poor-law Medical Service. — *Marylebone.* — The resolution of last week raising the salary of the Medical officer of the Rectory District from £170 to £200 per annum was rescinded, and notice of motion was given that the whole question of the salaries of the Medical officers be taken into consideration. *St. Pancras.*—Mr. J. W. Barnes, of Sydenham, was elected Medical officer, *vice* Dr. Saul, resigned. The elected officer undertook to reside in the district. *Paddington.*—The question as to whether Dr. Hardwicke, the Medical officer of Health, ought to undertake the duties of Vaccinating Prosecutor was discussed, but adjourned for a week. *Kingston.*—Mr. Armstrong, M.R.C.S., was the only applicant for the post of public vaccinator of the Teddington district, and was appointed. *St. Luke's, Middlesex.*—Mr. Neighbour was re-appointed vaccination inspector, at a salary of £10 for the three months, as before. Mr. Neighbour is one of the inspectors of nuisances.

Royal College of Surgeons.—The Hunterian Oration will be delivered on Monday, the 15th inst., by Mr. Richard Quain, F.R.S., Surgeon Extraordinary to the Queen, and President of the College. In the evening the President, Vice-Presidents, and Council of the College, will entertain a distinguished body of visitors to the usual Hunterian Festival at the Albion Tavern. Professor T. H. Huxley, F.R.S., the lecturer on Comparative Anatomy and Physiology to the College, will commence his course of eighteen lectures on the Construction of Vertebrated Animals on Monday, the 22nd inst. The following will form the heads of his discourses, viz.: The Essential Characters of the Vertebrata, and of the Provinces and Classes of that division of the Animal Kingdom. The vertebrate Ovum, and the first stages of its development. The nature and origin of the vertebrate Skeleton, composed of the endoskeleton and the exoskeleton. The Endoskeleton, axial and appendicular. The Axial Endoskeleton, vertebral and cranial. The Vertebral Endoskeleton, and its leading modifications. The Cranial Endoskeleton, and its leading modifications. The Appendicular Endoskeleton. The pectoral arch and limb. The pelvic arch and limb. The Exoskeleton in the Vertebrata. The Muscular System, its nature and origin. Exoskeletal, Endoskeletal, Visceral and Mixed muscles. Episkeletal and Hyposkeletal muscles. Appendicular muscles. The nature and origin of the Nervous System, cerebrospinal and sympathetic. The Cerebrospinal System, axial and peripheral; the axial divisible into cerebral and spinal. The Brain and its modifications. The essential relations of the cerebral nerves. The Development and Modifications of the Sensory, Circulatory, Respiratory, and Renal Organs in the Vertebrata. The Reproductive organs and processes.

Anthropological Society of London. — At the evening meeting held on the 2nd inst., Dr. Beigel, Vice-president, in the chair, the following papers were read:— 1. "Cleveland Gravehills," by the Rev. J. C. Atkinson. The moorland districts of the valley of the Esk, lying to the west of Whitby, at between eight and sixteen miles' distance, are thickly studded with burial mounds, or barrows, or, in the old Danish country vernacular, "howes." Many have been destroyed; but of the larger ones which yet remain, a large proportion had been examined by the author. He obtained forty-five urns, and evidence of more than one hundred interments after cremation, but not any trace of metal. In some of the larger mounds evidence appeared of three successive interments—the first in the centre, the second inserted at a distance from the centre, and rudely and violently misplaced to make room for a third, due to an intrusive, perhaps a conquering tribe. The author of this paper (which will appear at length in the *Memoirs* of the Society) was of opinion that the whole of the remains belong to an extremely remote period. 2. "Opening of a Barrow at Cleatham, Lincolnshire," by Edward Peacock, Esq., F.S.A., Local Secretary A.S.L. for North Lincolnshire. The approximate dimensions of the mound were 114 feet by 75, with a central depth of 9 feet 6 inches. Three interments were discovered; one in the centre, another at 42 feet south (of a youthful subject), and another at 40 feet north of the centre, all accompanied by urns of a Celtic type. The excavation was particularly interesting, as showing the manner in which these mounds were constructed, the materials being carried in baskets or panniers; each basketful of sand could be distinctly traced. The thanks of anthropologists are due to Matthew Maw, Esq., of Cleatham Hall, the proprietor, for his kindness in undertaking this exploration. Thanks were voted for these communications; and a special vote of thanks to Mr. Maw, as suggested by Mr. Peacock. 3. "On Flint Arrow-heads from Lake Erie and Northern California," communicated by the Rev. J. G. Wood. 4. "On a Kjokken-mödding in the Island of Horm," by J. W. Flower, Esq.

Worcestershire Medical Society. — The annual meeting of this Society was held in the Society's library and reading-room at Worcester on the 21st ult. From the report we gather that the Society continues in the same prosperous state as last year. The two objects for which the Society was established—viz., the maintenance of a Medical library for circulation and reference, with a reading-room, and the holding of periodical meetings for the reading of papers, cases, etc.—have been fairly successful. It will be remembered that the Society was started by the gift of the Medical library of the late Sir Charles Hastings by his son, Mr. G. W. Hastings, the President of the Council of the Social Science Association. Sir Charles's library was noted for possessing a fine collection of the Medical classics in excellent condition, and of the principal periodical literature of the present century, several of the latter class, such as the *Lancet*, the *Provincial* and *British Medical Journals*, the *Edinburgh Journal*, and the *British and Foreign Medical Review*, being complete copies from their commencement. To utilise this library amongst the late Sir Charles's Medical neighbours and friends was the first object; the second, to maintain its value and efficiency by the addition, from time to time, of all fresh works of standard value. Many very valuable illustrated works have also been presented to the library by Mr. Carden, Mr. Everett, Mr. Shepherd, Mr. Clarke, Dr. Strange, and other members. The report stated that papers and cases had been read during the year on "Nervous Disorders of Motility" by Dr. Strange, on "Morbus Addisonii" by Dr. Inglis, "Paracentesis Thoracis" by Mr. Jeffery, and on other subjects. The Society had also taken up the question of remuneration by clubs, and unanimously resolved to adopt what is called the "Birmingham Declaration," with the exception of its "damnatory" clause. This declaration is now the rule of conduct in regard to clubs for all the members of the Society, as well as for upwards of eighty Practitioners residing within a radius of sixteen miles from Worcester, who have signed the declaration in question. The new officers for the present year are Dr. Nash, President; H. B. Marsh, Esq., Vice-President; and Dr. Strange, Hon. Sec., and G. E. Hyde, Esq., Hon. Treasurer, re-elected. After the meeting the usual annual dinner was attended by twenty-five of the members, and a very pleasantly spent evening closed the proceedings of the day. Altogether, we congratulate the Medical men of Worcestershire on the establishment of this flourishing Society, which cannot fail to prove a great boon to all within reach of the "faithful" city.

Medical Experts and Crime.—An extraordinary case of judicial error has just been brought to light by an appeal before the Imperial Court of Nancy. Last November, a girl, 22 years of age, named Adèle Bernard, was brought to trial on a charge of infanticide. The prosecution alleged that in October, 1868, she clandestinely gave birth to a child and threw it into a pigstye, where it was eaten. This allegation was confirmed by her own confession both before the examining magistrate and in open court. Moreover, a midwife and a parochial surgeon certified that immediately after her arrest they found traces of recent delivery. On this evidence the Correctional Tribunal sentenced her to six months' imprisonment for the concealment of the birth of a child who was not proved to have been born alive. She went to prison accordingly, and about a month later, in December, she was delivered of a fine healthy child, perfectly formed. The time allowed for her appeal against a sentence which circumstances appeared to show was manifestly unjustifiable had then expired, but the public prosecutor lodged an appeal on her behalf. When interrogated by the President of the Appeal Court, she said she had been induced to make a false confession by her mother and the midwife, who impressed on her that if she told the truth she would get off easily, whereas if she persisted in denying the accusation she would certainly be condemned to 15 or 20 years' imprisonment with hard labour. Some medical evidence was produced before the Court of Appeal to show the bare possibility of a superfœtation. But the Court rejected this hypothesis, held that she had been impelled by intimidation to make a confession for which there was no foundation, and reversed the verdict against her. This case

reminds one of the painful affair of Madame Doize, an innocent woman, who was driven to confess herself guilty of murder in order to be released from the torture of solitary confinement. The *Droit* improves the occasion to urge the necessity of courts of law taking more care than they habitually do in the choice of their experts, who too often certify blindly whatever they think is expected of them.

King's College.—A series of short Lenten services (Litany and sermon), for the Professors and students of King's College, will be held in the College Chapel on the Wednesday afternoons in Lent, at 3 o'clock. The Dean of Westminster will preach the first sermon on Wednesday next (Ash Wednesday). We are requested to state that efforts will be made to accommodate as many visitors as possible.

The Lord Lieutenant of Ireland and the Medical Profession.—Amongst other deputations lately received by the Lord Lieutenant of Ireland, was one representing the King's and Queen's College of Physicians. It consisted of the following gentlemen:—Dr. Churchill, President; Dr. Freke, Vice-President and Censor; Dr. Apjohn, Professor of Chemistry; Dr. Atthill, Censor; Dr. Banks, Dr. Beatty, Dr. Churchill, jun., Dr. Croker, Dr. Dwyer, Treasurer; Dr. M. Eustace, Dr. Foot, Censor; Rev. Dr. Haughton, Dr. Finny, Dr. Percival, Dr. Walter Smith, Dr. Hayden, Censor; Dr. Jennings, Dr. Johnston, Dr. Evory Kennedy, Dr. H. Kennedy, Dr. Law, Professor Institute of Medicine; Dr. James Little, Registrar; Dr. Lyons, Dr. Mollan, Dr. Moore, Dr. Ringland, Dr. Sinclair, Professor of Midwifery; Dr. A. Smith, Professor of Materia Medica; Dr. Travers, Professor of Medical Jurisprudence. The address, which was read by the President, offered a cordial welcome and congratulation to his Excellency, and then modestly claimed some credit for what the College has done, is doing, and is prepared to do. It truly observed:—"From the time of our incorporation, in the 17th century, we have been always mindful of the important trust committed to us, and have endeavoured to secure a succession of Physicians competent to take charge of her Majesty's subjects. We beg to assure your Excellency that as it is our duty, so it will at all times be our anxious desire, to afford aid to the Government in any measure calculated to improve and secure the public health." His Excellency reciprocated the spirit of the address in the following reply:—"Mr. President and Fellows of the King and Queen's College of Physicians in Ireland,—I thank you for your expressions of loyalty to her Majesty, and of congratulations to myself. During the many years since your incorporation the changes in Medical science have been great, and discoveries have been made which largely conduce to the preservation of health. In diffusing the benefits of these discoveries your society plays an important part, and by continuing to send forth a succession of competent and able Physicians you merit the thanks of those to whom the public health is a matter of solicitude."

The Vaccination Act.—The following important proceedings took place before a bench of magistrates at the Scarborough police-court on Monday last. Informations were laid under the "Vaccination Act, 1867," against Henry Walker, Esq., Mr. Lawrence Harrower, Dr. R. B. Cooke, and the Rev. R. H. Parr, Vicar of St. Martin's; and the nominal prosecutor was Mr. C. Smailes, relieving officer, on behalf of the Board of Guardians for this Union. Mr. W. O. Woodall, solicitor, and clerk to the Board, conducted the cases for the prosecution. Mr. Walker's case was the first to be heard; and on being called he admitted that his child had not been vaccinated, but he put in a certificate dated November 15, 1868, stating that the child was not in a fit state for vaccination. Dr. Craig, as Medical adviser to Mr. Walker, said that although the certificate was dated November 15, it had not been signed and delivered until Saturday last. Mr. Smailes showed that no certificate had been given within three months after the birth of the child, according to the provisions of the Act, although the usual notice had been given to Mr. Walker at the time of registering the birth, requiring him to procure such certificate. The bench imposed the mitigated penalty of 10s., with 15s. costs. The charge against Mr. Harrower was similar to the above. Dr. Craig was the Medical witness in this case also. The child was born on June 12 last. It was not in a proper state for vaccination at three months old, and it still remained unfit for it. He assured the bench that there was no wish to evade the law, but he was not aware that the Act required a certificate of unfitness to be sent in, and he thought that this plea would properly constitute the "reasonable excuse" required by the statute. The bench, seeing that no certificate had been sent in, had no alternative, and therefore imposed the same penalties as in the former case. The next case was against Dr. R. B. Cooke, and was parallel to the last. It was contended here that the child was not in a fit state to be vaccinated, and this was urged as a "reasonable excuse" under the Act. The defence was considered satisfactory, but adjourned for a week to prove the "reasonable excuse" by Dr. Cooke, who was not present. The Rev. R. H. Parr was then called to receive the charge against him. His child was born on June 1 last, and he acknowledged that no certificate had been sent in within the required time. This was owing to Mr. Parr's ignorance of the fact that the Act required a certificate in his case. The child had been vaccinated, but only in a partial or unsuccessful manner, and the operation would have to be repeated. Mr. Woodall explained that in case of unsuccessful vaccination on the first operation, a certificate should be sent in to that effect within three months. Such certificate would hold good for two months, when it should be renewed, and again for every two months so long as the child remained unvaccinated. After the third operation, if still unsuccessful, the parent would be released from further legal responsibility on his sending in a certificate of such third unsuccessful attempt. Mr. Parr said he had no desire to evade the law, nor did he think he had broken it so far as he understood it. However, he should ask for an adjournment, on the ground that he was not sure that a certificate had not been sent in within the three months. The case was accordingly adjourned in order that Mr. Parr might ascertain whether or not this had been done.

Dislocations are of all accidents the most rare; I fancy because the natives of the lower classes do not wear shoes, and seldom fall. In fact, last year I had only one case of dislocation; it was of the lower jaw, in a funny old lady, who laughed it out of joint. We succeeded in reducing it, however, three weeks after the accident happened.—*Dr. Davidson's Report of the Antananarivo Dispensary for* 1865-6.

Neuralgia of the Internal Saphenous Nerve.—M. Bousseau related two cases to the *Société Médicale d'Observation*, which he believes may be thus correctly denominated. He says: 1. This form of neuralgia manifests all the characters observed in the neuralgias of the principal nerves of the trunk and limbs. 2. It is sometimes directed towards the terminations of the nerve, and at others mounts up from these towards its main trunk. 3. It may exist alone or concurrently with neuralgia of other branches of the crural nerve, and with that of the sciatic nerve. 4. It is a very rare affection, and is promptly ameliorated by injections of sulphate of atropia.—*Gazette des Hôp.* January 19.

Suture of the Tendo-Achillis.—M. Delore, of the Charité Hospital, Lyons, relates the case of a boy, 9 years of age, who was brought to that Hospital twelve days after his tendo-Achillis had been cloven by a small hatchet. A separation of four centimetres existed between the two parts of the tendon. These were cut down to, and after some adhesions had been separated, and the edges of the tendon pared, these were brought into contact by four points of metallic suture. The leg was so fixed that no traction was exerted on the sutures. In from ten to fourteen days all the sutures were removed without union having taken place. There was, however, no separation, and the limb was kept in the same position, the starch bandage not being removed until the fifty-second day. Six weeks were required to restore the complete mobility of the limb after being so long fixed, but at the end of that time the boy had recovered complete use of the extremity. No separation between the ends of the tendon now existed, some adhesion having, however, taken place between it and the skin covering it.—*Bull. de Thérap.*, September 15.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

An Old Subscriber.—Certainly he can affix M.D., but he cannot register the degree without special permission of the General Medical Council.

Dr. Thomas Nedley.—We are not in the habit of copying from the source in question—more especially anything libellous.

An Old Subscriber.—Only six parts have been published. We have reason to believe the seventh and concluding part will very shortly appear. Doubtless it will be announced in our advertising columns.

£200 *per Annum.*—The appointment of Government Medical Officer to Jamaica is vested in the Secretary of State for the Colonies.

Mr. G. T. would be glad to be furnished with the name of any member of the Odontological Society who uses the ether spray invented by Dr. Richardson in extracting teeth.

An Obstetric Student is referred to our advertisement columns, where he will find that the examination day for the "L.M." has been changed.

Curier.—The honorary gold medal of the College will no doubt be unanimously, and most deservedly, voted to Mr. W. L. Crowther, of Hobart Town, at the meeting of the Council on Thursday next.

Warrington.—Dr. James Kendrick, of Warrington, has rendered good service to the children of the Bluecoat school of that town and to the inhabitants generally. The school was, according to Dr. Kendrick, shamefully mismanaged before Dr. Kendrick exposed the prevalent abuses. These abuses were chargeable mainly upon the trustees of the charity, who appear from Dr. Kendrick's account to have been very negligent of their duty. Thus the food of the children was cruelly deficient and shamefully cooked. The arrangements for washing and for meeting the requirements of nature were filthy, and the clothes and bedding of the children were equally bad. Barbarous punishments were inflicted; the girls were covered with vermin, and the education, at best, of the girls was worthless or very defective. These were a few of the evils which Dr. Kendrick exposed with much ability and with heroic perseverance, though he was opposed by a powerful and interested body of trustees. Happily, however, his efforts have been successful, and though he may share for a time the fate of most reformers of abuse, his name will ever be held in honour by the great body of his fellow townsmen.

A Medical Student.—It was the fashion some thirty years ago for fast young men about town, when they got into any disreputable scrape, to describe themselves at the police office as "Medical students." Even now we occasionally find the old fashion "cropping up." Undoubtedly there might formerly have been some excuse for the *ruse*. When it was the custom for the young Surgeon to pass a five years' apprenticeship, and to be let loose, as it were, on the world, on entering a Medical school where bodies had to be obtained for dissection by practices illegal and revolting, the Medical student was often an unruly and dissipated person. But times have altogether changed. The student of Medicine of the present time is as well (if not better) conducted than the student of any other profession—indeed, the change has been so remarkable as to call for especial comment by many persons of influence. For any "fast young man," therefore, at the present time to assume the title of "Medical student" without any claim to the distinction, is an impertinent insult to the alumni of the Profession which cannot be too strongly condemned. Fortunately, the registration of students now enables us to detect any attempt at deceit on the part of a non-Professional delinquent. The Register is searched, detection of the false assumption is accomplished, and the character of the Medical student relieved of a certain amount of ignominy.

A Young M.D. inquires "whether it is customary for Physicians to charge for letters written to patients respecting their health and in reference to a consultation previously held." We believe that there is no general rule in force on this point; some Physicians charge for "consultations by letter," whilst others do not. We cannot, however, understand upon what ground exception should be taken on the part of a patient to payment for advice so rendered. Letters of the kind referred to are often necessarily lengthy, involve much time and trouble, and in common justice should be regarded as "consultations," and paid for accordingly. The lawyer charges for consultations so carried on; why should not the Doctor do the same? If the lawyers will not work for nothing, why should we? The public obtain gratuitous services from us on so many occasions that they can well afford to pay for advice, even though it be given by letter.

Sham Dispensaries.—One of the most prominent abuses of the present time is the establishment of dispensaries by private Practitioners to serve merely private purposes. We do not allude merely to the "shops" that are opened in various quarters for the treatment of special diseases, though these are becoming an intolerable nuisance, but more particularly to "dispensaries" of a sham kind, entered by the back door of a homœopathic practitioner's house in a mews. Hence it is no uncommon thing to find a board with the name of the "dispensary" and that also of its disinterested "founder" emblazoned on it. The trap, no doubt, takes with many foolish, weak people, but it is easily seen through and denounced by the sensible part of the public. A story used to be current many years ago of a notorious quack who distributed to the public very small pieces of paper, setting forth his claims to their confidence in the treatment of certain diseases. A jocular member of our Profession passing along Bridge-street, Blackfriars, in the small hours of the morning, rang the night bell of Mr. T——, and requested to see the "eminent Practitioner." On that person making his appearance, our friend, with expressions of regret at disturbing the "eminent" at so late an hour, politely requested him for the future to print his circulars on larger paper.

Professor Owen's "Conclusions."

T. D. says: "Will you be so good as inform me if Professor Owen, in his 'Conclusions on the Science of Life,' seems to believe in an adult creation, say at a former period? The extracts from his lectures in the *Medical Times and Gazette* are of great interest."

*** We think that Professor Owen does not believe in an adult creation.

Medical Officers in the Balaclava Charge.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In Kinglake's late volume, describing the glorious Balaclava charge, it appears that every officer present with the 600 is mentioned, if killed, the same. Now, among these, not one Medical officer's name appears. Surely, in that charge some Surgeon or Assistant-Surgeon took part, and, if not, wherefore not? I would ask among your numerous readers for information on this point. Surely, if there were Surgeons present, they deserve well that their names should be handed down to posterity.

Bengal, December, 1868. I am, &c. An Inquirer.

The Late Election to the "Dreadnought."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—May I, as one who has not only been a student on board the *Dreadnought*, but a subscriber to the Hospital—one, too, who has done his best, in more parts of the world than one, to advocate the claims of that noble charity—inquire why, considering its catholic aims and its aught but purely local support, the selection of candidates in the late appointment to the post of Assistant-Surgeon should have been confined to members of the Royal College of Surgeons, London? *Décidément*, we of the Medical Professsion set a curious example of solidarity and *esprit de corps*. Is it a miracle that our social and political influence is *nil*, when we submit to, or encourage, such intolerable provincialism and Little Pedlington feelings as the limitations in this late election show? How many applicants were there? I am, &c.

January 31. An Operating Surgeon.

Liebig's Extract of Meat.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Having been in the habit of almost daily using Liebig's extract of meat, as prepared by Mr. Tooth, of Sydney, I take the liberty of expressing my great approval of it, when used in small quantities, from half a teaspoonful to a teaspoonful; not by itself, but when added to either beef or mutton broth, etc., or, also, sometimes in conjunction with Symington's prepared peas for soup, and Brown and Polson's patent corn-flour. I find, then, that it makes a most pleasant addition, which is very agreeable to the palate. It thus makes rather a rich dish. I think that I have gained considerably in muscle and strength since its use. I have never found a disagreeable taste from it; but sometimes, on removing the cork, it has an unpleasant smell when the nose is applied. As proof that it keeps well, I may mention that, even to the very last, a little broth, introduced into the pot to wash it clean out, furnishes as good a soup as at the very first. That must speak most favourably of it. In conclusion, I consider it almost as valuable an addendum to the articles of diet as the sulphate of quinine is to the Materia Medica. I am, &c. Willoughby Aeding, M.D.

Wallingford, January 28.

Pancreas—Sweetbread.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Most of your readers know that the sweetbread is the pancreas, but probably they are not aware that, when eating a so-called sweetbread, they are eating the thyroid gland. If you ask a butcher from what part of the animal he takes a sweetbread, he will invariably tell you that it is from the neck. On examining the thyroid gland and the pancreas of an ox together, I could easily express a juice from the thyroid very similar to the pancreatic emulsion of Horace Dobell. Is it not possible that Savory and Moore, who make this preparation, are supplied by the butchers with thyroid glands in place of pancreases?

Old Meldrum, N.B., Feb. 2. I am, &c. James Wilson.

*** We believe that Savory and Moore use sweetbreads only, and not thyroid glands. But not all serve. Those of the ox and also of the sheep were fully tried when the experiments for making the emulsion were commenced several years ago, and they were discarded as unsuitable for the purpose. No other animal than the pig furnishes pancreatic juice of the character and quality required for medicinal purposes, and we believe that Messrs. Savory and Moore use none other in the manufacture of their pancreatic preparations. The large supply of pancreases they require are regularly furnished by Messrs. Harris, of Calne, whose extensive establishment is well known. As much as 2 cwt. of pigs' sweetbreads are sometimes received by Savory and Moore as the result of one morning's pig killing at Messrs. Harris's. For information on the subject of the constituents and method of preparing pancreatic emulsion, we refer to Mr. Schweitzer's pamphlet "On Pancreatic Emulsion and Pancreatine," published by Churchill and Sons; also Dr. Letheby's Cantor Lectures for 1868.

An Unqualified Practitioner.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In one of our villages, of some considerable historic note, there is a man practising Medicine and Surgery who has several club appointments. He dispenses his own medicines, and visits, and when death occurs no certificate seems needful. He has no qualification of any kind. He makes no charge, but receives what his patients choose to give him. This materially influences the income of the duly qualified and registered Practitioner in the same place. The unqualified man has even given evidence in the coroner's court. He does not send in accounts, nor yet have his name on the door. Now, Sir, this unheard-of presumption came under my notice last week. Can you tell me what protection there is for us who are qualified and registered? I am told there is no way of preventing him from practising. It appears that he came into the place as assistant, and remained thus for three or four years; when the incumbent died, he still held on, and has done so for ten years unnoticed. And when the incumbent's practice was for sale, valued at £1500, it was valueless, on account of this unqualified man's introduction and general attendance on most of the people during the incumbent's illness. It was my intention to purchase the present qualified Practitioner's practice, but when I saw the state of affairs, I declined working with such opposition. Can you, in the interest of the whole Profession, suggest any means of remedying this evil? If such can exist, what is the use of our young men of scanty means expending their little all that may have been gathered after years of severe toil and labour as assistant to qualify? Better spend that little in obtaining a home as this man has done. But surely there is protection.

Macclesfield, February 1. I am, &c. M.D.

The Hospital and Dispensary System.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I hope you will permit a general Practitioner to say a few words on the Hospital question which has been so warmly taken up in the *Times*. There are two sides to it—one as it affects the welfare of the Profession, the other as it affects the sick poor. At present both are injured; under a better system both might be benefited.

The Profession is injured because the interests of various branches are diametrically opposed, and because the *pures* use that as a means of climbing into eminence, which is simply starvation to the general Practitioners. The patients and hills go from Mr. Pillbox in order to swell the *tail* or *chorus* of applicants to the great Dr. Pure at St. Annanias and Sapphira's Hospital. Surely, with the improvements in Medical education, a general Practitioner ought to be able, with the aid of occasional consultation, to treat domestic servants, mechanics, and workpeople. But what is the case? All these classes go from us to be out-patients or in-patients at the Hospital. The master of a large household does not recognise the right of his servants to be sick, and to have any nursing or attendance at home; if known to be ill, off they are packed at once to the Hospital. When I am sent for to certain houses to see a sick servant, I shirk the task—the servant does not pay, and the master does not pay; if I apply to the latter, I am told, "Sir, all my sick servants go to the Hospital, unless they choose to go to the chemist or to employ a Medical man of their own." One master said to me, "What else are the Hospitals for?"

Then at the Hospital, some junior, who has all knowledge of treatment to learn, has the opportunity of sneering at my diagnosis and treatment, and exalting himself; and sometimes of intruding into the family, under pretence of "taking an interest" in the case!

Is the system, which is ruinous to the Practitioner, good for the sick poor? I speak of out-patients, some of whom wait from three to six hours, and then get a hasty glance from a hurried "pure," and a supply of medicine worth perhaps twopence.

I am, &c. G. P.

COMMUNICATIONS have been received from—

An Inquirer; Messrs. A. and C. Black; An Operating Surgeon; M.D.; Lord Loudi; Mr. Sargeant; Dr. Strange; Dr. Weir Mitchell; Dr. Doyon; Mr. T. H. Brocklehurst; Dr. Tannahill; Dr. James Wilson; Mr. A. Bruce; An Old Subscriber; T. N.; Dr. W. Arding; Dr. T. Downie; Dr. Richards; Dr. C. Bell; Dr. C. P. Coombs; Mr. Carruthers; Mr. Louis L. Smith; Mr. O'Brien; Dr. Cotton; Dr. W. D. Moore; Dr. Wilks; Mr. J. Chatto; Dr. Day; Dr. J. Wickham Legg; Dr. Gray; Mr. J. Nicholls; Mr. Osman Vincent; Mr. F. H. Welch; Mr. J. B. Blacsett; Rev. T. R. O'Flaherty; Dr. Smart.

BOOKS RECEIVED—

Winckel's Pathologie der Geburt—Squire's Manual of the Diseases of the Skin; smaller edition—Moore, on Going to Sleep—Macdonald's Contributions to the History of Development in Animals—Pharmaceutical Journal, February—Lescher's "Modified Examination" of the Pharmaceutical Society—Bulletin Générale de Thérapeutique—Bible Animals, Part 14—Menzies' Suggestions for the Sanitary Improvement of Labourers' Cottages and of Villages—Butler's Physician's Daily Pocket Record—Annales de Dermatologie et de Syphiligraphie—The Register and Magazine of Biography, February—Bauer's Lectures on Orthopædic Surgery—Scott Alison, on Morbid Conditions of the Throat in their relation to Pulmonary Consumption—The Practitioner, February—The Warrington Bluecoat School Exposure—Scheffler's Theory of Ocular Defects and of Spectacles, translated by R. B. Carter, F.R.C.S—Monthly Microscopical Journal, No. 2—Morgan's Town Life among the Poorest—Hartwig's Polar World—McNab's Immunity from Consumption in the Hebrides—Braidwood on Pyæmia—Guy's Hospital Reports, vol. xiv., 1868.

NEWSPAPERS RECEIVED—

Scotsman—Colonial Standard—L'Union Médicale—Scarborough Gazette.

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 30, 1869.

BIRTHS.

Births of Boys, 1153; Girls, 1107; Total, 2260.
Average of 10 corresponding weeks, 1858-67, 2062·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	874	863	1737
Average of the ten years 1858-67	787·5	775·2	1562·7
Average corrected to increased population	...	...	1719
Deaths of people above 90	...	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	...	1	10	...	13	10	3	...
North	618210	2	7	11	...	19	26	3	...
Central	378058	1	1	6	...	11	6	2	...
East	571158	...	8	15	2	18	17	1	...
South	773175	2	9	11	4	24	10	3	...
Total	2805989	5	26	53	6	85	69	12	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·525 in.
Mean temperature	40·7
Highest point of thermometer	54·0
Lowest point of thermometer	26·3
Mean dew-point temperature	34·0
General direction of wind	S.S.W. & S.W.
Whole amount of rain in the week	1·03

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, January 30, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending Jan. 30.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Jan. 30.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London Metropolis	3170754	40·7	2299	1462	1737	54·0	26·3	40·7	1·03	104
Bristol (City)	169423	36·1	143	76	*101	...	...	...	...	...
Birmingham (Boro')	360846	46·1	249	175	164	54·2	25·4	40·3	1·06	107
Liverpool (Boro')	509052	99·7	380	205	222	...	...	...	...	...
Manchester (City)	370892	82·7	255	210	*235	53·0	27·0	40·3	0·96	97
Salford (Borough)	119350	23·1	103	60	68	52·6	27·0	40·8	0·74	75
Sheffield (Borough)	239752	10·5	197	126	116	54·0	27·0	40·0	1·04	105
Bradford (Borough)	138522	21·0	92	71	70	...	...	...	...	...
Leeds (Borough)	253110	11·7	182	129	153	54·0	29·0	41·1	0·58	59
Hull (Borough)	126682	35·6	79	59	61	49·0	23·0	36·8	0·96	97
Nwcstl-on-Tyne, do.	130503	24·5	118	69	77	48·0	24·0	37·7	0·37	37
Edinburgh (City)	178002	40·2	123	86	114	48·7	26·0	38·2	0·50	51
Glasgow (City)	458937	90·6	361	268	373	52·1	28·6	40·1	1·11	112
Dublin (City and some suburbs)	320762	32·9	232	158	199	53·2	27·0	43·0	0·93	94
Total of 14 large Towns	6545587	35·5	4774	3244	3790	54·2	23·0	39·9	0·84	85
					Week ending Jan. 23.			Week ending Jan. 23.		
Vienna (City)	(1863) 560000	...	...		345	...	...	14·9	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·525 in. The barometrical reading decreased from 30·02 in. on Sunday, January 24, to 28·92 in. on Friday, January 29.

The general direction of the wind was S.S.W. and S.W.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

February 6. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Royal Institution, 3 p.m. Prof. Odling, "Hydrogen and its Analogues."

8. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London. 8 p.m.: Casual Communications. 8½ p.m.: Mr. Adams' 3rd Lettsomian Lecture, "On Strumous Diseases of the Joints, their Pathology and Treatment; also the Treatment for the Restoration of Motion in Cases of Stiff Joint or Partial Anchylosis."

9. *Tuesday.*

Operations at Guy's, 1½ p.m.: Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Ethnological Society, 8 p.m. "On Ceremonies accompanying Childbirth in Australia and New Zealand"—communicated by Dr. Hooker, F.R.S. Mr. Hodder M. Westropp, "On Cromlechs and Megalithic Monuments."

Royal Medical and Chirurgical Society. 8 p.m.: Ballot. 8½ p.m.: Mr. John Wood, "On Fission and Extroversion of the Bladder and Epispadias treated by Plastic Operations."

Royal Institution, 3 p.m. Prof. Westmacott, "On Fine Art."

10. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Epidemiological Society, 8 p.m. Dr. Ed. Goodeve, "On the Cholera Outbreak of 1867 in Northern India." Mr. J. N. Radcliffe, "On Fluctuations in the Subsoil Water of a London Parish."

11. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Royal Institution, 3 p.m. Dr. M. Foster, "On the Involuntary Movements of Animals."

12. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Clinical Society, 8½ p.m. Dr. Buzzard, "Case of Acute Rhenmatism in an Epileptic Patient." Mr. Maunder, "A Case of Colotomy." Dr. Duffin, "Treatment of Cases of Syphilitic Rheumatism." Dr. Bäumler, "Cases of Non-tuberculous Hæmoptysis."

Royal Institution, 8 p.m. Colonel Drummond Jervois, "On the Coast Defences of England."

ORIGINAL LECTURES.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,

Fellow of the Royal College of Physicians, Physician to King's College Hospital, and Professor of Physiology and of Morbid Anatomy in King's College, London.

LECTURE IV.

THE PART PLAYED BY GERMINAL MATTER IN THE FORMATION OF BONE—ORGANIC AND INORGANIC MATTER — GERMINAL MATTER OF LACUNÆ—FORMATION OF CANALICULI—CANCELLI AND COMPACT TISSUE—LAMELLÆ AND PERFORATING FIBRES—CANALICULI NOT PROCESSES OF A CELL—MYELOID CELLS—PRIMARY AND SECONDARY BONE—GERMINAL MATTER OF BONE TRANSPLANTED — INFLAMMATION OF BONE.

CONTRACTILE TISSUES — CONTRACTILITY — UNSTRIPED MUSCLE—BLADDER OF FROG—ARTERIES—PREPARATIONS.

(*Continued from page* 112.)

OF CONTRACTILE TISSUES.

WE now come to the consideration of textures which possess certain remarkable endowments, and there is little in the action of any tissues which have been already passed in review, at all resembling that manifested by muscle or nerve. In both, molecular changes, remarkable for their rapidity and repetition, take place, the exact nature of which still remains doubtful.

Although intimately related to one another, it is doubtful if the changes in muscle and nerve are of the same kind. If in nervous action there is an actual movement of the particles of matter entering into the formation of the nerve fibre, the movements are more subtle, and not self-evident like those which occur in contractile tissues, and which we have now to consider. The striking alterations which take place when the muscle, or a part of it, passes from the state of rest into that of active contraction, can be seen and measured, while under the microscope an actual shortening can be observed to take place in each elementary portion of muscular tissue every time it contracts. What the muscle loses in length it gains in width, or nearly so, for probably a little fluid is expressed from the contractile material during contraction, and taken up again as it returns to the condition of relaxation. Repetition of similar changes is characteristic of contractile tissues.

The states of rest, of partial contraction, and complete contraction, are but different degrees of the selfsame process of shortening of a delicate fibre, which perhaps consists of a passive basic substance of a fibrous character, through which is diffused a soft material prone to move in directions at right angles to one another, according to the operation of external forces to it.

It has been stated that the contractility of contractile tissues is a phenomenon closely allied to the alteration in form which takes place in the living germinal matter of the amœba, mucus corpuscle, white blood-corpuscle, etc.; but it must be obvious to every one who considers the question that the first is a mere alternation of movement, limited in direction, while every part of a mass of germinal matter may move in any direction, and there is no limit to its movements. So varied are the *vital movements* of living matter, that the same mass may never twice in its life assume the same form. Moreover, the living matter may move itself in its entirety from one place to another, while a portion of contractile tissue may become shortened and lengthened, but it remains in the same spot. In the first case one portion may move *in advance of another portion*, and in any direction, while in the contractile tissue, although one part may move in a direct line to or from another part, it is not possible for any particle to get before, or place itself in front of, another particle. A contractile tissue might be likened to a chain of beads, every bead being capable of becoming short and broad or long and narrow, but forced to retain, by reason of its connexions, its relative position with regard to every other bead. The particles of a mass of living matter are not thus chained together. Each is free to move in any direction whatever, and the particles do not retain their relative positions for a moment. The movements of the muscular tissue, as regards direction, extent, and place, are limited, and are determined by external forces. The contractile cord may become shorter, causing its points of attachment to approximate, but it cannot move itself in its entirety in any direction. On the other hand, it is characteristic of living matter to move in any direction, and to pass from one place to another, according to the operation of forces acting from within the matter itself.

There is, therefore, no analogy between the movements of living germinal matter and those of contractile tissues. These movements are essentially different from one another, and cannot be classed together. Moreover, living matter takes up pabulum, and changes this or some of its constituents into living matter like itself, but under no circumstances, actual or conceivable, can the contractile tissue produce more tissue like itself.

Unstriped, Involuntary, or Organic Muscle.—The simplest form of contractile tissue occurs as a clear, transparent, colourless, apparently structureless matter, which shortens the instant anything touches it. It is met with in almost all the lower invertebrata, and from it we pass by gradual transition into the unstriped or organic muscular tissue of man and the higher animals, and we may find forms of tissue which may be regarded as intermediate between this and the striped or voluntary muscle concerned in the most varied and complex movements of expression as they occur in man, entirely under the control of his will.

The unstriped muscular tissue may be studied in many organs of vertebrata, but the most favourable situation is the bladder of the frog. In the thinnest parts of this extremely delicate membrane the muscular fibre-cells form a single layer, and are often separated from one another, so that an individual fibre-cell may be followed from one end to the other. Bundles of these long spindle-shaped elementary parts are arranged around all the vessels, but in the intercapillary spaces are numerous separate cells which cross each other at various angles, and are so arranged that when they contract the area of the membrane is reduced in every direction. In the central part of each fibre-cell is the oval mass of germinal matter (nucleus), at either end of which new contractile material is produced as the fibre increases in length. From these points the muscular band becomes narrower, and at either extremity tapers into a tendinous thread, which is inserted into, and is indeed continuous with, the connective tissue. The contractile tissue itself appears perfectly smooth, and under the highest powers exhibits a very faint striation in the longitudinal direction. In many instances a fibre is preserved in a state of contraction, when undulatory swellings are observed at slight intervals, giving to the fibre a beaded appearance. (See the uppermost fibre in Fig. 11.) If the bladder be examined at different ages, the mode of growth of the muscular fibre cells in length and breadth will be understood, and in the old bladder it will be found that many of the cells have degenerated into connective tissue. In the adult bladder even, young muscular fibre cells may be found, and the conversion of the contractile material into fibrous tissue demonstrated.

Muscular Fibre Cells with three or more fibres.—The most remarkable muscular fibre cells are those which have three, four, or even five tail-like processes extending from the central triangular, quadrangular, or pentangular mass of germinal matter. These are found in considerable number in the thinnest part of the frog's bladder, which correspond to the intercapillary spaces.

From the uterus of the white mouse some beautifully delicate spindle-shaped muscular fibre cells may be obtained. The muscular coat of the stomach and small intestine will also furnish the observer with good specimens of muscular fibre cells. In order to isolate these cells, soaking in dilute nitric acid, tearing with needles, and other chemical and mechanical expedients have been recommended; but in the thin membrane which constitutes the frog's bladder these cells are isolated ready for observation. In the spaces between the vessels in specimens prepared according to the plan I have recommended, numerous single cells may be seen and followed from one end to the other without difficulty. (Fig. 11.)

Some of the most recent drawings of this form of muscular tissue and the supposed arrangement of its nerves are very defective. J. Arnold, in his article on organic muscle in Stricker's "Anatomy," has given very unsatisfactory drawings

of the muscular tissue from the frog's bladder. His figures on p. 142 are evidently taken from bundles of muscular fibre cells. The delicate cells, isolated already for observation in the thin-

FIG. 11.

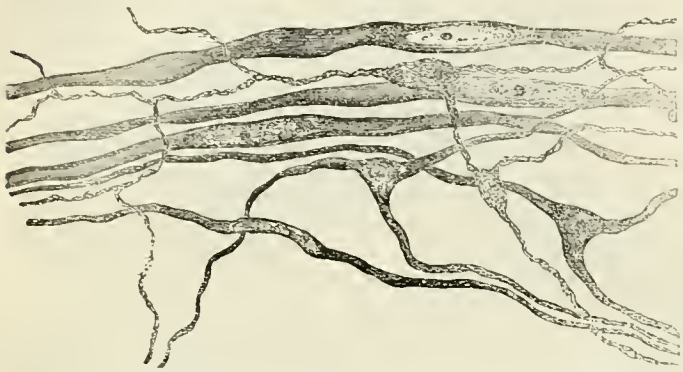


FIG. 11.—Portions of spindle-shaped and tricaudate muscular fibre-cells from the thin part of the bladder of the hyla or green tree frog. The fine branches of nerve are seen ramifying amongst the muscular fibres. × 900.

nest part of the membrane, would have afforded far better objects for study; but it is evident from his drawings that he has not even seen these. They would probably not be recognisable in his specimens. Had he seen these, he would probably have noticed the outlines of each individual cell, and would have seen the nerve fibres crossing and recrossing them at intervals; and I think he would have been convinced that the nerves passed over, under, and parallel with the muscular tissue, but did not penetrate into the contractile tissue or into its nucleus.

Muscular Fibre Cells of the Arteries.—But of all the forms of unstriped muscle, that which encircles the small arteries and ramifies over the coats of the veins, is, in many respects, the most interesting, for by its influence the calibre of the small vessels is altered, and the flow of blood permitted to traverse the capillaries of a particular tissue regulated, and the quantity passing through the vessels in a given time determined. If the pressure employed in injecting the vessels artificially be very gradually increased, the smaller arterial tubes may be distended, so as to separate slightly from one another the encircling muscular fibre cells, and in fortunate specimens prepared in glycerine according to my method I have succeeded in gently tearing asunder the vessel, so as to display not only each individual muscular fibre cell with its germinal matter, but the nerve fibres distributed to it. A good example of this is seen in specimen 72*. The distribution of the nerves to these muscular fibre cells, and the arrangement of the mechanism by which the blood flow is varied, will, however, be further considered in my next lecture.

LIST OF MICROSCOPICAL SPECIMENS ILLUSTRATING LECTURE IV.

No. of Specimen.	No. of diameters magnified.
49. Ossifying cartilage, kitten; masses of germinal matter near ossifying surface, arranged in rows and increased in size as they approach the part ossifying	130
50. Ossifying cartilage, temporal bone; frog. Observe the globules of calcareous matter deposited around the masses of germinal matter	215
51. Very large cells in ossifying cartilage, temporal bone, frog	215
52. Formation of bone beneath periosteum, ossifying femur, kitten. Observe the germinal matter in the very large lacunæ	215
53. Cancellated structure and cancelli bone, pig; showing germinal matter in lacunæ	130
54. Fully formed bone, pig; showing germinal matter of lacunæ, canaliculi, and fibrous arrangement of the fully formed bone	215
55. Germinal matter in very large lacunæ in course of formation, frog	215
56. Developing adipose tissue with vessels injected. A fat vesicle with its germinal matter is situated in each vascular space	130
57. Adipose tissue, showing nuclei of fat vesicles. A vein crosses the centre of the field, to the left of which is a bundle of nerve fibres	40
58. Fat cells in different stages of development; frog	215
59. Young cells of potato; showing germinal matter and very small starch granules which have commenced to form.	215
60. Fully formed cells of potato; showing fully formed starch grains	215
61. Transverse section of muscular tissue of gizzard of bird; showing great regularity of the arrangement of the muscular bundles which have been divided transversely	40
62. Unstriped muscle, arranged in bands; intestine, frog	130
63. Thin membrane; showing bands of unstriped muscular fibres with vessels (injected blue). Observe the numerous masses of germinal matter in connexion with all the tissues; frog	20
64. Thin membrane, showing bands of unstriped muscular fibres, with numerous masses of germinal matter; frog	130
65. Thin membrane, showing unstriped muscular fibre cells. Many of the masses of germinal matter are triangular, and some quadrangular, with muscular fibre radiating from each angle; frog	215
66. Unstriped muscular fibre cells, showing germinal matter and termination of fibres of unstriped muscular fibres in connective tissue	215
67. Unstriped muscular fibre cells, with vessels; white mouse	215
68. Artery, showing unstriped muscular fibre cells encircling it, and nerve fibres; chameleon	40
69. Small arteries; pia mater brain, showing unstriped muscular fibre cells encircling them	130
70. Arteries and vein, with numerous small branches; a bundle of fine nerve fibres is seen to the right of the artery	40
71. Small artery, frog; showing muscular fibre cells encircling it, with numerous nerve fibres ramifying outside muscular coat	215
72. Small arteries with muscular fibre cells; membrane of brain at an early period of development	215
72*. Artery torn lengthwise, showing individual muscular fibre cells, with their masses of germinal matter	215

CHANG, a labourer, 47 years of age, fell from the kang into a pot of boiling water at 4 years of age. For thirty-eight years continual irritation was kept up from the effects of the scalding. The arm gradually atrophied until the forearm and hand completely disappeared. When he presented himself at the Hospital, the thumb and phalanges of the index, middle, and small finger projected from the humerus in front of the biceps muscle. The elbow presented a conical stump. The remains of the hand were implanted in the biceps about $1\frac{1}{2}$ inch from the rounded end of the humerus. The fingers were still atrophying and inclined to slough, and in a year or two more the whole will have gone and left him with a stump, with hardly the appearance of a cicatrix.—*The Sixth Annual Report of the Peking Hospital, by Dr. Dudgeon.*

UNHAPPILY, through a mistake in diagnosis, I admitted a woman into the Hospital during the precursory stage of small pox. Four cases subsequently broke out amongst the other patients, and it was only after the Hospital was cleared of patients, white-washed, and every article treated with boiling water, that the disease was stopped. The case referred to may be worth relating. The patient, seven months pregnant, was seized with pain in head and back, and copious hæmoptysis; and it was for the hæmoptysis that she requested advice. I examined her chest as carefully as my time admitted, and finding no explanation of the profuse spitting of blood from the physical signs, I sent her to the Hospital to be under observation. That same night, sudden and fatal hæmorrhage from the womb came on. She died before I could be called, and it was only afterwards that I learned that she had been nursing a small-pox patient. Those who nursed her took the disease. It attacked the patient who occupied her bed after her death, and afterwards three others, as above mentioned.—*Dr. Davidson's Report of the Antananarivo Dispensary for* 1865-6.

ORIGINAL COMMUNICATIONS.

ON LUMBAR COLOTOMY.

By C. F. MAUNDER, F.R.C.S.,
Surgeon to the London Hospital.

The formation, by operation, of an artificial anus in the loin is a procedure which, naturally enough, is abhorrent to the instincts of humanity. But, inasmuch as it is a means of making a wretched existence bearable, and, under certain circumstances, is competent to prolong life and even favour the cure of a distressing disease, it is a subject well worthy of the thoughtful consideration of the Profession. Hospital Surgeons are well aware of its value, and have no hesitation in recommending its adoption in suitable cases; but, unfortunately, their advice is not always followed—a fact, I believe, in great measure due to an unwholesome prejudice against the operation which even now exists in the minds of the bulk of Medical Practitioners, and is due to a want of personal knowledge of the truth and of every circumstance (which it is of course difficult for all to acquire) connected with the operation and its results. All I ask for the operation and its sequelæ is an attentive and unbiassed hearing.

Of the operation I can say that I have never known a patient die of it in the sense in which patients die quickly after amputation, etc., and that is a strong fact in its favour. It can be executed with comparative facility and rapidity—as easily and as quickly as the majority of operations for strangulated hernia. The patient being generally thin, the necessary wound is neither long nor deep, and prolonged suppuration, with its exhausting consequences, need not be anticipated; there is little or no hæmorrhage, not a single ligature being requisite sometimes.

The operation is best performed in the left loin while the patient lies upon the right side and somewhat upon the face, with a pillow under the right loin as a means of stretching the interval between the crest of the ilium and the last rib of the left side.

Chloroform having been administered or not, if the rectum be pervious, a pint or two of some warm fluid (milk will do) should be slowly thrown up into the descending colon, with a view to distend this bowel and make it bulge hereafter at the wound. The incision should be made as near as convenient to the crest of the ilium for two reasons—one in order to avoid the kidney, the other that this crest of bone, being immediately below the opening into the colon, may form a barrier to the onward progress of fæcal matter, that might by chance glide by the artificial anus if this latter were situated nearer the last rib.

Various directions are given for determining the exact spot to which the centre of the incision shall correspond, and the means for so doing which I employ is sufficiently simple. Let the forefinger placed upon the antero-lateral abdominal wall be carried backwards with firm pressure towards the lumbar spines. In its progress the tissues will yield until the finger comes in contact with the firm sheath of fascia enclosing the quadratus lumborum muscle, and this will be readily recognised by the resistance which it offers, and by its direction, oblique from below upwards and inwards. Having this point in his mind's eye, the operator makes a transverse incision from two and a half to three inches in length through the skin, and of less and less extent by one-half when he has arrived at and severed the lumbar fascia giving origin to the transversalis muscle, and continuous with the edge of the aponeurotic sheath of the quadratus muscle referred to. Either with or without pressure by the hand of an assistant upon the abdomen, some soft fat will protrude at the wound, but enclosed by a thin cellular membrane, the presence of which latter, if not expected by the operator, will alarm him lest it should be peritoneum. But keeping close to the edge of this sheath, or even nicking it if necessary, let him open up this fat with two pairs of forceps, removing a little if it abound, and possibly the bowel will come into view, either of a greenish hue if containing fæces in a fluid state, or the finger introduced will detect scybala; and the kidney must not be mistaken for these.

In this, as in all operations upon the abdominal wall, the muscles and fasciæ are to be divided to the least degree necessary, so as to weaken the wall as little as possible, and prevent troublesome protrusion at the site of the artificial anus. It is with this view that I particularly advise that the deep structures be not severed to the same extent as the superficial in this operation.

As soon as the bowel has been cleared of fat and loose areolar tissue, the operator may look for a longitudinal band, and will also notice the sacculated condition of this gut, which will distinguish it from small intestine. A well-curved needle armed with thick silk should now be passed through one cutaneous lip of the wound, then through the bowel, taking up a segment of this, and lastly through the opposite lip. Thus one thread has been passed diagonally, and when the gut has been opened will serve for two sutures, and two more must be employed. The bowel may now be opened in a longitudinal direction to such an extent that when the stitches are *in situ* a florin would just fill the aperture. To complete the operation, one or two sutures may be put into the skin wound.

Fæces may or may not pass out at once, in accordance either with the degree of distension of the bowel or the physical state of the former. There are several diseases or states of bowel in which this operation is practised.

1. For irremediable obstruction in order to prevent speedy death.

2. For obstinate stricture, malignant or benign, situated either high up or low down in the rectum, for which relief to distressing and exhausting symptoms cannot be obtained, after a judicious trial, by more simple measures.

3. For painful cancer of the rectum (non-obstructive), in which the patient's life is rendered miserable, and would soon be closed by exhaustion—consequent partly on excruciating pain caused by the passage of fæces over the diseased and exquisitely sensitive bowel, and depriving him both of appetite and of sleep; and partly on profuse discharges, purulent, sloughy, and sometimes dangerously hæmorrhagic. In this instance, the disease, though incurable, progresses more slowly when the morbid structures are no longer irritated, and a vast amount of pain is prevented.

4. For irremovable tumour of the rectum.

The morbid conditions for the relief of which I have performed colotomy are—

Case 1.—Malignant stricture of the rectum, causing complete obstruction, lasting over many days, with constant vomiting, and associated with a vesico-intestinal fistula, giving rise to frequent and most painful micturition.

Case 2.—Non-malignant ulceration of rectum high up, associated with a vesico-intestinal fistula, and giving rise to excruciating pain and great exhaustion. Both of these patients were between fifty and sixty years of age, and their sufferings were so severe that they were willing to submit to any measure that offered a prospect of relief from pain. Both were relieved, and expressed their gratitude for the benefit afforded by the operation in the most forcible and unmistakable language. When the disease is cancerous, the Surgeon can, of course, only afford ease by the operation, and prolong life for a few weeks or months; but, in Case 2, the disease being non-malignant, I regretted very much that the operation had not been performed sooner, and before the vital powers were so exhausted, when closure of the communication between bladder and rectum and restoration to health might have been fairly expected. These patients only lived a few weeks, dying of exhaustion.

Case 3.—Female, aged 68, the subject of tumour high up in the rectum; complete obstruction for ten or twelve days. The operation was performed nearly twelve months' ago, and she is now in fair health. Nothing has passed per anum since operation.

Case 4.—Female, aged 60. Symptoms of stricture had existed during two years and a half. She was operated upon for hæmorrhoids twelve months ago by a Surgeon, but her sufferings were in no way alleviated. She was greatly emaciated; no appetite, no sleep, and distressed by pain in the bowels and constant calls to defecation, passing little more than liquid motions consisting chiefly of mucus occasionally tinged with blood. Here the operation was performed only a few days ago (Feb. 2), and on the third day the wound was found to be already healed about the artificial anus. There was neither redness nor secretion. No recent wound could possibly be in a more painless or healthy condition, and yet the patient was 60 years old. This case especially illustrates the desirability of making the artificial anus as near to the point of obstruction as possible, in order that the patient may be teased by the presence of as few fæces as possible lying in that portion of bowel between those two points. Since the operation, a good deal of mucus has continued to flow per anum, and the finger introduced at the wound found the sigmoid flexure full of scybala. If these were allowed to remain, their presence would keep up the irritation which the

operation is intended to remedy. With a view, therefore, to dislodge and soften these bodies, a catheter was passed into the bowel below and through the artificial anus, and warm milk was injected. This done, by the aid of a lithotomy scoop guided by the finger I was enabled, at one sitting and without exhausting the patient, to extract several masses of hardened fæces. Milk will be injected daily, and will also help to nourish the patient, and the scoop will be again used at suitable intervals by Mr. Pearce, who is associated with me in the charge of the case. On the fifth day following the operation, this lady partook of roast mutton, vegetables, and beer.

Diagnosis.—With regard to the recognition of the diseases to which the above operation may become suitable, there is often great difficulty in forming a positive diagnosis, and, indeed, the first time organic obstruction is gradually occurring often arises only when the malady is far advanced, and this especially if the cause be non-malignant stricture. The chief symptoms are dyspepsia, slow wasting, and alternate constipation and diarrhœa, neither of which signs can be regarded as pathognomonic of stricture. Even a digital examination will not discover the true cause should the obstruction be high up in the rectum. In the two last cases recorded (both females) the certainty of the cause of symptoms was known by the introduction of the hand into the rectum, and colotomy was undertaken without the least hesitation. In Case 3 a tumour was found completely blocking the rectum, and in Case 4 a tight stricture was the cause; but this could not be treated by bougies, being situated high up, with its mouth looking directly backwards towards the sacrum. This knowledge was gained while the patient was under chloroform, and with the hand in the rectum to guide a bougie to and through the stricture; but this treatment, to be continued, would have involved the frequent use of chloroform and of the passage of the hand into the bowel, which might probably result in a permanent weakening of the sphincter. It was also evident that the patient's strength could not bear a repetition of this treatment. The effect of passing the hand is to weaken the sphincter, and to lead to incontinence of liquid fæces for a few days only, but this drawback is fully compensated by the accurate knowledge gained.

After-treatment.—Cleanliness is the chief consideration. The fæcal accumulations of weeks and months must be allowed to pass away, or may be assisted by mild aperients, or by injections administered through the wound, and after a time the bowel will acquire almost a habit of emptying itself at certain periods. A soft pad and a bandage are the only retentive apparatus necessary.

I believe that lumbar colotomy, as a means of alleviating frightful suffering and of rendering existence tolerable, has not yet received that consideration at the hands of the Profession generally which it deserves.

NOTES ON THE PNEUMOTHORAX OCCURRING IN PHTHISIS.

By R. DOUGLAS POWELL, M.D., M.R.C.P.,
Assistant-Physician to the Hospital for Consumption, Brompton.

(*Continued from page* 114.)

The intensity of the symptoms in pneumothorax is influenced by—

A. The condition of the lung previous to its rupture. If the lung be already extensively diseased, the symptoms produced by its rupture will be much less marked than if it were comparatively healthy. The two points to be considered under this head as affecting the severity of the symptoms are—

(1) The greater or less amount of respiratory area suddenly cut off.

(2) The increased resistance to the flow of blood through the capillaries of the affected lung.

The former bears a very important part in the production of the dyspnœa, and depends directly upon the amount of healthy tissue left in the lung which has suddenly become collapsed: the greater the amount the greater the disturbance of the equilibrium, if one may use the term, between the aërating power and the blood-volume to be aërated, and hence the more urgent the dyspnœa.

But while this has long been known and appreciated, is there not also another agent in the production of the dyspnœa—viz., the pressure to which the lung is exposed and the consequent impediment to the circulation through it? It was proved by Goodwyn in 1788, and more lately by Mr. Erichsen in 1845, that mere collapse of the lung does not materially affect the circulation through it, and Mr. Erichsen's experiments tend to show that the cessation of the vital changes of respiration does not retard the circulation through the lung. But in pneumothorax, at least in many cases, the lung is subjected to considerable pressure, and is more completely collapsed than in any of these experiments.

The actual pressure to which the lung is subjected in pneumothorax has been ascertained post mortem in eight cases. The apparatus used is simple enough. It consists of a trocar with well-fitting canula, having a lateral branch, which is connected by india-rubber tubing with a water pressure-gauge; the water may be conveniently coloured with a drop of Condy's fluid. The trocar with canula, is thrust into the chest, the trocar withdrawn, and the height to which fluid rises noted.

Case 1.—February 15, 1867; 30 hours after death. Pressure = 4 inches of water.

Case 2.—June 20, 1867; (attack June 18) 12 hours after death. Pressure = $5\frac{2}{10}$ inches of water.

Case 3.—July 15, 1867; about 14 hours after death. Pressure = 2 inches of water.

Case 4.—August 21, 1867; 16 hours after death (seizure 18th morning; death 20th evening). Pressure = $3\frac{3}{4}$ inches of water.

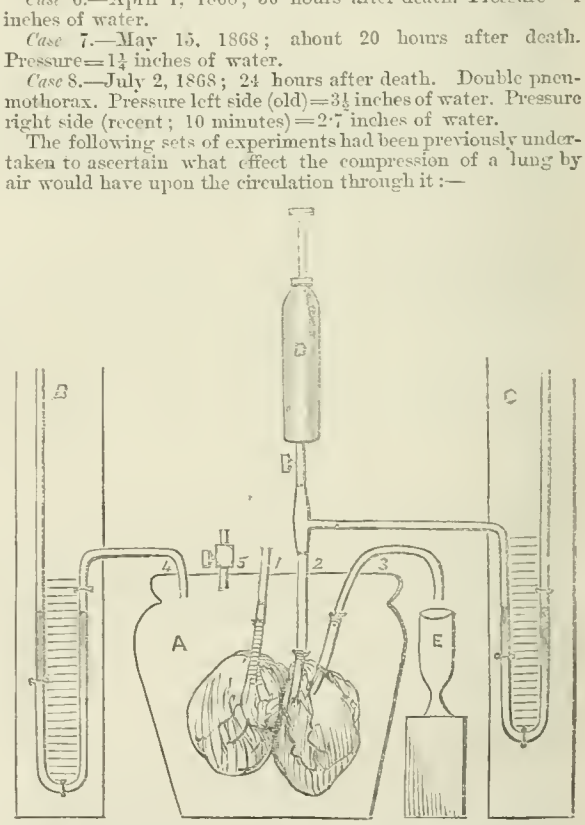
Case 5.—October 8, 1867; 30 hours after death (seizure 6th, 12.30 a.m.; death 7th, in morning). Pressure = 2 inches of water.

Case 6.—April 1, 1868; 30 hours after death. Pressure = 4 inches of water.

Case 7.—May 15, 1868; about 20 hours after death. Pressure = $1\frac{1}{4}$ inches of water.

Case 8.—July 2, 1868; 24 hours after death. Double pneumothorax. Pressure left side (old) = $3\frac{1}{2}$ inches of water. Pressure right side (recent; 10 minutes) = 2·7 inches of water.

The following sets of experiments had been previously undertaken to ascertain what effect the compression of a lung by air would have upon the circulation through it:—



For this purpose an apparatus was fitted up, consisting of a large glass jar, A, across which is stretched a piece of bladder perforated by five tubes tightly attached, so that the whole, when secured, is air-tight. To the central tube, 1, the lung is attached by the trachea, and to the free end a short piece of gutta-percha tubing is attached. To the next tube, 2, the pulmonary artery is secured, and the free end is left open for the insertion of the nozzle of an injecting syringe. The third tube is connected with the pulmonary vein, and its free end is prolonged by tubing, so as to reach over the side of the jar into a glass measure, E. The fourth tube has its free end within the jar, and its other end connected with a pressure gauge, B, to note the air-pressure within the jar. The fifth tube, also free within the jar, is provided at its other end with a stopcock, so that air can be injected and retained at any pressure required. The syringe has its nozzle fitted into a T-shaped tube, which is connected by one branch with the

pulmonary artery tube, 2, and by the other with a hæmodynamometer, C, which measures the injecting force employed.

First set of experiments January 11, 1867, were made with the kind assistance of Mr. Alexander Bruce and Dr. Green. The lungs used were those of a recently killed dog. They were attached by the trachea, common pulmonary artery, and vein to the tubes 1, 2, and 3 respectively, and the whole apparatus carefully secured. Whipped bullock's blood was used for injection.

Experiment 1.—Lungs moderately expanded by inflation through tube 1; atmospheric pressure within the jar normal; blood injected into the pulmonary artery with a pressure of between 1½ and 1¾ inches of mercury. The blood flowed from the pulmonary vein in a fair eqnable stream and filled the vessel, E, up to a given mark in 50 seconds.

Experiment 2.—Ligature removed from the trachea, tube 1, and the lungs allowed to collapse by their own elasticity; atmospheric pressure within the jar still being normal. Injection again employed at the same pressure. It still took 50 seconds to fill the measure, E, to the same point.

Experiment 3.—Air was now forced into the jar by a syringe through the tube, 5, until the mercurial gauge, B, indicated a pressure of ¾ inch. The stopcock was then closed, and injection again employed with the same force as before. The blood after a little while began to flow from the pulmonary vein in a continnous stream, though a smaller one than before, and it took between 60 and 70 seconds to fill the measure up to the given point.

These experiments were repeated several times with uniform result.

January 16.—Experiments repeated with the assistance of Mr. Bruce and Mr. Gill. Lungs, those of a dog recently killed.

Experiment 1.—Lungs moderately expanded; pressure of injection 1¾ inch of mercury. Measure filled in thirty seconds.

Experiment 2.—Lungs permitted to collapse by their own elasticity; precisely the same result.

Experiment 3.—Air forced into the jar to pressure of 1 inch of mercury, with same injecting force; measure filled in 40 seconds.

Experiment 4.—On increasing the air-pressure, the bladder gave way at some point, and air began to escape. The tube connected with the trachea was then instantly seized and secured by a ligature, thus preventing any expansion of the lung; the stopcock 5 was then opened, and the air-pressure allowed to become normal. The lung was thus maintained in a state of complete collapse, but without any external pressure. On injecting with the same force as before, it required 37 seconds for the measure to become filled up to the mark.

In August, 1867, a third set of experiments were conducted with lower air-pressures in consequence of the post-mortem obs rvations above referred to. Mr. Alex. Bruce again kindly assisting. The experiments were performed with one lung only, the left of a sheep, and the blood used was thinned with a little water.

Experiment 1.—Lung expanded moderately; force of injection 1¾ inch of mercury; measure filed in 88 seconds.

Experiment 2.—Lung collapsed by its own elasticity; same injecting force; measure filled in 85 seconds.

Experiment 3.—Lung compressed by air-pressure equal to 9 inches of water; same injecting force; measure filled in 230 seconds.

Experiment 4.—Lung compressed by 5 inches of water; measure filled in 190 seconds.

Experiment 5.—Air tube secured by ligature, and pressure removed; measure filled in 125 seconds.

Inferences from these Experiments.—That there is no appreciable difference in resistance to the circulation through a moderately expanded lung, and one collapsed by its own elasticity.

That when the lung is more completely collapsed there is a decided increase in the resistance to the circulation through it. That (Exp. 4, second series; Exp. 5, third series) the complete collapse of the lung has a very marked effect in retarding the circulation through it, independently of all external pressure. In illustration of the effect this pulmonary obstruction has upon the general circulation, an observation of Marey's may be well qnoted.

"Un point très important et qu'on ne saurait trop répéter pour le bien établir, c'est que la même quantité de sang doit, dans un temps donné, traverser les deux appareils circulatoires. Sans cela l'une des circulations recevant à chaque instant un peu plus de sang qu'elle n'en laisse passer, il s'ensuivrait une stase qui irait en augmentant sans cesse et serait incompatible avec la vie."—*Marey, Physiologie Médicale de la Circulation du Sang*, p. 30.

In this way, in pneumothorax, the normal quantitative relation between the two circulations is interfered with, and death would result, but that the systemic veins admit of some, and the portal system of still greater engorgement, by which a certain amount of the surplus blood is temporarily removed from the general circulation, and time is allowed for more permanent relief either naturally or by treatment.

B. The state of the other lung will obviously affect the symptoms, which will be intense and fatal, *cæteris paribus*, in direct proportion to its disease.

The effect of air in the pleura upon the lung of the opposite side is, as shown in experiments on the dog and human subject above quoted, to cause its partial collapse, in the first place, by removing the resistance to its elastic tension; secondly, when the pressure of accumulation comes into play, this lung is further embarrassed by the displaced heart and direct pressure.

3. The exchange of a certain negative pressure which is exercised upon the cavities of the heart, and doubtless aids considerably its refilling after systole, for a more or less positive air-pressure in pneumothorax must tend to embarrass its action in some degree. In Case 8, where there was a pressure on one side of 3½ and on the other of 2·7 inches of water, the cavities of the heart were found empty, with the exception of half an ounce of blood in the left ventricle. The direct pressure to which the heart was exposed in this case may very probably have prevented the return of blood into the right cavities.

4. The nature of the opening will affect the symptoms, which will be the more urgent in proportion as the opening is more or less completely valvular. It is quite obvious that an opening may be potentially valvular which does not appear to be actually so post-mortem.

5. The previons condition of the patient is much in accordance with that of his lungs.

6. The peculiar temperament of the patient will greatly influence the amount of shock he will suffer from on being seized with pneumothorax.

The prognosis in a case of pneumothorax, always very grave, rests chiefly upon a knowledge of the previous condition of the patient, the amount of disease present in the other lung, and the probable valvular or non-valvular nature of the opening.

The prognosis is, of course, special to each case, but it may be laid down as a general rule that if the opening be valvular the patient will die within a few hours unless relief be afforded by paracentesis; whereas if the opening be non-valvular (indicated by amphoric respiration and more or less movement of chest wall), the patient may survive for weeks, months, or even years, dying, in fact, either from exhaustion from empyema or from the advancing of the disease in the other lung.(a)

To be continued.)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

MEDIAN LITHOTOMY IN A CHILD.

(Under the care of Mr. MAUNDER.)

Mr. Maunder writes to inform us of certain difficulties which occurred to him in attempting to perform the operation of median lithotomy in a child (February 3). The boy, between two and three years of age, had presented unmistakable symptoms of stone, which was readily felt on sounding. Mr. Maunder determined to perform the median operation. The incisions were made in the usual manner. The membranous urethra was slit open, and a steel probe was carried into the bladder along the staff until it touched the stone; the forefinger was then inserted between the staff above and the probe below, and, thus acting as a wedge, was gradually insinuated towards the neck of the bladder. By desire of the operator the staff was withdrawn, leaving the probe in the bladder as a guide. But now came the difficulty; the finger being pushed on, the soft parts seemed to yield before it with disagreeable readiness, but although the probe was *in situ* the bladder was not entered by the finger. Under these circumstances (the fact that the probe was in the bladder being confirmed by his colleague, Mr. Couper, touching the calculus) Mr. Maunder

(a. Of course those cases must be excluded which are immediately fatal from collapse of the only remaining portion of healthy ung.

thought it better to return the child to bed, with the intention of performing the lateral operation on a future occasion.

Mr. Maunder performs the median operation more frequently than the lateral, his chief reason for selecting the former being that, in more than one instance, this method has been attended by no incontinence of urine whatever, whereas the same cannot be said for the lateral method. The rules laid down by Allarton for the performance of the operation were fulfilled to the letter, and one cause of the failure may be ascribed to the use of a simple probe, by the side of which it was found impossible to pass the forefinger through the urethra of so young a subject, and thus to complete the operation without cutting the prostatic urethra—the grand object to be attained by this method of operating. Had a grooved director been employed instead of the probe, a knife could have been passed along it, and the parts further incised; but in this instance all attempts to replace the staff failed, and a director passed through the wound could not be made to enter the urethra, and be carried into the bladder by the side of the probe.

Bearing this failure in mind, it is questionable whether the median operation should be performed on patients under five years of age, with a view of securing to them complete control over micturition from the moment of the operation. It may, no doubt, be undertaken at any age, provided the rules respecting the extent to which the urethra is to be incised are not strictly followed, and the knife be used rather freely. There is certainly less risk of hæmorrhage by this method, but always more difficulty in getting the finger into the bladder, even in the adult, and serious bruising must often result. To dilate the part, in order to admit the passage of the finger, and before the staff is removed, some one of the urethra dilators might perhaps be used with advantage.

If Surgeons had the courage to make known the difficulties and failures which now and then attend their practice, the Profession and the public in general would be grateful, nor would the individual doing so be the loser, because to have experienced difficulties and dangers is to learn how to avoid them in future, and is the most valuable experience possible.

N.B.—In the performance of the median operation a grooved director should be substituted for a probe in all cases.

METROPOLITAN FREE HOSPITAL.

CASES OF EPILEPSY, AND REMARKS UPON THEIR TREATMENT.

(Under the care of Dr. BEIGEL.)

We are indebted to Dr. Hermann Beigel for the following valuable report upon the treatment pursued by him in cases of epilepsy.

My theory concerning epilepsy is as follows:—From the results of former experiments it has been shown that depletion of the cerebrum and the medulla produces general epileptiform fits. But these experiments have not proved that similar results may ensue when such depletion takes place in a limited district—for instance, a group of muscles, or even one single muscle. Depletion gives rise at once to a change of nutrition in the nerves supplying such muscles, and consequently the muscle itself becomes irritated as if by electricity or other irritant. There is good ground for believing that in epilepsy the vaso-motor nerves are the parts primarily affected, in consequence of which the muscular layers of the vessels become contracted. This may be more or less complete, and may be general or partial, according to the nature of the primary irritation of the vaso-motor nerve. If the contraction of the vessels is general—that is to say, if the nervous centres are implicated—the question of its intensity arises. If it be extreme, loss of consciousness sets in; if not, convulsions may occur without loss of consciousness, or neither loss of consciousness nor convulsions occurring, the fit consisting merely of giddiness, impaired vision, and other more or less obscure symptoms, a prominent part of which is constantly impaired circulation through the capillary system. The action of the heart generally remains more or less normal. If the vaso-motor nerves of a limited district be irritated, then, of course, a similarly limited group of muscles will be affected, and perform contractions—a process which must be considered as epilepsy of these muscles. This is a matter of great practical importance, inasmuch as experience teaches us that these forms of limited epilepsy may at any time become general if the patient indulges in any excess of food, etc., and that, on the other hand, general epilepsy, under proper treatment, may be converted into these slight local convulsions, which sometimes produce comparatively little inconvenience to the patient.

These facts are borne out by the results of experience on which we cannot dwell here, and by the mode in which epilepsy in the largest number of cases is acquired, and by the results obtained by treatment, or, as the old Physicians used to express it, *ex juvantibus et nocentibus*.

It is a well-known fact that the larger number of cases of epilepsy—at all events a very large number of cases—are acquired by strong emotions or mental affections, particularly such as act suddenly and intensely—sudden shock. Now, this admits no other explanation than that of sudden change of nutrition in the nervous spheres, and further observations lead us to believe that the vaso-motor nerve is the sphere primarily so affected.

Concerning treatment, we are all aware that amongst the large number of remedies such only have any visible effect as belong to the class of nervines. According to my experience, which extends over several hundred cases, there are only two remedies which render good, and even very good service, in the treatment of epilepsy—namely, large doses of bromide of potassium and morphia if used hypodermically. I have tried nearly all drugs recommended by the authors on epilepsy, but failed to see any result worthy of notice. But bromide of potassium has doubtless the power of delaying the attacks, so that a patient who has previously had perhaps several fits in one week, has one every few months—a delay which remains stationary in many cases, even after the remedy has been left off, provided it has been taken for a sufficiently long period. The same result is obtained by hypodermic injection of morphia, which acts much more rapidly and intensely. I use the bromide of potassium in children and in such adults as are ill-nourished, and employ hypodermic injections if no other complication exists with true idiopathic epilepsy. To these remarks I add the following cases:—

Case 1.—W. S., a child of twelve months, whose sister died in a fit when one year old, had fits when he was aged five weeks; these recurred every third or fourth day, but during the last four months a succession of fits have set in nearly every day, and particularly when the child is going to sleep. His mother knows the approach of fits beforehand, from the child's thumbs being firmly shut about an hour or so previously. The little patient came under my observation in March, 1865, and was treated by bromide of potassium, of which he took five grains three times a day. This had the immediate effect of causing the fits to set in singly instead of in rapid succession. After two months the fits did not reappear; the bromide of potassium was, however, continued for several months. I have seen mother and child a few weeks ago, and learn that the child has since enjoyed good health.

Case 2.—A. L., a boy thirteen years of age, always healthy, had no convulsions when teething, and has no hereditary taint traceable, was climbing up a tree one day in May, 1865, when, frightened by a playmate, he fell down from a height of about four feet; he did not sustain any injury, nor had he any pain after the fall, but got up at once and went away. On his way home, however, he had a fit, in which he lost consciousness, and was much convulsed. After three weeks the attack recurred, and from that time the patient had at least two fits weekly. In December of the same year he came under my care. He was of a weakly constitution; the visible mucous membranes were pale; muscles flabby; action of heart rather weak, but otherwise healthy. The ophthalmoscope showed the background of both eyes to be in a state of venous congestion. He suffered now and then from headache; his memory and mental capacities were, however, not impaired; electric tonus of muscles normal. Patient was put on a better diet, and took ten grains of bromide of potassium three times daily. The attacks soon became more rare, and then ceased altogether. The general health improved remarkably, so that patient was, when discharged in December, 1866, a strong and stout lad. I have seen him several times since, and he assured me that his health was perfect.

Case 3.—M. R., a young lady of seventeen; had no convulsions when a child; no history of epilepsy or nervous disease in her family. She always enjoyed good health, and menstruated when 14. When 16 years of age, she was very much frightened by a large dog suddenly taking hold of her dress, and this gave her such a shock that she could scarcely reach her home. When she arrived there she felt indisposed, and about four hours afterwards she had a fit, in which she lost consciousness, and was violently convulsed. This was in January, 1866; from that time until May, the attacks recurred about every month, but independently of the patient's menstrual periods. But from about August until the middle of September the patient was attacked daily once or more, sometimes losing her consciousness.

sometimes not; her mental capacities, however, were not impaired, and in the interparoxysmal period she scarcely knew that her health had suffered. When she came under my care in September of that year, I found her general condition excellent, her muscles strong, and her appearance in every way very healthy. All her functions went on normally, and except the fits nothing could be detected. She was treated by hypodermic injections of morphia repeated three times a week. After three months, the strong fits had disappeared altogether, and only now and then a slight one unaccompanied by loss of consciousness set in, about once every month, or every six weeks. The parents of the patient considered her cured, and against my advice, treatment was discontinued. After the lapse of four months the slight fits became stronger, and treatment was renewed. Beginning again with a quarter of a grain of morphia three times a week, I gradually increased the dose to one grain. In February, 1868, patient was discharged, and up to the present time no attack has recurred.

Case 4.—H. F., 35 years of age, doing business largely on the Stock Exchange. He was healthy until his twentieth year of age, when he had typhus fever, from which he recovered after two months' illness, and then he enjoyed very good health indeed. One of his sisters had epilepsy when she was 17 years of age, which continued until she married. In 1863 patient had lost nearly all his fortune by a transaction, and after remaining in an excited state for several weeks, he had a series of epileptic fits which lasted for about five hours, and in which he lost consciousness, and was much convulsed. He was then free for four months, when he was again attacked. From that time the fits recurred about every fourteen or twenty days, sometimes in a series, sometimes single, each fit being ushered in by an aura, arising from the stomach and moving towards his head, when he fell with a cry, losing consciousness and becoming violently convulsed. During the interparoxysmal period he had partial epilepsy, or so-called *petit mal*, when he was exposed to any excitement; this partial epilepsy consisted of shocks, like electric convulsions, of the upper extremities, but in these the patient did not lose consciousness, and did not fall. He had tried many remedies without finding any other relief than that of sometimes delaying his attacks. In February, 1865, he came under my care. I found him to be of a very strong make, but of a nervous easily excited temperament. His general health was good, and all functions in a normal state. Background of his eyes in a condition of venous stasis. His memory had not suffered. The treatment consisted in hypodermic injection of morphia, a quarter of a grain four times a week; this was gradually increased to one grain and a half three times a week; after ten months no fit came on, and up to the present time the patient enjoys good health, and has lost his excitability. In the first months after the treatment had ceased shocks came on when patient was exposed to extraordinary mental work, but these shocks ceased likewise.

Remarks.—I do not communicate these cases in order to show that the results of the treatment by bromide of potassium or hypodermic injection of morphia, or a combination of both, which in some cases may become necessary, will be the same in all instances. But my object is to show that this kind of treatment is capable of producing very good results, if employed for sufficiently long periods, in cases suitable for the treatment. Of course, even when these conditions were fulfilled, I have met with many cases which did not yield to the treatment. Yet I feel justified in saying that the treatment just mentioned is—at least, according to my experience—much more satisfactory than other remedies, and that the number of patients who have been cured or improved is, as far as I am able to gather from statistic records, considerably larger than that obtained by any other method of treatment.

NORTHAMPTON GENERAL INFIRMARY.

GUNSHOT INJURY OF THE CHEST—INTERNAL HÆMORRHAGE—DEATH.

(Under the care of Mr. MASH.)

We are indebted to Mr. J. G. Carruthers, House-Surgeon at the Infirmary, for the details of the following case of gunshot injury:—

J. N., aged 30, a detective policeman, was admitted into the General Infirmary, Northampton, under the care of Mr. Mash, on December 26, 1868, at 10.45 p.m., having been fired at in the street with a gun at ten yards' distance. On admission there was found to be an irregular gunshot wound with the edges slightly inverted, situated in the posterior inferior triangle of the neck on the left side; there were also a number of stray shot-marks in the neck on the same side, which was greatly swollen from effused blood. There was a good deal of venous oozing from the wound, but no active arterial hæmorrhage; the shirt was saturated with blood, and he was said to have lost a quantity of blood while being brought to the Hospital. He was very prostrate and collapsed, and presented all the symptoms of having suffered from severe hæmorrhage.

On examination, the wound, which admitted the index finger in its whole length, was found to have taken a slanting course towards the scapula, the upper border of which could be felt roughened and denuded of its coverings. The wound could not be traced further by the finger, and no foreign bodies could be felt in it. There was no reason to suppose that the lung had been injured, there being no embarrassment of respiration and no sanguineous expectoration. It was conjectured that hæmorrhage was going on into the pleura, as there was no other evidence of internal hæmorrhage to account for the extreme exhaustion. About half an hour after admission the left radial pulse, which previously had been of the same strength as the right, gradually became scarcely perceptible. Ice was at once applied to the wound in a bag; brandy and beef-tea ordered to be administered alternately *ad lib.* The patient was put to bed between the blankets, and hot-water bottles applied to the feet and abdomen.

December 27.—He had slept a little during the night, but was exceedingly prostrate. Ordered the following:—Sp. æth. sulph. co. ʒss., sp. amm. arom. ʒss., aq. camph. ʒjss. statim. Later in the day vomiting supervened, and he was ordered cal. gr. j., pulv. opii gr. ss., in formâ pil., 4tis horis; also ice, barley-water, and mutton broth, as he did not like the beef-tea. The pulse was somewhat better, and the left radial pulse was then of the same strength as the right. The vomiting was greatly relieved by the calomel and opium, which also had a sedative effect, for he slept at intervals during the day. The swelling of the neck appeared to have extended. There was still a slight oozing of blood from the wound, to which a pad of lint soaked in carbolic acid lotion was applied, and over that the ice-bag.

28th.—Still much the same, excepting that, the vomiting having ceased, the calomel was ordered to be discontinued; the opium alone to be taken every four hours. The bowels not having acted, a draught of magn. sulph. ʒjss., magn. carb. gr. viij., aq. menthæ pip. ʒjss. statim, was ordered. He had hitherto been lying on his right side, but now begged earnestly to be allowed to turn, and this request was ultimately acceded to, as he was so persistent in his complaint of the uneasiness of his position. He experienced great relief on being turned on his back.

29th.—The bowels acted: he was very weak and low, and was evidently sinking fast; pulse weak and intermittent; clammy perspiration; feet cold, lips blanched, uneasiness of position and jactitation of the limbs. He died that day.

30th. — *Post-mortem Examination.* — The body was well nourished, and presented no other marks of injury than those described. The charge was found to have struck the scapula, one part taking a lateral direction, and this, on disarticulating the scapula, was found embedded in the muscles near the spine, together with the missing portions of the great-coat collar. The other and smaller portion of the charge took a downward direction into the chest, passing into the pleural cavity between the first and second ribs, but not lacerating the pleura appreciably, and many of the shot were found on the anterior aspect of the spine, embedded in the soft parts covering it. About sixty ounces of blood and clots were found in the left pleural cavity. The lung was compressed, but not wounded, although a distinctly circumscribed effusion of blood, resembling a pulmonary apoplexy, was found in the apex of the lung. The subclavian and axillary arteries were found intact upon dissection, and there was no such effusion of blood around them as would lead to the belief that they had been wounded. The brachial plexus also was unimpaired.

From the direction the charge took, we presumed that he had stood on somewhat lower ground than his assailant (both being men of middle height), and this view of the case was confirmed by eye-witnesses. The internal mammary artery was uninjured, so that the hæmorrhage probably proceeded from one of the intercostals.

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Medical Times and Gazette.

SATURDAY, FEBRUARY 13, 1869.

THE WEATHER OF 1868.

We cannot permit the year 1868 to pass away from our memory altogether without making some note of the very extraordinary meteorological characters which it presented. It seemed as if an entire change had taken place in our climate, and as if the range of temperature had been raised many degrees. From the third week of January to the last week of September the mean atmospheric temperature at Greenwich never, or scarcely in one week, fell so low as the mean temperature of the fifty previous years as calculated by Mr. Glaisher. Then, for the first time, the temperature fell below the average. October and November were comparatively cold months; but this change did not last, for at the time when it is customary for some little rise of temperature to take place—namely, about the forty-eighth week of the year—a remarkable elevation of temperature again took place, which continued to the end of the year, and has, indeed, lasted ever since. It was not, then, that we had a hot summer merely, although there was this with a vengeance. The mean temperature of July was 67·5°. In the year 1859 it was only a little higher—namely, 68·1°—and in the year 1778 it was 67°; in all other years back to 1771 it was less than 67°: it was, with one exception, the hottest month that had been experienced for ninety-seven years. On the 22nd day of the month the temperature at Greenwich rose to 96·6°, the highest ever recorded there; on two occasions it reached 92°, and on two other occasions 90°. Comparing the period from February to September with the corresponding long period in other years, Mr. Glaisher finds the temperature in 1779 was 55·6°; in 1846, 55·2°; and in 1868, 55·7°. In all other years back to 1771 it was less than 55°. In no year, so far as the Greenwich records reach, has the mean temperature of these eight months been so high. But not only was the temperature thus elevated, but the air was remarkable for dryness also, especially in the three summer months, July, August, and September. Drought prevailed very generally, and fears, which happily proved to be groundless, were felt for the results of the harvest. From February to the end of September only 11·46 inches of rainfall were measured at Greenwich, and of these nearly an inch and a half fell in one week in April, an inch in one day in May, and two inches in one week in August. From April to September there were only forty-four days on which an appreciable quantity of rain fell at all. It is true that after September had closed this deficiency of rain was partly made up for, since in the last three months 8·61 inches fell at Greenwich, nearly 5 of which fell in the month of December. So much rain has not fallen in December for a good many years past. It would be interesting to know what was the mundane cause of this strange occurrence, and whether or no we are now entering upon a period of time during which our climate is to be different from what it has been heretofore. Of course, the Gulf Stream has been suggested as being at the bottom of it all. Whether it is so or not, of course we can offer no opinion; but it is certainly curious that such weather should be contemporaneous with occurrences in the volcanic regions of the globe which have attracted much attention during the year in consequence of the fearful catastrophes which attended them. What interests us more as Medical men is the relation which these unusual meteorological conditions have held to the health and mortality of our population.

As regards mortality, the returns of the Registrar-General assure us that the first half of the year was favourable to human life, but the gains of the winter and spring were sacrificed in the summer. We can comprehend this readily. The class of diseases which prove most fatal in the winter and spring months—namely, bronchitis, and other similar diseases of the chest, whether complicated or not with disease of the heart, or complicating measles and other like maladies—were just those which a warm dry season would keep within due bounds. On the other hand, the hot weather of the summer was calculated to promote those diseases of the bowels which we group together as diarrhœal affections. No less than 3145 deaths from diarrhœa occurred in London during the summer months, the deaths similarly returned in 1867 being 2186, and in 1866, 2298. Now, this is worthy of remark. The year 1866 was that of the epidemic of cholera, yet the diarrhœal mortality of last summer exceeded that of the summer of 1866 by about one-third. It was not that diarrhœa, as a disease, was not equally prevalent in 1866; it was much more prevalent than last year, and many cases exhibited a choleraic character, but although more prevalent it was not anything like so fatal. We may remark that the mean temperature of the summer quarter of 1866 was 58·9°, five degrees lower than that of 1868, and about half a degree below the average temperature of the summer for ninety-five years.

Unfortunately we have no public registration of sickness to compare with our national register of mortality, so that we are left to gather any information we need upon this subject from private sources, and inferentially from the returns of deaths. We learn from Dr. Ballard, who keeps a record of all the public sickness in Islington, that the applications for Medical relief last year in his district—made to the Union Medical Officers and the several Medical institutions there—were so numerous as to bear no comparison with those of former years for twelve years back. We all know how very prevalent scarlet fever has been throughout the year, and especially since the middle of September; but the weather which has proved so promotive of the spread of this disease has served to extinguish the epidemic of small-pox, which has plagued us almost without intermission since the serious outbreak of that disease in 1863. In the week ending May 2 there were twenty-two deaths recorded from small-pox in London. There were only five deaths recorded in the week ending June 20. Occasionally since, only one, two, or three have been registered; and in the week ending December 12 there was not one. So, if this lasts, the hot weather will have done us some good.

Taken altogether, the hot and dry year 1868 contrasts forcibly with the cold and wet year 1860, not only in meteorological characters, but in the character and amount of the sickness and mortality which prevailed. In nearly all respects, regarded from a Medical point of view, 1860 was the very antithesis of last year; but it would carry us too far were we to enter fully into this subject. We commend the comparison to the study of those who are disposed to pursue it.

THE SIAMESE TWINS.

The return of Chang and Eng, the celebrated Siamese twins, to this country, partly for the purpose of recouping a fortune lost in the American war, and partly to consult the most celebrated Surgeons of the day as to the feasibility of an operation for their separation, has directed general attention to a subject always interesting. It is now forty years since these twins came to England and were carefully examined by some of the most eminent members of our Profession; the question of separation was then raised, but not being urgent, nothing was done. Now, instead of being in the heyday of youth and strength, they are old, their health is failing, they both suffer from a troublesome cough, and they dread the moment when the living man may be found attached to the dead. Since they arrived in this country they have consulted Sir J. Y. Simpson and Mr. Syme, and both have decidedly pronounced against any operation. On Thursday morning they consulted Sir William Fergusson, who also dissuaded them from any operation. When they leave London they intend to proceed to Paris, there to consult Baron Nélaton, whose decision they intend to make final. We can hardly doubt what that decision will be, for any one who has considered the nature of the bond between these two otherwise distinct individuals, can hardly fail to appreciate the danger of an attempt at separating them.

It so happened that just at the moment we were considering these circumstances an admirable pamphlet, by Dr. A. B. Cook, of Louisville, Kentucky, reached us. This pamphlet contains, along with other admirable matter, a careful account and some well-executed drawings of a case more nearly approaching that of the Siamese twins than any of which we have read. This double birth was the product of a mulatto woman, aged 28. The labour was conducted without any danger to the mother, who recovered well; but the children were still'orn. They were born at the full time. Their sex was male, and, with the exception of the bond of union, either child was perfect. The connecting band began at the level of the ensiform cartilage, and descended to the level of the umbilicus much as in the Siamese twins. But the length of the band, measured from one child to the other, was only one inch and a half at the upper and two inches at the lower border. There was but one umbilical cord. Of the Siamese twins it may be said that we knew nothing until they reached America in 1829, when they were examined by Dr. J. S. Warren, who published an account of them in *Silliman's Journal*. Mr. T. Holmes also gave an account of the bond of union in his work on the "Surgical Diseases of Children." The band is described as being one inch and three-quarters long above and about three or more below. It begins at the ensiform cartilage, and extends downwards for about three inches and a quarter. It is nearly two inches in thickness, and measures eight inches round about.(a) At its lower edge is a single umbilicus, with which was connected a single umbilical cord during fœtal life. The ensiform cartilages extend through the upper portion of this band, the one being connected with the other by a kind of joint. There is a distinct cavity in the band at either extremity, and some soft substance extends from the one side to the other; but whether the cavities are directly continuous or not has not been clearly made out. Touched in the centre, this band is sensitive to both, but at a short distance on either side of this line the common sensibility is lost.

Now let us see what was found in the connecting band described by Professor Cook. The peritoneum formed one common cavity in the two infants, the cavity in the band being three inches in vertical diameter. In this cavity was situated a single liver, common to the two fœtuses, the one extremity resting in the abdominal cavity of the one, the other in that of the other. The vertical diameter of the liver was one inch and a half. The diaphragm was also common to the two infants. In the centre of the liver below was a depression, whereby the common and single umbilical vein entered its substance, but there were two gall-bladders, one in each fœtus, with all the ducts perfect, as were the venæ portæ and hepatic arteries. There was no septum whatever dividing the liver into two portions: the hepatic ducts were promiscuously distributed throughout its substance; in short, it was common to both. The ensiform cartilages were also united, forming a firm and dense upper border to the uniting band. Other cases of joined twins have been reported by Dr. Tanner, by Dr. Swayne, and by Mr. Wills in the Obstetrical *Transactions*; but these have not the close analogy with the living twins which the case described by Professor Cook has. In each case the liver was common to both infants.

It is no part of our purpose to enter into any speculations as to the origin of such double births, nor do we propose discussing such cases as those wherein the children were united by other parts of the body than the anterior wall of the abdomen. In one instance, two female children, Helène and Judith, born joined back to back, lived so for about twenty-three years. The question which now mostly concerns us is that of operative interference in such cases as that of the Siamese twins. Two cases are recorded: one by König, but this was evidently something very different from the Siamese twins or the case reported by Professor Cook. The band in the children was five inches long and only one inch broad. The umbilical cord was single, but contained four arteries and two veins—in short, it was a double cord in one envelope. The operation in such a case was of the easiest. Boehm has since reported a case much more similar to those we are now discussing. The two children were females, joined together by a band beginning at the lower extremity of the sternum and extending to the level of the common umbilicus. There were six arteries, and but one vein; besides these nothing of importance was found in the band, which was cut across with but little loss of blood. One of the children died on the fifth day; the other was alive and well at the age of six years, but presented a considerable separation of the linea alba below the ensiform cartilage.

A Surgeon who would not hesitate to attempt the separation of two weakly and delicate children would hesitate to interfere with two aged men. In the case of Chang and Eng there is evidently a hollow proceeding for some distance along the band of union, and connected with either peritoneum. The question is whether the one cavity is continuous with the other, and, if so, what are their contents? We have given above good reasons for dreading the presence of a portion of either liver. This organ is so very plastic that it might easily enough be united in the two and yet give rise to no discomfort in the uniting band. That the one does not feel what is done to the other, is of no consequence; that the union is close between the two is clearly shown by their liability to simultaneous attack by constitutional maladies, as ague and measles. In the case of the former disease the periodicity was identical in both.

The prospect which now faces these unfortunates is no doubt a hideous one, but the immediate dissolution of both is more appalling, and we are thoroughly convinced that our Surgeons have acted wisely. Sound advice, and an almost womanish regard for human life, are the grand characteristics of English Surgery, and we are prouder of men who can dispassionately and skilfully consider the chances for and against the success of an operation, and finally decline to perform it, than we should be of one who, with a reckless disregard for consequences, would adopt a course which might end unfortunately both for the patient and himself.

(a) The measurements are now slightly different.

GYMNASTICS AND ATHLETICS.

Various systems and processes of physical education have of late years been widely adopted for the training of youth in the principal states of Europe, and particularly in the public

schools and universities of our own country. No class of persons can be more interested in the progress of this wholesome movement than the members of the Medical Profession.

Physical training in this country takes two principal forms of development—one is old, time-honoured, and essentially popular; the other is comparatively new, and on its trial. Our national athletic games and exercises are the representatives of the first; gymnastic exercises and the establishments which we call gymnasia are the representatives of the second. The aim of the first is to make the strong stronger; the aim of the second is not only to make the strong stronger, but also to make the weak strong; and in our Professional relation to the public we naturally feel a more serious interest in the latter than in the former. Indeed, we are not at all sure that the cultivation of what are called athletic sports, for their own sake alone, is productive of unmixed good. We are by no means convinced that a man is a better member of society, or of more use to himself and to others, because he can run a hundred yards in ten seconds, or jump "twenty-one feet two inches and a half on level grass," or throw a hammer of eleven pounds a hundred and seventy-six feet, or even walk a "hundred miles in twenty-two hours nineteen minutes and ten seconds, including stoppages." We have also our doubts as to the advantage of permitting the ambition of our youth to seek its culminating point in attaining a place in the University crew or in his school eleven, or to give to these distinctions a social recognition far above what is to be obtained through the class list. From a parental point of view also, we may perhaps be pardoned for wishing that our boys brought away with them from our public schools something a little more useful in after life than a proficiency in cricket, football, rackets, and the like. There can be no manner of doubt that the devotion to athletic games which characterises public school life in England has been permitted to grow to such an extent as to interfere to a serious degree with the graver duties of these educational establishments, so that it has been truly said that "life at school and college forms the manners of our young men, provides them with acquaintances, makes them cricketers or oarsmen, and gives them some knowledge of the world. But it inspires them with no love of knowledge, developes no power of using wisely what knowledge they possess, cultivates no tastes, whether literary or scientific, which may raise them above mere material enjoyment." The French Commissioners, in their interesting report on the public schools of England and Scotland, justly criticise this remarkable aspect of our public school life. After mentioning that it is obligatory at Harrow to engage in football three times a week, and that cricket absorbs fifteen hours a week—that at Eton cricket takes up twenty-seven hours a week, and at Winchester three hours a day—and that if a pupil wishes to rank in the eleven he must practise cricket five hours a day—they go on to observe, "Ce jeu est une science, qui a, comme les autres, ses maîtres professionnels, et qui est régulièrement enseignée. Nous serions curieux de savoir dans quels termes le maître de cricket vit avec le maître de latin." They also state, with perfect truth, that "l'opinion, si puissante dans les écoles publiques, attache aux distinctions athlétiques la plus haute considération. Le chef des onze au cricket, le capitaine des bateaux sur la Tamise, sont des personnages bien plus importants à Eton que l'élève le plus distingué dans le grand concours pour les prix de littérature et de mathématique." Then with quiet irony they add, "*Les études se restreignent respectueusement pour faire place aux jeux athlétiques.*"

The final judgment which these foreign commissioners express on this subject is so sound, and agrees so entirely with our own, that we cannot refrain from reproducing it here. "Nous ne condamnons pas; nous tenons seulement à constater que, tout homme étant doué d'une somme donnée de force, la partie de cette force destinée à développer l'intelligence doit nécessairement s'amoindrir à mesure que l'on augmente la partie destinée au développement physique, et que le grand problème de la bonne éducation consiste précisément à régler ces deux portions de manière que l'une n'empiète pas trop sur l'autre." And again—"Pour résumer en deux mots notre opinion sur l'usage des jeux athlétiques dans les écoles, nous voudrions qu'ils fussent une diversion et non une étude, une détente de l'esprit et non une passion." This passion for athletic sports has reached our Medical schools, and we possess in London a "United Hospitals Athletic Club." We are far from wishing to underrate the advantages derivable from a certain amount of physical training for our Medical students, shut up as many of them are a great part of their time in Hospital wards and out-patient rooms, and confined in unhealthy parts of towns; but we must be careful lest our summer sessions, already too brief, be made entirely useless by the encroachment of these athletic feats, and the training they necessarily involve, on more legitimate occupations.

But the most important question for us to consider is whether this devotion to violent and emulative athletic exercises, which is now so dominant at our schools and universities, is conducive to the production of a vigorous and sound constitution. We doubt greatly if this can be truly said of any but the very strongest of our youths, and these even suffer occasionally from the violent and sustained muscular efforts which they undergo; while the constant alternation of being "in training" and "out of training" is damaging to the strongest constitution. And if the strong sometimes suffer and always incur risk, those with less vigorous bodies, who are led by a spirit of emulation to enter the lists with them, are almost certain to receive injury.

We have no sympathy whatever with muscular Christianity or with those who would make a kind of *cultus* of brute force, and we feel no more inclination to accept a muscular divinity than we do to worship a steam engine. But we have a great respect for brain, heart, and lungs, as the essential vital organs, and it is to the maintenance of these in a perfectly healthy activity that our chief efforts should be directed; and it is precisely because we have good reason to believe that violent and prolonged muscular exertion tends to upset the balance of the functions of these organs, and in constitutions inheriting some latent proclivity to disease in them to develope grave derangement, which has, in many instances within our own knowledge, led to premature death, that we wish to arouse the serious interest of our Professional brethren in the subject of this article.

Many years ago Dr. C. J. B. Williams wrote to this effect:—"Some of the most serious cases of pneumonia that I have ever had to treat have occurred in boys at public schools after violent and long-sustained exertion at football and other athletic games;" and in the same work, in speaking of excessive bodily exertion as a common exciting cause of disease, he observes:—"General muscular efforts, as in running, walking uphill, rowing, etc., hurry the movement of the blood back to the heart, and resist its distribution through the arteries to such an extent that the heart, the lungs, the brain, and other organs have an unusual pressure put upon them." "The heart, when excited to inordinate action, is often strained and distended, and its function, or even its structure, as well as that of the great vessels, may be impaired in consequence. This is especially apt to happen if there be anything already wrong in the structure of the organ, its valves, or vessels, and, independently of actual disease, there are naturally very various degrees of perfection and strength in these parts. The brain is particularly liable to suffer from violent exertion, for its vessels are not, like those of the limbs and trunk, supported by muscular pressure. The excited heart on this account sends its blood into them with more force." "The lungs, too, are apt to suffer, for the blood being returned to them faster than they can arterialise it, they become greatly congested. Coughs, dyspnœa, hæmoptysis, or inflammation of the lungs ensue in this way. The texture of the lungs sometimes sustains injury in consequence of the

violent strain to which it is subjected by the increased exertions made in sustaining the breathing, and temporary emphysema is produced. Other internal organs are sometimes disordered by the blood thrown into or retained in their vessels by the pressure of external muscular action." We cannot express better than these words do which we have now quoted the kind of injurious influence which games and sports involving long-sustained and violent muscular effort are likely to have on the essential organs of life. Let us, by all means, have well-developed muscles; but let them be developed by some rational system of *gymnastics* calculated to improve, rather than impair, the functions of heart, lungs, and brain. That this may be done we hope to show in our next number, when we shall deal with the second part of this subject. In the meantime we should endeavour to impress on the public the fact that we may go on living long and comfortably with comparatively feeble muscles if our internal organs are sound, but with any one of these damaged no strength of muscle will avert an inevitable fate.

THE WEEK.

TOPICS OF THE DAY.

The re-election of Mr. Partridge to a seat in the Court of Examiners of the Royal College of Surgeons will be received as a well-deserved tribute to his merits as an examiner, and the zeal and judgment he has displayed in improving and giving a practical character to the examinations. We do not think the precedent of re-election should be always followed, and we continue to advocate the appointment of special examiners in histology and physiology. But we think that the strong claims of Mr. Partridge on the votes of the Council may well, in the present instance, have been allowed to override all other considerations, and even to postpone for a time the discussion of necessary reforms.

The Profession will receive with great regret the news of the death of Mr. Joseph Hodgson, better known to the Surgical world as Mr. Hodgson, of Birmingham, than even as President of the Royal College of Surgeons, Hunterian Orator, and a London consulting Surgeon. The reputation Mr. Hodgson made at Birmingham has been rarely equalled by that of any provincial Surgeon. In our next number we hope to furnish our readers with a full notice of his Professional career. He has died at the good old age of 80, having survived Mrs. Hodgson but a few hours.

We have received a copy of the *Scarborough Gazette* of February 4, which contains an account of the adjourned proceedings taken under the Vaccination Act against Dr. R. B. Cooke, the Rev. R. H. Parr, and two other gentlemen, before the local board of magistrates, for neglecting to comply with the provisions of the Act. The result is that Dr. R. B. Cooke has been fined 10s. and costs for not having taken, or caused to be taken, his child to the public vaccinator to be vaccinated, or in default not having provided a reasonable excuse, certified by a Medical man. Dr. Cooke by his solicitor pleaded that the child had been in a sickly state from its birth, and not able to undergo the operation. Dr. Cooke had sent a series of certificates to that effect to the registrar, but these were not admitted in defence because, the charge being a criminal one, no evidence could be taken from the defendant for or against himself. We are glad to say that Dr. Cooke has appealed against this decision, which appears to us simply absurd. The Vaccination Act is not the most popular piece of Medical legislation which Parliament has ever perpetrated. It only requires a few more prosecutions of this kind to cover the whole thing with ridicule. If a man in Dr. Cooke's position—a Surgeon to the Scarborough Dispensary, possessed of four Medical qualifications, and a graduate of the University of London—is not to be allowed to certify that his own child is not in a fit state of health to be vaccinated, we think that the law which prevents him from doing so ought to be altered. The absurdity of such legislation is only equalled by its injustice. In a second case, a clergyman named Parr was fined 5s. and costs, although it was proved that the illness of the child and of its parents had prevented the vaccination till the fifth month, at which time the child was vaccinated unsuccessfully by Mr. Teale. In this case, too, an appeal was granted. In a third case, in which it was alleged that a certain certificate of unfitness for vaccination had been antedated, it was proposed to lay an information against Dr. Craig, who gave it, for misdemeanour. It is well that members of our Profession should be aware that, if they give certificates through complaisance, they may get into trouble; but it would be expedient that some leniency should be shown by the authorities in cases where a "reasonable excuse" is forthcoming.

The result of the Dublin election petition will necessitate another contest for the representation of the city, and it is announced that Sir Dominic Corrigan will again offer himself as a candidate in the Liberal interest. In the interests of the Medical Profession, we may be allowed to express a hope that he will this time be returned. We need scarcely repeat that our advocacy of a Medical candidate is entirely free from political bias or party motive. As we observed at the time of Sir Dominic Corrigan's former candidature, the fate of the Irish Church will not be much affected by a single vote, whereas Medical interests may be very sensibly promoted by the presence of a Physician of Sir Dominic Corrigan's fame and standing, representing one of the three chief cities of the United Kingdom, in the House of Commons. We cannot profess to feel no sympathy for a political fervour which is strong enough even to extinguish the loyalty that a Professional man owes to the interests of his calling. But the return of a Conservative for the City of Dublin would in no degree alter or modify the resolutions which the present Ministry have formed, and which the overwhelming majority following them will enable them to carry out with a high hand. On the other side of the question is the fact that of all the newly returned Medical members of the House of Commons not one has the same position in the Profession, and would be listened to on Medical matters with so much deference, as the Dublin Physician, who not only has obtained the highest and rarest honour the State bestows on Medical men, but who has filled the President's chair in one of the three Royal Colleges of Physicians, is a leading member of the General Medical Council, and has made a European reputation by his writings on practical Medicine.

A death from the absorption of carbolic acid is reported to have taken place at the Worcester Infirmary. The only account which we have seen of the accident is one which has appeared in the daily papers, and is not very explicit. It appears, however, that an enema of carbolic acid and water was administered by a mistake to a man who was suffering from urinary fistula. While the nurse was administering the enema the patient suddenly fell in a fit and became stertorous. The House-Surgeon, Mr. Knapp, was immediately in attendance, and syringed out the rectum with hot water. The man, however, died in about twenty minutes. The Coroner's jury returned a verdict that the patient had died from the effects of carbolic acid.

The Society for the Prevention of Cruelty to Animals has recently instituted proceedings against several cab and omnibus proprietors for driving glandered horses after nightfall in the London streets. The cruelty of the practice does not require to be enforced by comment, but its danger to human beings coming into contact with the horses cannot be too strongly insisted on. It is abundantly proved that the poison of glanders may be transmitted from the horse to man, from man back to the horse, and from one human being to another. It may, moreover, be introduced into the system by mere contact with

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the mucous surface, as well as by inoculation. Glandered horses, therefore, coughing and sneezing in the London streets, are an evil which at least demand the vigilance of the police as much as vagrant curs and hoops.

The correspondence between the Holborn Board of Guardians and the Poor-law Board has been continued by a long letter from the guardians in answer to that of the Poor-law Board which we noticed in our number of January 30. The tone of the correspondence is warm, to say the least, and in one or two particulars the guardians give a flat contradiction to the Poor-law Board. For instance, the guardians reiterate that the Poor-law Board originated the idea of building on a site adjoining the workhouse, and for twelve months never suggested any other course; that they, the guardians, in fact, acted entirely on the suggestion of the central authority. The Poor-law Board, on the other hand, now assert that they only gave a reluctant assent to the plan. The guardians argue that—

"Inasmuch as the Poor-law Board have proposed no plans whatever in relation to infirmary accommodation in the Finsbury Sick Asylum District, but have merely issued a bare order creating the district, it is a simple impossibility to make a comparison between the non-existing plans of the Poo-law Board and the existing plans of the guardians; but the guardians feel very confident that if the Poor-law Board will authorise them to remove the children to a separate school forthwith, and will then reconsider the question with a full knowledge of what portions of the workhouse can be made available for an infirmary, it will be found that the necessary accommodation can be obtained at a much less cost than the Poor-law Board have hitherto imagined."

They terminate their letter by reasserting "that they have never objected, and do not object, to provide further accommodation for the sick of the union; in their opinion a separate infirmary is unnecessary, but they have never insisted upon that opinion; they only ask that the Holborn Union may not be united with other unions or parishes, and they undertake to do all that is necessary for the sick, trusting that the Poor-law Board will not require more to be done than is really necessary."

ARMY MEDICAL SCHOOL, NETLEY.

We regret to hear that there is some foundation for the report of reductions being contemplated in the expenditure on the educational staff of this establishment, and that probably the staff salaries of £100 per annum, to which the assistants to the Professors only lately were declared entitled after five years' probation in teaching, are now about to be withdrawn. After men have laboured and taught for five years, and have by so doing become, of course, more efficient for the continued discharge of such duties, it seems to us to be very questionable policy, to say nothing of simple justice, to withdraw from them the emoluments of the office. We shall not be surprised to hear of resignations and of difficulty being experienced in finding suitable successors. The intention, however, may be to abolish the appointments altogether. In all these days of retrenchment and economy, perhaps falsely so called, it appears to us rather curious that nothing has yet been done at the other end of the scale, and that, while minor offices are being abolished or the pay reduced, we have not yet heard of any proposed reduction in the salaries of the Prime Minister, the Secretaries of State, the Commander-in-Chief, or suchlike.

NAVAL HOSPITAL COMMISSION.

Every department of the public service is at present undergoing the most rigid inspection, in order to discover any possibility of effecting a saving. The First Lord of the Admiralty, in accordance with the general movement, has set on foot a visitation of the naval Hospitals at Chatham and elsewhere, and has intrusted it to Mr. Robert Ellis, of Sloane-street, well known as a general Practitioner of large experience, an able writer and Practitioner, and many years Surgeon to the Chelsea Dispensary. Mr. Ellis has selected as associates in the task Dr. Charles Murchison, of the Middlesex Hospital, and Mr. Timothy Holmes, of St. George's; and we have no doubt but that, from the varied experience and good Professional feeling of the Commissioners, not only the Admiralty and the public, but the members of the Naval Medical Department, will be satisfied with the result. But there is no use in concealing the fact that, with every good feeling to the Commissioners personally, the services are deeply hurt that such a commission should be intrusted to civilians. Our own sentiments on the matter are no secret to our readers. We believe that in the members of the Army and Navy Medical Services we have a picked body of Professional men more elaborately educated, more thoroughly examined, and better qualified for their duties than almost any other that could be named. We do not refer to the present case, but would say in general that, having a well-organised and efficient set of public servants with a responsible head, it cannot promote the public weal that they should be systematically slighted and set aside. We are quite certain that, in all matters of organisation, sanitary and otherwise, the Medical officers have for years been besieging the combatant department with suggestions for the more healthy and less costly management of diet and a hundred other points on which the efficiency of the soldier depends. But they might as well have pleaded to a stone wall. Then comes a breakdown, and civilians are appealed to, as if the archives of the department did not contain ample store of unheeded suggestions from the military Surgeons. We need only point to the papers now appearing on the early progress of army sanitation in India to show that if sanitary matters have been neglected, it has not been by the Medical officers. We do not see why the Army and Navy Medical officers should not be dealt with as every man of sense would deal with his grooms or any other servants—put confidence in them in their own special department, and put them on their mettle to do their work well. No service can ever flourish where the servants are perpetually snubbed and interfered with by outsiders, and where their responsibilty is divided.

HEALTH OF SCOTLAND.

The Registrar-General for Scotland, in his monthly report for January, 1869, bears witness to the prevalence of scarlatina, which was the most fatal of all the epidemics, and caused 7·2 per cent. of the mortality of the eight principal Scottish towns. In Glasgow and Greenock nearly 10 per cent. of the deaths were due to this cause. Two deaths are ascribed to small-pox—of two children under five, at Glasgow—but they were really due to vaccination!—"faulty vaccine virus having probably been used." This is certainly a singular mode of classification. The chief characteristics of the weather have been a mean temperature the highest since 1859, and 3·2 above the average; a large amount of rain and of atmospheric moisture; and an unusual amount of south wind.

DEATH IN THE VAT.

A sad accident, causing the deaths of two men, at Trowbridge, during the past week, by suffocation from carbonic acid in a beer vat, reminds us of having, some years ago, seen a suggestion made in a Calcutta newspaper that there should be attached to all such vats a light elastic tube, with wire coiled on the inside to prevent constriction, and a mask, with a valve to permit the escape of expired air, to be applied, in all cases, over the face of a person descending for the purpose of cleaning out the vat. Had such an apparatus been in use in the instance under notice, two lives would have been saved. When a vat contains refuse hops and grains above the level of the outflow tap, it is, of course, impossible for poisonous gases to escape through that channel, so that opening the tap for some hours will not necessarily

evacuate the gaseous contents, and, time being valuable in these go-ahead days, it seems to us that it would be extremely desirable that a simple apparatus such as that above described should be introduced for trial at least in some of our large breweries.

FROM ABROAD.—PROFESSOR TARDIEU ON CORALLINE SOCK POISONING—TEMPERATURE IN APOPLEXY—THERAPEUTICS IN WAKEFULNESS.

THE "poisonous socks" which have caused so much discussion in our newspapers have just received highly important attention at the hands of Professor Tardieu, in a paper which he read at the last meeting of the Academy of Medicine. He was consulted in May, last year, by a gentleman for a severe and obstinate vesicular eruption affecting both feet, and occupying exactly the portions of these that were in contact with the red socks, compressed by the shoes. There were present also general indisposition, fever, headache, and nausea. These latter disappeared in a day or two, but the eruption occupying the feet was not cured until after two or three weeks. A similar case or two following shortly after, in persons who had worn similar stockings (in one of these the inflammation of the skin corresponding to the red stripes of the stockings only), he resolved to investigate the matter thoroughly. Having ascertained that these socks contained no mineral poison, he proceeded, as in the investigation of organic poisons which are insufficiently characterised, by means of physiological experiment. The socks were treated by boiling alcohol of 35°, in which the red colouring matter was rapidly dissolved, and the evaporated solution yielded an extract which manifested poisonous properties. Redissolved in alcohol, it was injected into the skin of the thigh of a dog, a rabbit, and a frog; all died, the frog in four hours, the dog in about thirty-six hours, and the rabbit somewhat later. As the red colour is derived from *coralline*, which is a preparation of phenic acid, this substance was also experimented with, and a dog, rabbit, and frog were also killed by its agency. As the result of the autopsies which were made, it was found that at the point where the coralline had penetrated a violent inflammation of the cellular tissue with purulent infiltration had been set up. The stomach was in a healthy state, but the intestines, distended with an enormous amount of diarrhœa matters (the discharges were copious during life), exhibited obvious signs of acute inflammation of the mucous membrane. To the microscope, the liver exhibited fatty degeneration. Finally—and this is to some extent the essential character of this description of poisoning—the lungs in the dog, and especially in the rabbit, were as if dyed by the colouring matter—presenting over their entire extent a most beautiful scarlet shade, spread uniformly over their surface, so as to efface its lobular divisions and the vessels coursing along it. By an ingenious chemical procedure enough colouring matter was extracted from the lungs and liver of the poisoned animals to dye red a skein of silk. The coralline which had caused the death of these animals was thus exhibited as distinctly by its characteristic tinctorial matter as are atropine and digitaline by the power they possess of dilating the pupil and arresting the pulsations of the heart. M. Tardieu justly regards this as an illustration, as striking as unexpected, of the physiological and experimental method of research which he, in his "Treatise on Poisons," so strongly recommends for the investigation of organic poisoning.

It can be no longer doubted, he adds, that coralline is a poison of great energy, since, introduced in a small quantity into the living economy, it causes death. It would seem to act in the same manner as the drastics—as *croton tiglium*, for example, which it resembles both in the acute local eruption and the inflamed condition of the digestive canal which it gives rise to. Penetrating into the substance of organs, it, on the one hand, like various other poisonous substances, as phosphorus, ammonia, and arsenic, gives rise to fatty degeneration; and, on the other, becomes so concentrated as to be capable of extraction, still retaining its special tinctorial property. The accidents it has hitherto determined in the human subject have been limited to a very painful local affection, and some disturbance of the general health of no great importance; but, judging from the rapidly fatal effects produced on animals, it is by no means certain that it might not prove very dangerous under certain circumstances. Other colouring matters, such as the Schweinfurt green, white lead, etc., have given rise to much mischief; but all these have been of a mineral nature, and coralline is the first organic colouring matter that has been noted capable of producing poisonous effects.

At a recent meeting of the Société de Biologie, M. Charcot read a paper on the "Temperature in Apoplexy dependent on Cerebral Hæmorrhage and Ramollissement," which was founded on investigations which he has been carrying on at the Salpêtrière during the last two years. When exploration by the rectum has been practised at the time of the apoplectic attack, or some hours afterwards, the temperature has almost always (especially in the severer cases) been found notably below its normal mean. Thus, in place of 37·5° C., which is the physiological condition, it is found to be only 37°, or lower—descending in several cases to 36°. Before long, however, it rises again, and it is rare to find at the end of twenty-four hours that it has not again reached 37·5°, and during a variable number of days it continues between 37·5° and 38°. If the patient is to survive, it seldom rises beyond this, unless some inflammatory complication is present. If, however, the attack is to prove fatal, we find a sudden increase of temperature taking place independently of all complication, so that scarcely have twelve, twenty-four, and forty-eight hours been attained when we find the thermometer successively indicating 39°, 40°, or 41°—even 42° having been observed several times shortly before death. This sudden rise of temperature is nearly a certain sign of approaching death; and it is usually preceded—or, as it were, announced—by another sign, which also is of fatal augury—viz., an ecchymotic spot, often succeeded by an eschar, which is formed on the buttock of the paralysed side. This high temperature may be noted before the earliest external phenomena of the approaching agony have made their appearance.

From an abstract of a lecture, published in the *Boston Journal*, on the "Therapeutics of Wakefulness," by Dr. Hammond, who has paid much attention to the subject, we may make a few extracts:—

"Brushing the hair or friction of the skin, as by rubbing the palms of the hands or backs of the arms, will in some persons tend to induce sleep. Soothing sounds have sometimes a similar effect, while, on the other hand, persons whose occupations are noisy are apt to awake when the noise to which they are accustomed suddenly ceases. But agents more efficacious than such external ones are those which lessen the amount of blood circulating in the brain. First may be mentioned food and drink, of whose happy influence a frequent illustration is given in the case of a late supper. During digestion more blood circulates through the gastro-intestinal vessels than when the abdominal organs are unemployed; and this additional amount of blood must come from some other part of the body, since a marked excess of this fluid cannot exist in two different parts at the same time, except in cases of disease. That the amount of blood in the brain is diminished during digestion is evinced by the feeling of drowsiness commonly experienced, which is a perfectly healthy sensation. The food thus taken as a therapeutic agent should be easily digestible.

"In persons weak or anæmic, especially women who have been rendered so by hæmorrhages, a dose of some of the preparations of alcohol at bedtime is frequently advisable. Of these, wines are not so generally admissible as spirits. A clergyman who came under my care had been unable for seven or eight weeks to sleep more than two hours each night. I prescribed a dose of whisky, to taking which he at first strongly objected. The first night he slept five or six hours, and the second seven or eight hours. His whisky was gradually reduced from half a glass to none at all, and he continued to sleep well without having formed any habit of drinking. In some persons coffee acts much as other stimuli do in asthenic cases. Do not trifle with it by administering a

little weak infusion, but give strong doses at once. Much depends upon the method of making it. Exhaust the strength of three or four ounces of ground coffee by percolation with a rather small amount of boiling water, and give it without milk. Tea acts in a similar manner, but not so efficiently.

"Sometimes sleep may be produced by exercise taken regularly about two hours before bedtime. This acts best in sthenic cases. It has often been noticed that change of air and carriage exercise produce sleep. The warm bath may be used as a hypnotic, but the head should be prevented from becoming heated by putting cold water on it while the body is immersed, and sometimes cold water suffices without the bath. Another remedy, often of much value, is the application of a sinapism to the epigastrium. The position, too, of the body is of importance. In many cases, holding the head downwards produces wakefulness, and such persons should go to sleep in the erect posture. Among drugs, opium is hypnotic in doses of one or two grains, and one of its constituents, narceine, has been found to produce continuous and profound sleep; but the ordinary preparations are too uncertain to be relied on, and it is too expensive for frequent use. Hyoscyamus sometimes acts excellently, having the advantage over opium of not producing headache and constipation. The tincture, especially Neergaard's, may be given in doses of a drachm to a drachm and a half three times a day, if necessary. Oxide of zinc may prove serviceable in some cases, two grains being given three times a day. When much larger doses are given, it generally produces irritability of the stomach. Phosphorus is a remedy which has come into use recently. Twelve grains of phosphorus should be boiled in one ounce of almond oil, and filtered. The oil absorbs four grains of the phosphorus, so that each minim contains $\frac{1}{120}$ grain. Half an ounce of this oil is to be mixed with one ounce of gum arabic, and fifteen drops of some aromatic oil are added. Of this mixture the dose is fifteen drops, equal to five drops of the phosphorated oil, and containing $\frac{1}{24}$ grain of phosphorus. I have used it in eight cases with success, and failed in two cases. I try to get three doses taken before bedtime, and thus far have succeeded in producing the desired effect on the second day, if I had not on the first. The dose may be increased by a drop a day until twenty are taken or signs of gastric irritation supervene. But of all the sleep-producing agents at our disposal, bromide of potassium is most deserving of the name of hypnotic. I have never seen it fail when given in sufficient quantity. A healthy adult may take from twenty to thirty grains three times a day, the latter dose not being too large when needed at all. Sometimes it produces, amongst its other effects, great weakness in the legs and a staggering gait, strongly resembling that of a person intoxicated with alcohol. It also occasionally produces great lowness of spirits and a disposition to cry. It should be administered very much diluted, and may be conveniently prescribed one ounce in four ounces of water, a drachm of this being given in at least half a tumbler of water."

THE MARSHALL HALL MEMORIAL.

A GREAT discoverer seldom receives his rewards during his lifetime. It is left to posterity to do justice to his labours and his fame. This is more especially the case with regard to members of our own Profession. Harvey and Jenner were ridiculed and persecuted during life; after death, honoured and extolled. Marshall Hall was no exception to the rule. His life was one prolonged combat with detractors and envious opponents. From the very first moment he published his great discovery of the excito-motory system to the last days of his life, he was engaged in controversy. His assailants were many of them men of mark, and it was necessary they should be answered. But he had other opponents less distinguished, but less scrupulous of the means they employed to injure his reputation. I had the pleasure of the personal friendship of Dr. Marshall Hall. For many years I knew him intimately. I was consulted by him on many occasions when he had been attacked or vilified. I had the honour of defending him more than once in the pages of a Medical journal with which I was then connected.

No man ever earned his reputation with more labour and under more trying circumstances than Dr. Hall; for, though of indomitable perseverance, and of undoubted courage, he was sensitive to a painful degree. It was this extreme sensitiveness which gave rise to the erroneous impression in the minds of some persons that he was naturally quarrelsome. He was not so. He felt keenly a sneer or a rebuke, and fretted under trifles as a high-spirited horse will fret under the slightest touch of the whip. But he was never dismayed, never untrue to his allegiance. He had founded his theory on a repeated series of indisputable experiments, and he felt certain of its truth. If therefore he was attacked, he attacked again; but I believe he was never on any occasion the aggressor. I shall not easily forget the effect of the Prochaska controversy upon him. It kept him in a state of extreme agitation, but he was not dispirited; he answered the attacks successfully, with his usual ability and temper, but it embittered his life for several years. Dr. Marshall Hall never appeared to greater advantage than at the memorable discussion on his system at the Medical and Chirurgical Society, nearly twenty years ago. Arrayed against him were some of the ablest men of the day, men accustomed to speak, and "well up" in the subject. He was attacked by a host, certainly with great ability, and not in a bitter spirit. He was thought to be overwhelmed; this was a mistake. He rose to reply; the audience listened with profound attention. In his quiet unobtrusive manner, with his subdued voice, he seemed no equal match for his great opponents; but he soon displayed his real power. In a speech of unsurpassable clearness and true eloquence he quickly grappled with the arguments that had been advanced against him. In sentences almost epigrammatic in their brevity and style, he demonstrated the truth of his theory. He met with great applause at the conclusion of his address; but there were still many who maintained that he was in error. Attacks were afterwards made upon him, but none with the gravity and seriousness of this. Now that the fierceness of controversy has passed, and he who fought so long and so gallantly for the truth is laid in his grave, we propose to do honour to his memory. The meeting held last week offered a pleasing contrast to many with which his name is associated. All present were animated by the desire to hold him up to admiration as one of the greatest discoverers of the age. It is well that the memorial should be a handsome one. The subject is in the hands of a committee of gentlemen well fitted to carry out the intended object in a satisfactory manner. We may state, as a matter of history, that Dr. Marshall Hall never had an extensive practice—that is, it was never so lucrative as might have been expected of one of so great a reputation; but he was more of a philosopher than a man of business, though his opinion was of the highest value. I remember at the opening of the Middlesex Hospital School (in 1837, I think) the address was given by Sir C. Bell. He, too, a great discoverer, had suffered from detraction. He, too, had never in practice obtained that position to which his great talents and experience entitled him. He drew a gloomy picture of the miseries which beset the path of a man who claimed to be "a philosopher." He, too, was said to be of the *genus irritable*, but he had good reason to feel disappointment and disgust at the treatment he had received. J. F. C.

GRESHAM LECTURE.

By E. SYMES THOMPSON, M.D., F.R.C.P.

ON TRAINING THE MIND.

ACQUISITION of knowledge is not the sole end of education; as the body needs care to secure sound development as well as special training, so must the mind be cultivated and aptitudes acquired, not as a means of livelihood only, but to accomplish the perfection to which man is destined. But this is a practical age, and we desire to see the object of everything, and are unwilling to separate training the mind and acquiring knowledge. The only way of educating is—we are told—by instructing. The only way of training intellectually is by imparting information. As a professional man gains professional knowledge by reading and practising his profession, so we must accustom a man to read, talk, and think on subjects of general education. We cannot separate formal and material elements of thought any more than we can separate matter and form, body and soul. The term useful education is, in this way, confined to technical or professional knowledge, or what the Germans call "Brodwissenschaften" (bread-knowing or bread-and-butter sciences), as distinct from the training directed to help the development and growth of mind.

The acquisition of knowledge and intellectual cultivation are

not, however, identical, and an education having for its aim only the former object is sure to fail in the latter. Knowledge taught by others is one thing, self-culture another. Children are sent to school as much to acquire obedience, industry, application, as to master reading, writing, and arithmetic. A good instructor will give children little to do, but be careful how they do it, and be sure that they master what they learn. The completeness, thoroughness, and method thus taught are vastly more important than the mere facts acquired. Sound knowledge is, like the oak, of slow growth, and to grow up symmetrically the mind needs, like the tree, light and air from various quarters.

Since the time of Milton, most of our great literary lights have insisted on the evil of confining the mind of youth too exclusively to classical training. The so-called "liberal" education of the day is anomalous and incomplete; the elements of natural science should form an essential part, for education ought to represent the existing state of knowledge, and to do this it must be progressive. Classical training was the best, indeed the only, training that could be given, when science had no existence and there was no modern literature to speak of; but to perpetuate this in these days of progress is a strange anachronism.

"In an age full of modern artillery we turn our boys out to do battle with the sword and shield of the ancient gladiator" (Huxley). It cannot be the aim of education to make every man an encyclopædia—

> "A bookish blockhead ignorantly read,
> With loads of learned lumber in his head."

Nor can we, if we would, teach men all they ought to know; but it is possible to teach how to learn, and all should know how to think. Thinking, like rowing or riding, can only be taught by practice, and the work which most stimulates thought is the best.

The faculties of observation are not exercised in our schools; discursiveness is encouraged rather than concentration. Students go to the Universities ignorant of the knowledge of *things* distinguished from *words*. It is more important, as Mr. Lowe remarked, for a man to know where his liver is, and what is its function, than to know it is called ἧπαρ in Greek and *jecur* in Latin. Classical and mathematical studies are invaluable in training the mind to habits of correct observation and accurate discrimination; but so are the natural sciences.

Boys at school learn with pleasure and avidity the elementary facts of natural philosophy—the *theory* of projectiles has attractions for them only second to the *practice*. The languishing inefficiency of most boys at their Greek and Latin contrasts wonderfully with the keen enthusiasm with which they attack physical science, and it cannot be a question in which study their reasoning faculties are best drawn out. It is said that a marked increase in grasp and penetration has been observed in those schools into which science has already found entrance; observation, accuracy, exactness, acuteness—the very faculties useful in the business of life—grow rapidly, and the power of estimating (perhaps the most marked characteristic of the man of education) the value of evidence.

Our schools are nevertheless slow to accept the conclusion that they need change. Masters must teach what they know, and in the same way in which they learned it themselves. A teacher should be a first-rate man in mind, feeling, and energy, with point and heartiness of intellect, not, as was formerly the case so often, a worn-out broken-down man who had failed in business and in everything else at which he had tried his hand. If the parents of children insist on the introduction of physical science, schools will supply the necessary teachers. This will not at first be easy, but the demand for good teachers will create the supply; men will take to science as a profession, and the value of such inducements will be great. Remunerative offices, as well as exhibitions and fellowships, open to men of science in England, are deplorablyfew and meagre.

Professor Masson (Macmillan, Oct. 1867) has ably advocated the consolidation and aggregation of the higher teaching bodies of London, so as to form a reformed University of London or a central academy where science could be taught by first-rate and well-paid teachers to all comers.

The far-seeing founder of this College (Sir Thomas Gresham) intended to form such a centre, believing that the University of London should be a really educational institution, not merely, as at present, an examining and degree-conferring body, but possessing, like the older universities, endowed professorships and resident fellowships. We are falling into the error of regarding examinations as the only test of fitness, and truly the examinations become every day more real and searching, and, indeed, err on the side of excessive requirement; but while they keep out the incompetent, and supply a definite aim to work for, they are not goals or ends in themselves; they test instruction rather than education; a high place in the honour list is no real test of fitness for the duties of life. Yet it has been proposed, on high authority (Simon), to do away with all regulations as to previous work, attendance on lectures, Hospital, etc., of the Medical student, and do nothing but "test results." We are told, "The proof of the pudding is in the eating." A recruiting officer does not judge of a man by the kind of food he has eaten, or where he ate it, provided that his thews and sinews are in satisfactory order. So a good examiner should not care how knowledge is gained. "Let a man learn how and where he pleases, provided he does learn." For a purely literary profession, such a test might possibly be adequate, but a Medical man's life is a life of action, and his knowledge must be available at all times.

We have said that knowledge of physics should form a part of all liberal education. For the student of Medicine this preliminary work is *essential*. It is no use talking about the exchange of gases in respiration to those who do not know what a gas is, or how it differs from a liquid; on the influence exerted on nerve by the "constant current" to those ignorant of electricity; or on the effect of the colouring matter of the blood on the solar spectrum to those who know nothing of the properties of light.

But *how* these things are to be taught is a practical question of no little moment. It is useless to set boys to read class books on botany or chemistry; these can only breed disgust. We must eschew printer's aid and teach by the eye and the ear. Some few schools have already appointed science lecturers; these awake the interest of the boys, and develope dormant scientific tastes, but—although better than nothing—they supply little more than amusement and information of the most superficial kind. Besides voluntary attendance on a few lectures, some practical teaching should form a regular part of school work. *Botany*, as a science of observation, is a good introduction; a short course on *physics* should precede *chemistry*, which is the perfection of an experimental science, and should be begun in the laboratory.

As an example of the use of the experimental method in chemical research, the Professor demonstrated the various processes and agencies set to work to ascertain the true nature of water. He first showed that potassium and sodium when thrown upon water ignite, decompose the water, and set free hydrogen; chlorine, in a similar way, displaces and sets free oxygen.

The use of electricity in the electrolysis of water was next exhibited, two volumes of hydrogen being collected in one jar, and one volume of oxygen in the other, etc. This experiment suggests mixing two volumes of hydrogen with one volume of oxygen and trying to form water (Cavendish's eudiometer).

The evidence of analysis, synthesis, chemical action, heat, and electricity, is thus needed to demonstrate the nature of simple water.

"The mysteries of nature are too refined, too solemn, to be read off with certainty. In natural and experimental studies, the more we learn the stronger becomes the consciousness of the limit of mental power, and the application of the fact that the phenomena of the universe are seen but as mental visions, beginning in the unknown, ending in the unknown, having to us no beginning and no end" (Richardson).

Many of the great principles of nature are, indeed, too profound to be explained popularly; they cannot be watered down into common-place sufficiently thin for easy digestion by schoolboys or by the public.

The truths of physical science are daily more fully applied to the phenomena of life and disease. What was formerly empirical is at length giving way to what is rational; and, as facts of science are mastered by the public, we shall be able to explain what seem now the mysteries of Medical science. Instead of dogmas and doctrines, they will be logical deductions. We cannot diffuse so generally as we would a knowledge of health laws, of the causes and prevention of disease, till we can secure not only intelligent but trained listeners among the public. Even the ablest men and best writers of the day are now so ignorant of the elements of chemistry and physiology as to be quite unable to realise our position. Not one in a hundred possesses that elementary knowledge which will enable him to judge whether the principles and theories of Medicine are founded upon truth or error. The diffusion of scientific truth is thus the only way in which the public can save itself from

quackery. Science affords a mental recreation of no mean value, and recreation is no waste of time; it is to the mind what sleep is to the body.

Diseases arise from the breach of health laws. Let us strive to diffuse a knowledge of these laws, and thus shall we best promote the health and well-being of all. Hygiene is a science of English growth, and some of its simple teachings should be known to all. It should form a part of that reformed education of which Milton spoke as "fruitful of the mightiest advantages to England as a nation, and to thousands of her sons"—an education which is

> "Not harsh and rugged, as dull fools suppose,
> But musical as is Apollo's lute;
> And a perpetual feast of nectared sweets,
> Where no crude surfeit reigns."

REVIEWS.

JACCOUD'S CLINICAL LECTURES.(a)

(Second and Concluding Notice.)

The twelfth and thirteenth of Dr. Jaccoud's lectures are devoted to the consideration of a subject on which he had previously written,(b) and on which he is regarded as one of our highest authorities—namely, that of progressive muscular atrophy. They begin with a full history of the case of a woman, aged 39, who was one of a troupe who travelled about the country exhibiting learned monkeys. It is a singularly interesting case, because it can be traced directly to its beginning. On August 15, 1865, she was exposed to the action of the rain during the whole day, and remained chilled to the very bones in her wet clothes till 2 a.m. of the following morning. She suffered from repeated rigors during the next two days, followed by pains, often very acute, and always unaccompanied by febrile disturbance, which followed the course of the nerves in the extremities, and especially attacked the articular surfaces of the joints. The pains were of a lancinating character, and were increased by pressure or constriction, and they often assumed a radiating form—that is to say, they did not at one and the same time occupy the whole length of the limb, but, limited at first to the shoulder or to the knee, they would shoot to the elbow or the toes. The pains commenced in the right side (as seems from the observations of Dr. Roberts,(c) to be usually the case), but in the course of six weeks, when the patient came under Dr. Jaccoud's care, they extended to the left side. At first, as her appetite was good, as there was no fever, and as her general health was scarcely at all affected, he regarded her case as one of diffused neuralgia with subacute articular rheumatism, induced by exposure to cold and wet. One morning, however, he observed a new phenomenon which gave him a clue to the true nature of the case. The extensors and deltoid of the right arm were the seat of fibrillary contractions which could be clearly traced through the skin, and of which the patient was conscious, feeling that certain parts of her arm were agitated by slight movements, over which she had no control. In the course of a week or two all possible doubt as to the nature of the case was removed.(d) True muscular spasms now supervened, together with the train of symptoms which modify the configuration of the thumbs, hands generally, and arms, so graphically described by Dr. Roberts in page 170 of the article to which we have already referred. Moreover, the same electric current, applied to corresponding parts, excited in the right (or diseased) arm a much less rapid and powerful reaction than in the left arm. Day by day the disease rapidly gained ground, fresh groups of muscles became successively affected, and by the ninth month the unfortunate patient was perfectly helpless.

Dr. Jaccoud directs attention to three groups of symptoms which this and all such cases present—viz. (1) Changes in configuration of the body, for which the French term, *deformations*, might be conveniently substituted; (2) abnormal attitudes; and (3) disturbance of motor power. The deformations consist in the disappearance of the muscular masses, which stand more or less boldly out in a well-formed person. The muscles may continue to diminish till the arm or leg may appear almost totally wasted away, and we might at first sight mistake the disease for a case of emaciation if we did not bear in mind the absence of regularity in form on the two sides, in consequence of the disease being usually more developed on one side than the other. Moreover, as occurred in the present case, the face remained entirely unaffected, and presented an appearance of perfect health, which contrasted sadly with the appearance of the other parts. In this instance, the state of the face alone would suffice to exclude the idea of the case being one of emaciation. A third means of distinguishing these cases from those of simple emaciation is the absence (in the former) of muscular atrophy, of any anterior disease to which the emaciation could be referred.

The loss of power of the various muscular groups that become thus atrophied must obviously disturb the normal equilibrium of the muscles, and give rise to the second class of symptoms—namely, the abnormal attitudes assumed by the patient. As this is a subject to which Dr. Roberts does not refer, we feel that we need offer no apology for introducing Dr. Jaccoud's admirable word-picture of this patient, in whom this group of symptoms was very clearly defined:—"The attitude of the upper limbs in repose is truly characteristic. The forearm lies on the surface of the bed in a position intermediate between pronation and supination, and, unless when extended by a voluntary impulse, remains in a rather more than half-flexed state. This position is due to the relatively normal condition of the flexors. It is to the hands that we must look for the exhibition of the greatest loss of muscular equilibrium. The wrist is slightly flexed on the forearm, and the fingers are curved inwards towards the palm of the hand, but are not sufficiently flexed to touch it. A similar flexure occurs in the metacarpo-phalangeal and the inter-phalangeal joints in consequence of the loss of action of the interosseous tissues, while the superficial and deep flexor muscles retain their action. [Dr. Roberts's statement that the proximal phalanges are bent backwards (*op. cit.* p. 170) obviously does not hold good in this case.] The phalanges of the thumb are also in a state of semi-flexion, and its approximation to the middle axis of the hand indicates the relative want of power of the extensor muscles and the preponderance of the adductor muscles. By an effort of the will the patient may restore his fingers and forearm to the normal positions, from which you might conclude that there is no suspension of the function of the motor nerves or true paralysis of the extensors, and that the abnormal position of the parts resulted merely from diminution of the bulk of the muscles and their corresponding loss of power. On the other hand, if any of you attempt to restore the different parts to their normal positions, you can do so readily without experiencing any resistance or exciting any pain which is an important fact, and shows that the abnormal flexures of the fingers and forearm are the result of a comparative want of power in the interosseous muscles and the extensors, and not of actual contraction of the flexors." (P. 332.)

Our author's remarks on the different types of the "claw-shaped hand" of Roberts, or the "*main en griffe*" of the French writers on this subject, are deserving of notice in a semeiological point of view. "In the disease known as *contracture des extrémités ou tétanie*, corresponding, we presume, to hysterical tetanoid spasm, the claw-shape condition resulting from the flexion of the fingers is more marked. The thumb, in a state of complete adduction and flexion, occupies the palm of the hand, and the fingers are curved over it. The patient, in this form of disease, is unable to extend the fingers; and any attempts to rectify their position excite acute pain, and are either altogether futile, or are only partly successful, in consequence of the opposition which they encounter. Lastly, the flexion due to spasmodic contraction of the flexor muscles is not continuous, nor always of the same intensity." (P. 333.)

The most common deformity arising from rheumatic gout is the production of a true *main en griffe*, but here there can be no mistake as to its cause. Again, in or after paralysis of long standing we may have retraction of the flexors, which gradually gives to the hand the characteristic form which we are here considering. But, in these cases, the flexion persistently increases, and may become so extreme that it is sometimes necessary to place a foreign body in the palm of the hand, in order to prevent the nails from being forced into the flesh. The patient has not the slightest power over the fingers, and, as the affection is usually one of the sequelæ of hemiplegia, it is unilateral. Dr. Jaccoud noticed one abnormal attitude in this

(a) "Leçons de Clinique Médicale, faites à l'Hôpital de la Charité. Par S. Jaccoud, Professeur-Agrégé à la Faculté de Médecine de Paris, etc., etc. 1867. Paris: Delahaye. London: Williams and Norgate.

(b) "Etudes de Pathogénie et de Séméiotique, les Paraplégies et l'Ataxie du Mouvement." 1864.

(c) *Wasting Palsy*, in Reynolds's "System of Medicine," vol. ii. p. 170.

(d) Dr. Jaccoud observes that the occurrence of acute pains at the commencement of the disease is contrary to the classical description of the malady. This statement is no doubt generally true, but Dr. Roberts observes that cases arising from cold (wearing of damp apparel, exposure to inclement weather, etc.), such as Dr. Jaccoud's case, are marked by a trace of neuralgic, or so-called rheumatic, pains in the affected parts at the onset (as in this instance). They either cease when the atrophy fairly sets in, or may be continuous.

patient which we do not recollect to have seen previously described. When made to sit up in bed, her trunk at once became obliquely flexed on the pelvis, in consequence of the sacro-lumbar muscles of the right side being atrophied, and being thus able to oppose less resistance to the antagonistic action of the flexors than the muscles of the opposite side. By a voluntary effort the patient could overcome this abnormal flexion for a short time at the expense of extreme fatigue.

The disturbances of the movements may be readily understood from our remarks on the two preceding classes of symptoms. When the hand is extended and the fingers placed side by side, the patient can only partially and with difficulty separate them; and, similarly, if they are artificially separated, the patient can only make them assume their normal positions with difficulty. In the case of the thumb, the movements of adduction and flexion are the least affected, the atrophy being most marked in the abductor and in the opponens pollicis muscles. The extension of the wrist on the forearm, and of the latter on the arm, is limited, slow, and difficult, the extensors and the triceps being the muscles chiefly affected. There is flattening of the deltoid region in consequence of atrophy of the muscle, and the movements of elevation and of abduction of the arm are effected in a weakly and powerless manner. Passing over the effects of atrophy of the serratus magnus, trapezius, and rhomboid muscles on the normal movements, as seen in this patient, Dr. Jaccoud noticed that the abduction and flexion of the thighs were almost normal, but that extension of the leg upon the thigh was a matter of difficulty, especially on the right side, and could only be maintained for one or two seconds; hence the triceps was seriously compromised. Flexion of the leg presented no difficulty, but that of the foot, as well as the movement of extension accomplished by the gastrocnemius, was incomplete. The examination of the movements of the abdominal muscles revealed a striking peculiarity. When the patient, lying on her back, is told to raise her right leg from the bed, the movement commences very slowly; but when the popliteal region begins to ascend, the whole limb is suddenly projected outwards, and the same phenomenon exists in a less marked degree on the left side. This remarkable and totally involuntary movement in a direction totally distinct from that which was intended, simulates the most prominent feature of a totally distinct disease—namely, muscular ataxia. The analogy, however, is merely superficial, for the projection of the limb simply results from atrophy of the anterior and internal muscles, associated with full power in the vastus externus, or the tensor fasciæ latæ, and of the peronei muscles. The equilibrium of the muscles which elevate the leg being thus destroyed, the limb, instead of being raised directly upwards, is carried in the direction of the preponderating forces.

When the patient is made to assume the erect posture, the effects of the atrophy of the abdominal muscles are very decidedly seen. She can support herself in the standing position, and can walk after a fashion, one foot gliding after the other without being raised from the ground, and in consequence of atrophy of the lumbar and gluteal muscles of the right side, the body oscillates in a singular way from one side to the other. After she has stood for some seconds, her body inclines to the left, and then comes an energetic contraction of the muscles of the right side, so as to draw the trunk to the opposite side. As might have been expected, this to-and-fro lateral movement ceases if support is given to the right arm-pit.

The case is so remarkable, instructive, and in several respects unique, that we feel confident we need offer no apologies to our readers for entering into the above details regarding the most striking groups of symptoms. The tactile sensibility in Dr. Jaccoud's patient was unaffected, and this, according to Dr. Roberts and others, is the ordinary rule. Dr. Duchenne, and subsequently Dr. Benedikt, have, however, shown that anæsthesia is an occasional symptom; and this is a point of considerable importance, since it tends to support the view that the seat of the disease lies in the nervous system, and not in the muscles themselves. Moreover, another phenomenon noticed by Remak and Benedikt, and tending to support the same view—namely, that there is an exaggeration of reflex movements—did not present itself in this case.

The importance of "electrical exploration" in such cases as these is strongly insisted on, and our author agrees with Dr. Duchenne that they invariably possess electric contractility, but that it is weakened in diseased muscles, and that the degree of loss of this property is exactly proportioned to the amount of atrophy that is revealed by the abnormal flattenings and depressions of certain parts, and by the extent to which the normal movements are interfered with. Nor is this the only phenomenon revealed by electric exploration; another modification deserving of notice is the abnormal rapidity of the muscular exhaustion. In atrophied muscles which are still able to contract with some energy, the contractility diminishes very rapidly under the influence of strong currents, either constant or induced, and this property may even be totally suspended for a second or two. Another modification of the electric excitability has been recently pointed out by Benedikt—namely, that muscles which are still healthy, but which will soon become atrophied, frequently, but not invariably, exhibit as the earliest symptom of their fate a well-marked diminution of their electric contractility—a phenomenon clearly due to a primary disturbance of innervation. A third peculiarity of considerable importance, for the knowledge of which we are indebted to Benedikt, and which indicates even more clearly the original seat of the disease, is the more or less marked change in the excitability of the motor nervous trunks supplying muscles which are still unaffected or at most very slightly diseased.

We are not aware that any English Physicians have applied the thermometer to cases of wasting palsy, although Dr. Jaccoud states that it has been long known that the temperature of the atrophied parts is lowered. This loss of heat is due to two distinct causes. (1) There being a diminished amount of tissue in the atrophied parts, the metamorphosis of that tissue, or, in other words, its combustion, must also to a corresponding degree be lessened; and (2) the cooling is probably in part due to disorder of the vascular innervation. In the present case the temperature of both arms was always below the normal standard, the highest ever observed on the left (the least diseased) side being 98·2° F., while in the right arm it varied from 98° to 96·8°. The degree of cooling varies, however, to a considerable extent. Cold fits, of which the patient was conscious, sometimes occurred in which the temperature would sink to 98° on the left and to 88° on the right side. During the greater part of the fourth month of the disease, thermometers grasped in her hands during the cold fits exhibited a difference of no less than *nine* degrees; this enormous difference however, then gradually lessened to a difference of about 2·6°. These paroxysms never occurred more than once in twenty-four hours, but varied in duration from two to five hours. She could tell with accuracy when the fit was going to cease, and usually observed, "The cold on my right side is gone," and the thermometer always confirmed her statement.

In his summary of the case Dr. Jaccoud directs attention to the points in which it accords with, and those in which it differs from, the ordinary "classical type." The most striking points of difference are the rapidity of the progress of the disease, and its commencement with pains in the bones and joints and along the muscles, which continued for several months. But, as he observes, each of these peculiarities has been noticed in individual cases by Benedikt, Moritz Meyer, Roberts, Friedberg, and Remak, the last-named observer especially insisting on pains in the bones as a symptom. Moreover, Dr. Jaccoud briefly notices the case of a Physician who consulted him solely for neuralgic pains. The condition of the ball of the thumb and of the interosseous muscles even then revealed the true origin of the disease, and the subsequent atrophy of the deltoid and gastrocnemius muscles left no doubt regarding the progressive nature of the disease.

In the second of the two lectures devoted to this subject the author, after discussing the different points on which our diagnosis should be founded, gives an admirable *résumé* of the pathological anatomy of the disease. The different views regarding the changes which occur in the diseased muscle are first considered, and he then proceeds to notice the lesions that have been detected in the anterior roots of the nerves, in the spinal cord (with or without atrophy of roots), and in the sympathetic system. The amount of his knowledge of the literature of this department in English and German is positively enormous; nor are references to Dutch memoirs wanting. From a careful examination of the post-mortem appearances, he concludes, without hesitation, that the disease has its seat in the sympathetic system—a view also maintained by Bärwinkel, Remak, and Benedikt. It is only by the adoption of this view that we can explain the pains and enlargements of the bones noticed by Remak, the variations in temperature, and the contraction of the pupils observed by Bärwinkel, Voisin, and Bergmann, and that we can connect the paralysis or disturbance of sensibility with the production of muscular atrophy in lesions limited to the posterior part of the cord, as in the *tabes dorsalis* of the old writers. In opposition to this view of the localisation of the disease, we have two cases examined by Landry and Bayldon (see Dr. Roberts's article, p. 178) in which the sympathetic was perfectly healthy.

True progressive muscular atrophy defies all the remedies in the Pharmacopœia. In the hands of Duchenne and of Gros (of Moscow), localised faradisation has been sometimes successful; "but," adds Dr. Jaccoud, "now that we are clear regarding the anatomical seat and the nature of the disease, we should have recourse at its outset to the employment of the constant current, and should apply it according to Remak's method, which consists in placing the copper pole over the cervical vertebræ, and the zinc pole over the cervical region of the sympathetic. Some cures have already been effected in this way by Remak and Benedikt." (P. 370.)

This patient, whose case has afforded Dr. Jaccoud a text for two admirable lectures, first came under his care in October, 1865. Our latest information reaches to December 12, 1866, when his volume was going through the press, and eight months after the lectures were delivered. As might have been anticipated, the diseased condition was much more advanced; muscles which were previously unaffected were then undergoing atrophy, and those originally affected could then be scarcely recognised. The *griffe* still existed on the right side, but had disappeared from the left in consequence of the atrophied state of the flexor muscles. This hand consequently lay inert, in a state of passive extension; the intercostals were beginning to suffer. The cold fit still came on daily, and, as before, the coldness was most marked on the right side. She was still able to stand up, and could take a few steps, but she could not execute any movement with the upper limb. Even those muscles which still retained a fair amount of volume were totally irresponsive to the will. Their electrical contractility was, however, good, and "hence," says Dr. Jaccoud, "it is clear that the origin of these additional paralytic phenomena lies in the cord itself, and not in the peripheral nerves—a view which is confirmed by the entire preservation of sensibility. . . . The part primarily affected was the sympathetic at its intra-spinal origin; and hence the atrophy which existed alone for some months. Then, when the disease extended beyond these limits, it affected the motor elements which enter into the composition of the brachial plexus, and hence the secondary paralysis of the upper limbs." (P. 371.)

Had our space been less limited, and if our library table had not been covered with works waiting for review, we should have devoted another article to this excellent work, whose perusal we cordially recommend to our readers. Dr. Jaccoud has special claims on the Medical Profession of this country as being the translator of Graves's "Clinical Medicine," which he has enriched with many valuable notes.

GENERAL CORRESPONDENCE.

"CONTINENTAL PRACTICE."

Letter from Lord Louth.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have just seen in your impression of the 9th inst. a letter under the head of "Continental Practice" which I cannot allow to pass unanswered; and, being the husband of the lamented lady allnded to in it, I hope you will give these few lines a space in your columns. Not being a Medical man, I cannot enter into the minute particulars your correspondent does. I can only give my unqualified contradiction to almost all his statements, especially that relating to typhoid fever of a malarial character. With regard to your correspondent's pecuniary compensation, I submitted his demand to several friends, some of whom he had lately attended for the same purpose, and all agreed that it was exorbitant in the extreme. The offer I made was a good deal more than is usually given anywhere for such services. I am, &c.

Louth Hall, Ardee, Ireland, January 30. Louth.

THE AMYLOID OR WAXY CHANGE.

Letter from Dr. Dickinson.

[To the Editor of the Medical Times and Gazette.]

Sir,—Perhaps you will allow me space to touch briefly upon some "Further Remarks on the Properties of the Albuminoid, Waxy, or Lardaceous Change," by Dr. Legg, in the last number of your journal.

I stated that the so-called amyloid or waxy tissues permanently lost their characteristic reaction after soaking in a solution of potass. Dr. Legg persists in disputing the accuracy of this observation, which is one easily capable of demonstration. It is of course practicable to use the solution too weak, or to continue its action for too short a time, to produce the result. If Dr. Legg has not succeeded with the solutions he has used, let him try stronger, or protract the time of immersion. The strength of solution and the length of time required will of course vary with the thickness of the section, the hardness of the tissue, the temperature, and possibly other circumstances. The action is always slow if the tissue has been previously hardened in spirit or chromic acid. I found, in a kidney which had been hardened in chromic acid, that the iodine reaction was not permanently destroyed until after immersion for seventeen hours in a solution consisting of one part of liquor potassæ and two of water. Under other circumstances, a weaker solution will usually produce the effect in a much shorter time. Before the reaction disappears altogether there is always an interval during which it is much retarded, and it is easy to arrest the experiment, as Dr. Legg has done, at this point. After sufficient immersion the loss of the amyloid reaction is, as I have already said, permanent. I have kept the "amyloid" sections, which have been subjected to this process, in a solution of iodine for weeks, without any appearance of the amyloid reaction. What I have stated can be so easily verified that discussion is idle, but, if Dr. Legg still has doubts, I should be most happy to show him the experiments upon which I have founded my assertion.

Dr. Legg objects that in one of my analyses—and he might have included another, which I have given in my book, though not in the paper to which he refers—I have not given the percentage of alkaline salts, but only of the soluble ash. I thought I had made the meaning sufficiently clear. The fact was, that under the process employed the soluble ash consisted entirely of the salts of potass and soda. I therefore used the terms soluble ash and alkaline salts as bearing the same signification.

In opposition to the statement that the waxy change is very generally preceded by suppuration, Dr. Legg says that suppuration often takes place without the production of the waxy change. This is no doubt true, though it is also true that the lesser degrees of the waxy change are often overlooked at post-mortem examinations unless the organs are especially tested. The fact, however, that suppuration may occur without causing the waxy change by no means proves that the waxy change is not a result of suppuration. Persons differ infinitely in their power of resisting morbid influences. Suppuration may injure one man more than another, according to individual differences and varying circumstances. Though the waxy change can very generally be traced to suppuration, it does not follow that suppuration will, with the same frequency, produce the waxy change. Fractures of the skull can very generally be traced to blows on the head, but it does not follow that blows on the head will generally fracture the skull. What proportion of cases of long-continued suppuration cause waxy change I cannot exactly state. My impression is that it is comparatively rare to find no trace of it where the drain has been profuse and protracted.

Dr. Legg alludes to a statement of mine, that waxy organs had, in certain cases, been found to give an acid instead of an alkaline reaction. He rightly concludes that I did not apply tests to the human viscera during life, or even immediately after death, and, believing that death works rapid changes, is interested in learning under what circumstances I ascertained the fact I have stated. My plan was simple and obvious. My experiment was comparative. Not being able to examine the organs during life, I did so after death. I found that the cut surface of an "amyloid" liver turned litmus paper red, while the cut surface of a healthy liver (likewise belonging to a dead person) did not do so. I thence ventured to infer that so marked a difference after death probably resulted from a chemical difference which had existed during life.

With regard to the "amyloid" reaction of dealkalised fibrine and albumen, I must point out that Dr. Legg has mistaken the purport of my argument. Having been led by observations, which I need not here repeat, to the conclusion that the "amyloid" reaction of waxy organs depends on the absence of free alkali, I tried whether, by artificially dealkalising animal matter, I could get a similar reaction. I found that this occurred, and regarded the experiment, not as "the great point on which the theory of dealkalisation rested," but as a confirmation of the view already arrived at. Organs which I supposed to be wanting in alkali gave a peculiar colour with iodine. A similar reaction took place with fibrine and albumen from which the alkali had been artificially removed. The waxy tissue and the dealkalised matter resemble each other in the absence of alkali and in the reaction which depends thereupon.

Dr. Legg has laboured to disprove what I never for a moment supposed—namely, that the dealkalised matter and the "amyloid" formation are absolutely and in all respects the same. There is very little doubt that the increase in "amyloid" organs is of protein matter, and I have inferred it to be allied rather to fibrine than albumen; but on the latter point we as yet have no certainty.

In conclusion, I may once more draw attention to the main points in the views I have advanced—first, the frequent dependence of the waxy disease upon suppuration; secondly, the loss of alkali as the link which binds together the suppurative process and the organic disease. These views await the verdict of time. I may be allowed to say that nothing as yet has given me any reason to doubt their stability.

I must take leave to remark that the term "albuminoid" which Dr. Legg persists in using is peculiarly objectionable, because that name has been inseparably associated with the rickety enlargement of viscera, which Sir W. Jenner has so fully described, and which is a totally different pathological state from that which has been entitled waxy, lardaceous, amyloid, or depurative. I am, &c. W. H. Dickinson.

Chesterfield-street.

VENEREAL DISEASES IN THE FRENCH ARMY.

Letter from Mr. Berkeley Hill.

[To the Editor of the Medical Times and Gazette.]

Sir,—In a summary of the Medical Report of the French Army for 1866 in your number for January 30, you state that during 1866 the corrected mean of cases of syphilis for the present strength of that army is 110 per 1000 of effectives. You proceed to state that in the home portion of the British army (which you estimate at 59,738 men instead of 70,292 men) there were 6091 admissions for primary and secondary syphilis in 1866, being, you calculate, a proportion of 102 per 1000 of the strength. You then conclude that syphilis prevails nearly to the same extent in both armies. If you turn to the British Army Medical Reports, p. 7, you will see that the total number of admissions for the syphilitic group of venereal diseases was 9809, not 6091, and that the annual ratio is 139·6, not 102 per 1000 of mean strength for the syphilitic group alone. But your estimate is wrong in other respects. First, the French report (see page 16) does not distinguish the syphilitic from other venereal disorders; hence, instead of syphilis the word venereal should have been employed. Again, instead of 110 per 1000 of effective strength, you will see the real number is 97 per 1000—that is, in the whole French Army the proportion of venereal disease of all kinds was 97 per 1000 of effectives in 1866. This number must be compared with the entries for venereal disease of all kinds in the British Army. In the Army Medical Reports, page 2, the proportion of venereal disease per 1000 of mean strength in 1866 is set at 258·5, or more than 2½ times the amount in the French Army. Unfortunately the French report does not classify the venereal diseases as the British does. We can but deal with the gross amounts of loss from this cause in the two armies. Taken thus, we find that venereal disease caused in 1866 nearly three days' (2·89 days) loss of the services of the whole army in France, and nearly six days' (5·91 days) corresponding loss of the home portion of the British Army.

I have not had leisure to examine the correctness of your analysis respecting other kinds of sickness in the French army, but my attention was drawn to that appertaining to venereal diseases by the letter of Mr. O'Brien in your impression of February 6. That gentleman is naturally misled by your statistics into supposing that as preventive sanitary measures do not diminish the amount of venereal disease in the French Army, they will be unlikely to do so in the British. He will now probably reconsider his opinion. I am, &c.

Berkeley Hill,
One of the Hon. Secs. to the Association for extending the Contagious Diseases Act.

February 10.

LOSS OF SPEECH.

Letter from Mr. Henry Carnley, M.B. Lond.

[To the Editor of the Medical Times and Gazette.]

Sir,—Much has lately been written respecting "loss of speech" (under various names), and, having under my care at the present time a patient who is unable to express by words the ideas she wishes to convey, I have thought carefully while in her society of the nature of the case. If the following suggestions appear to you worthy of a place in your journal, perhaps you will insert them.

I suppose every one who has carefully read the exhaustive works of Professor Bain will easily comprehend the association of the senses and the constitution of "mind," "memory," etc., or, in other words, the association of the senses and the permanency (more or less) of the impressions upon them. No one has ever yet attempted to locate in the cerebrum any point of such association—to define, *e.g.*, if the optic nerve have its origin from the "corpora geniculata or the posterior and inferior aspect of the thalamus opticus, from the thalamus itself, and from the nates," and the auditory take its origin "in the linea transversæ of the anterior wall or floor of the fourth ventricle;" in what portion of the brain the sound "clock" and the sight of a clock are so associated that the sound "clock" shall always, in a condition of health, be associated with and call up the optic impression of a clock in the absence of a timepiece. Of course no one would attempt it, for I presume it will be acknowledged that the association of the senses is not at any particular point or ganglion, but exists in consequence of the general intercommunication throughout the cerebrum (grey matter?), so that whether the patient be aphasic, aphemic, or agraphic, the association of the senses is the first point to be considered. In the expression of words a long practice has produced such an "association" in the action of certain muscles that we as readily pronounce the word "clock" upon seeing either a clock or the word "clock" on hearing the sound "clock," as we exactly measure the distance between the morsel on the plate and our own mouth.

Although this latter is wholly a matter of experience, and only acquired by constant practice, persons differ greatly, even in health, in this matter of association. Some orators would find it hard to write down beforehand any speech to be made, but can easily and fluently talk upon the occasion, the written symbol being inadequate to call up any association of ideas, while they can readily form such association by the sound of words. Therefore, in any cerebral disorder or injury, it is reasonable to suppose the weaker association would be lost first, so that, the optical impression and association being stronger, things will be thought of as they appear, and the visual symbol remain associated when the association of sight and sound is absent. Again, it is quite possible that the sound expressed by another may recall the sight of the object such sound represents, when the patient cannot associate the two himself, so that the idea (memory or optical impression) of the thing may not recall the sound: or again, and this more frequently (I know this is the case in my patient under observation), the muscular association of speech fails to associate itself with the sight or sound of the object. My patient knows perfectly well her friends and their names, but cannot associate the two; and, having expressed a wrong name, will frequently, knowing it to be wrong, endeavour to recollect the right one, and then, sighing, give it up in despair. So complete is this association and want of correct association evident, that very often, having commenced a sentence, she will complete it by another, the words of which are correctly associated, but have no connexion with the previous part of the sentence, and do not at all express what she wishes to convey, and on many occasions she has laughed heartily at the incongruity of the whole.

I write this note hastily, and with many interruptions. My object is simply to suggest that it is in association simply that a large number of aphasics fail, and that such associations of the senses and muscular association will not be connected with any particular cerebral lesion, but with any that will destroy temporarily or permanently those associations which a long process of education has effected. I am, &c.

56, Charlotte-street, Hull, January 18. Henry Carnley.

LONDON HOSPITALS AND DISPENSARIES.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your leading article on the above subject in your issue of last Saturday, you take exception to the statement of the writer in the *Times* that, "as a matter of fact, most of the teaching staff of every London Hospital treated the laryngoscope much as the captain of a Chinese junk is said to have treated the sextant; it was altogether barbarian and entirely useless."

It so happens that in the last few months I have been making researches in the various Medical journals on laryngeal subjects, and as a matter of recreation I picked out several

remarks on the value of the laryngoscope when it was first introduced."

Your journal was the first to draw attention at length to the instrument, in a letter from your correspondent at Berlin, May 5, 1860. In this, however, as well as a review of Dr. Lewin's book on the subject, September 1, 1860, and in Mr. Jonathan Hutchinson's interesting account of Professor Czermak's demonstrations in London, September 8, 1860, doubt is freely expressed of the general utility of the instrument, and many difficulties, long since vanished, are raised as to its practical value. Your final opinion was not given till August 17, 1861, when, in a review of Professor Türck's work, you end thus—"What is our verdict? We have tried laryngoscopy many times since our Berlin correspondent first brought Czermak's instrument before the Profession here, but we must confess that, even after carefully studying this book, we have not succeeded in seeing all Dr. Türck has managed to see. And the reason why we have failed, and why, even with the best instruction, others will mostly fail, is that not only the Medical man, but the patient, requires an education to the use of the instrument. We have shown how his co-operation is requisite for success, and how much reliance must be placed on him in doing what he must feel to be either very philosophical, highly ridiculous, or disgustingly uncomfortable. It is impossible to set limits to what a real sufferer can be induced to put up with in the hope of its leading to his relief; but, for all that, we cannot look at the picture at page 100, where a patient is sitting before a laryngoscope, putting his tongue out, in the position for laryngoscopy, without the thought that the necessity for this will greatly impede, in England at least, the general adoption of this method of exploration."

The *British Medical Journal*, December 21, 1861, in a review of the New Sydenham Society's translation of Czermak, says:—"Notwithstanding the great stir the discovery (or alleged discovery) of this instrument has made in the Medical world, we cannot avoid thinking that it will be found to be little more than a pretty device—even useful sometimes to the physiologist—but that its practical utility to the Physician will be very limited."

These, it may be answered, are only the opinions of individuals, but the following is an account—the only one I can find—of the opinion of the Profession as a body:—

"A conversation took place at the Pathological Society (January 2) some weeks ago respecting the merits of the laryngoscope. The general impression of those who have used it was, that in most cases of disease requiring such examination it was not possible to derive much advantage from its employment. Either dyspnœa or undue irritability of the larynx and associated parts was present, or both; so that the difficulties were considerably increased under these circumstances. This opinion quite concurs with our own personal experience in the use of the instrument. The individual whose throat is to be examined must go through a long course of training before he is able to bear the manipulation required for the inspection of his larynx."—*British Medical Journal*, January 19, 1861.

Without further comment, I beg to subscribe myself, Sir,

Yours, &c. QUOD SCRIPTUM MANET.

*** We think our correspondent must see that his quotations by no means justify the comparison of the *Times* reviewer. The laryngoscope, after it was introduced to the Profession by the visit of Czermak, was adopted by many of the leading teachers and Physicians in London and the provinces. We believe it is now used in every London Hospital and by a large number of private Practitioners. The comparison was very good as a smart saying, but in our opinion it was unfair.

"ORTHOPÆDIC."—No doubt many of our readers have often wondered at the meaning of the term "orthopædic" as applied to a "Hospital," and have thought possibly that the institution must be a place where little boys (παῖδες) are made straight. It turns out, however, as we learn from a letter in the *Atlas*, that it was originally a mistake for "orthopodic" or "orthopedic" (πόδες, Lat. *pedes*), and that the absurd name having once been bestowed cannot be altered. The Hospital in question, which has for its object the *putting of club-feet straight*, ought clearly to be called the "orthopodic," if we adhere to the Greek derivation, or "orthopedic," if we like to take the one half of the term from the Greek and the other from the Latin. —*Guardian*.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, FEBRUARY 2, 1869.

Dr. QUAIN, President, in the Chair.

REPORTS by the Committee on Morbid Growths were read—first, on Mr. Adams's specimens of supposed cancer of the breast, which turned out to be no cancer at all, but a mass of dense fibroid tissue, of false membrane, and shreds of connective tissue; second, on Dr. Powell's specimen of diseased spleen and suprarenal capsules. The masses were not aggregations of tubercle or the result of scrofulous inflammation, but were allied to Hodgkin's disease and the products of syphilis. The Committee further reported that they had nothing to add to Dr. Moxon's history of the specimens of diseased glands and spleen he had exhibited at a former meeting.

Mr. MYERS then proceeded to show an Aneurism in the Abdominal Aorta of a soldier who had died soon after admission into the Hospital. He only complained of pain in the abdomen. There were a large proportion of such cases in the army, and Inspector-General Lawson had shown that they were much more common in the army than in the navy. Many held the excess was due to the prevalence of syphilis; but this was quite as common in the navy. The two causes to which he attributed the great amount of aneurismal disease in the army were mechanical obstruction to the circulation and the tight tunic.

Dr. WILKS said this excess of aneurism in the army was a new fact to him. He thought it must be due to the exertion certain exercises entailed rather than to syphilis. The disease was a very rare one among women.

Mr. C. MOORE thought that in this specimen there was some peculiar deposit which would weaken the vessel. He attributed aneurism rather to disease than to exertion.

Dr. MURCHISON remarked that in one specimen shown last year what was taken to be syphilitic deposit in the aorta was really atheroma. He had been led to think that syphilis favoured the formation of atheroma. The combination he had found to be not unusual.

Mr. HULKE thought it would facilitate discussion if it were clearly understood of what the wrinkles referred to as existing in the specimen were composed.

Dr. POWELL wished to know whether thoracic was more common than abdominal aneurism in the army.

Dr. MOXON said that sailors were more likely to suffer from tension than soldiers were. He had found no example of atheroma in his cases of syphilis, and he held that aneurism did not arise from atheroma, but before it.

The PRESIDENT remarked that in Mr. Myers' statements there was no reference to site, so that they were necessarily incomplete. He would refer the case to Dr. Moxon and Mr. Hulke.

Dr. LEGG showed a specimen of ulcerated trachea following on tracheotomy in a child seven years old. The child suffered from diphtheria, and was relieved by the operation, but the wound did not heal. In the end of January the wound was reported healthy, but the child died of tubercle, causing meningitis, early in February. In the larynx, below the chordæ vocales, were many small ulcerations, and the mucous membrane was bright red. There was an ulcer at the site of the opening. The tube was only worn four days, and after an interval of one day three days more.

Dr. LEGG also exhibited some interesting trabeculæ crossing the interior of the shank bone of an ox. These were not certainly pathologic, but were very rare.

Dr. WILLOUGHBY showed a diseased uterus from a woman who died of tubercular peritonitis. She was aged 35, and was suffering from phthisis. She had borne several children. After death the whole pelvic contents were found glued together. The ovaries were filled with cheesy matter, and the right one contained a clot. The Fallopian tubes were distended and convoluted.

Sir DUNCAN GIBB had brought forward two such specimens some years ago.

Dr. GREENHOW exhibited a specimen of Amyloid Disease of the Right Suprarenal Capsule from a man aged 36. He suffered from pyelitis, and the kidney existed as a large tumour in the right hypochondrium. He also had a stricture of the urethra, which was cured. The pus in the urine almost disappeared, and he left the Hospital, but returned again. The

tumour was less manifest when he returned, but the liver was more evidently affected. Hyaline casts were found in the urine, and the patient died of diarrhœa. He had no symptoms of Addison's disease. The right kidney was a large sac; the left was twice its natural size. The liver and spleen were also affected. They gave the amyloid reaction, as did the suprarenal capsules. This case illustrates the point already enforced in the Society—that Addison's disease does only accompany a certain definite pathological change of the suprarenal capsules, not every kind of change. He thought each case should be thoroughly investigated.

Dr. GREENHOW also brought before the Society a Heart with four Pulmonary Valves from a woman aged 40. She had an abdominal tumour in the splenic region; the liver was enlarged. She had a systolic murmur on the right side, with venous regurgitation, menorrhagia, and other forms of bleeding. There was no excess of white corpuscles in the blood. She died of typhus. The valves were fenestrated. The spleen was hypertrophied, and the liver was beginning to be cirrhotic.

Dr. KELLY exhibited a beautiful specimen of Hydatids removed from a cyst in the right Auricle of a boy who had been previously healthy, but died very suddenly. The lungs were collapsed, and the pericardium was adherent over the right auricle. Inside it was a large cyst, one of whose lobes blocked up the tricuspid orifice. It appeared to have originated in the sinus. In both pulmonaries old cysts were found, but none existed in the lungs. The right ventricle was not full; the auricle was. He probably died of cerebral anæmia. All the other organs of the body were healthy.

Dr. KELLY also showed an Aneurism of the Aorta from an old man, who complained in November last, when, on examination, a tumour was found in his thorax. He became delirious, and died of syncope. The left pleura was full of blood. The aneurism had pushed the pleura before it, and pressed on the pulmonary veins, which had caused him to spit blood.

Dr. WILKS exhibited specimens of Hypertrophied Bone, such as are often seen in the dissecting room, but which are rarely traced during life. They were removed from a man aged 60, who thirteen or fourteen years ago suffered from pains in his ankles. His tibia and upper extremities became enlarged, his head was last affected. The rigidity gradually increased; his ribs became affected, and he began to suffer from dyspnœa: mucus collected in his lungs, he had dropsy, and, finally, after some months, during which he had scarcely been able to move, he died. Latterly his ribs had been almost immovable, and he had breathed by his diaphragm alone. He looked more like a brute than a man. He became shorter in statue, his chest was narrowed, and his legs were bent. The bones were spongily hypertrophied; on the outside of the femur was some new bone. His skull cap weighed 31 oz., the femur nearly 3 lbs. The pelvis had assumed the ricketty type. The bones of the face, of the carpus, and of the tarsus seemed sound. The ribs were flattened as in mollities ossium. The heart was enlarged on the right side. He had been under treatment for twelve years. Everybody had given him iodide of potassium and iodide of iron, so that he was thoroughly saturated with iodine.

In reply to Mr. Bruce, it was stated that Dr. Wilks thought the cartilages of the ribs were affected. The lacunæ in the bone were tolerably perfect, but absorption was apparently going on; indeed, Mr. Durham thought the disease the same as mollities ossium.

Mr. W. ADAMS said there were some specimens of the same kind in St. Thomas's museum, but, as he thought, apparently softer.

Dr. A. GIBB said there two such in Westminster Hospital museum which he had exhibited, as some people thought the Neanderthal skull was of this kind. They were much thicker, lighter, and more porous than those now exhibited.

Mr. HOLTHOUSE asked if there had been pain in the head, as some bones appeared to be thickened by inflammatory deposit, both on the outside and on the inside. He remembered one gentleman who had suffered from constant pain in the head, with swelling and tenderness of that part.

After some desultory observations,

Dr. WILKS proceeded to show a kidney which he had been asked to exhibit. Externally the material by which it was enlarged would be considered an innocent growth, as formerly such tumours were studied with regard to Surgery. Many supposed that tumours of the kidney could be cystic or cancerous only. The patient had passed blood in his urine many years ago, and the existence of the tumour was known for about seven years. Nearly all these foreign growths came from the connective tissue of the parenchymatous organs, not from the glandular tissue. The tumour was fibrous in its nature.—Referred.

Mr. MAUNDER showed a growth, probably also of the same kind, removed a little while ago. It appeared to be a pulsating aneurism. It was removed, and the patient died of pyæmia.—Referred.

Mr. PICK showed a tumour occurring in the labium of a syphilitic woman who had died in St. George's Hospital of the cachectic condition induced by the disease. She had suffered from syphilis four years ago. The tumour was of two years' standing. Iodide of potassium and sarsaparilla did no good. The viscera were healthy.

Mr. PICK also showed an Aneurism of the Transversalis Colli from a soldier who had been discharged on its account. He was suffering from advanced phthisis, and died of that disease. Pressure did no good. The tumour was painted with iodine and consolidated.

MEDICAL SOCIETY OF LONDON.

MONDAY, JANUARY 4, 1869.

Dr. RICHARDSON, F.R.S., President, in the Chair.

A SHORT communication was read from Dr. BALTHAZAR FOSTER on Etherised Cod-liver Oil—that is, the addition of ten, fifteen, or twenty minims of pure ether to every two drachms of the oil, which Dr. Foster had found less nauseous, and more easily digested.

Dr. OPPERT related two cases of Lead-poisoning—one of a patient who enamelled playing cards; the other of a man who glazed straw hats.

Mr. HENRY SMITH exhibited a patient upon whom he had eighteen months previously performed excision of the knee-joint. The patient walked excellently without the aid of a crutch or stick, and without a high-heeled boot.

Mr. R. W. DUNN narrated several cases to show that whatever treatment may be adopted, a woman who is infected with syphilis before the seventh month of pregnancy is very likely to have a syphilitic child, but after that time the child will be free from syphilitic taint.

Mr. HANCOCK read a paper on Perforating Ulcer of the Foot. He commenced by giving the history of a patient, aged 24, who, twenty years before, was affected with swelling and inflammation of the great toe; an opening formed, which continued to discharge. Five years subsequently the disease attacked the sole of the foot, and Pirogoff's operation was subsequently performed with a good result. The author then narrated other cases which had commenced with a corn on the foot, for which amputation by Syme's method was performed. He thought this peculiar affection had not been sufficiently recognised. M. Cloquet first noticed it in 1837, and subsequently M. Boyer, Mazolin, and Nélaton had drawn attention to it. It commences as a phlyctæna on the pad of the foot, after which the dermis becomes implicated, and at last the subjacent bone. This is the order of the phenomena which have been found over and over again to occur. What was the disease? Was it one of the developments of scrofula allied to phthisis? Was it a variety of palmar psoriasis? Was it due to syphilitic taint? All writers agree that it commences in the sole of the foot, corresponding to the head of the metatarsal bones, doubtless from the pressure exerted on the part by the weight of the body. It is evidently constitutional and hereditary, some of the patients alluded to having relatives similarly affected—the disease commenced at the anterior part of the foot, and the heel never suffered. The author concluded a most interesting paper by observing that as soon as a perforating ulcer of the foot was recognised it was better to remove the whole of the metatarsal bones by amputation than to use palliatives, which condemn the patient to a succession of painful disappointments.

A brisk discussion followed, and the meeting adjourned.

EPSOM SALTS.—M. Lalieu recommends the following means of disguising the abominable bitterness of this useful purgative:—Having dissolved an ounce of it in half a pint of water, boil a third of an ounce of ground coffee for a few minutes in the solution, and strain through linen. This is to be divided into two doses to be taken a quarter of an hour apart from each other.—*Bull. de Thérap.*, December 30.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, February 4, 1869:—

Curtis, Charles Edwin, Bessborough-gardens.
Drew, Walter Henry, 15, Gower-street, W.C.
Fraser, Donald, Montreal, Canada.
Green, John, Madras, East Indies.
Hewer, Robert, Sheffield.
Kennedy, Alfred Edmund, Stratford, Essex.
Moorhouse, Henry, Budleigh Salterton.

As an Assistant in compounding and dispensing medicines:—

Seaman, Newcome, Laceby, Lincolnshire.

The following gentleman also, on the same day, passed his First Examination:—

Robinson, Richard S., St. Bartholomew's Hospital.

Dr. R. H. Robertson has been appointed Secretary to the Court of Examiners, in the room of Dr. W. P. Brodribb, deceased. Dr. George Corfe and Dr. John Sherwood Stocker have been elected members of the Court of Examiners, the former in the room of Dr. R. H. Robertson, the latter in the room of Dr. H. M. Rowden, deceased.

APPOINTMENT.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

WOODWARD, EDWIN, L.R.C.P.E. and M.R.C.S.—Public Vaccinator to the N.W. District of the Freebridge Lynn Union and to the King's Lynn Union, King's Lynn.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY, February 6.—Lowry John Monteith, Esq., has this day been promoted to the rank of Staff-Surgeon in her Majesty's Fleet, with seniority of the 4th inst.

4TH REGIMENT OF DRAGOON GUARDS.—Staff-Surgeon Edwin Wilson, to be Surgeon, *vice* Surgeon-Major James William Fleming, who exchanges.

15TH FOOT.—Assistant-Surgeon Joseph Bourke, from the 83rd Foot, to be Assistant-Surgeon, *vice* Edward Coffey, who exchanges.

83RD FOOT.—Assistant-Surgeon Edward Coffey, from the 15th Foot, to be Assistant-Surgeon, *vice* Joseph Bourke, who exchanges.

MEDICAL DEPARTMENT.—Surgeon-Major James William Fleming, from the 4th Dragoon Guards, to be Staff Surgeon-Major, *vice* Staff-Surgeon Edwin Wilson, who exchanges; Assistant-Surgeon James Septimus Steward, from the 104th Foot, to be Staff Assistant-Surgeon, *vice* Robert Nasmyth M'Pherson, appointed to the 104th Foot.

BREVET.—The undermentioned officer, who has retired upon full pay, to have a step of honorary rank as follows:—To be Inspector-General of Hospitals: Deputy-Inspector General of Hospitals George Schuyler Cardew, Bengal Establishment.

BIRTHS.

ATKINSON.—On February 5, at Bampton, Oxon, the wife of John P. Atkinson, M.D., of a son.

CURME.—On January 31, at Childe Okeford, near Blandford, Dorset, the wife of Decimus Curme, Esq., Surgeon, of a daughter.

FAER.—On February 6, at 20, West-square, St. George's-road, the wife of Dr. Farr, of a son.

MORTON.—On February 8, at No. 1, Greville-road, Kilburn, N.W., the wife of Dr. T. Morton, of a son.

PICKEN.—On February 7, at Sheerness, the wife of Dr. Picken, R.N., of a son.

WALES.—On February 7, at 5, South-terrace, Dorchester, the wife of John Wales, Assistant-Surgeon Royal Horse Artillery, of a daughter.

MARRIAGES.

BRUCE—TENNANT.—On February 9, at St. Helen's Church, Sefton, Robert Bruce, M.D., F.R.C.S., of Edinburgh, to Blanca Catalina, second surviving daughter of the late Stephen Cattley Tennant, Esq., of Leeds.

CARTER—COTTLE.—On February 4, at St. James's, Shirley, Captain Alex. Rodney Bligh Carter, R.N., second son of the late Vice-Admiral Charles Carter, to Georgine E. Morford, eldest daughter of John Morford Cottle, L.R.C.P., of the Avenue, Southampton. No cards.

CHANTER—ALLEN.—On January 10, at the Register Office, Exeter, and on January 30, at the church of St. Clement Danes, Strand, London, William Wolferstan Chanter, Esq., only son of the late William Chanter, M.D., of Ilfracombe, to Gertrude, youngest daughter of the late Rev. John Allen, M.A., rector of North Huish, Devon.

ELMSLIE—HARMAN.—On February 3, at All Saints, Upper Norwood, Graham, second son of John Foster Elmslie, Esq., of Upper Norwood, to Jane Ann, second daughter of the late E. B. Harman, M.D., of Bath.

HARTNELL—HOLLAND.—On February 9, at the parish church, Walcot, Bath, Samuel Tanner Hartnell, Esq., to Eliza Henrietta, only child of E. C. Holland, M.D., 15, Catherine-place, Bath.

HINGSTON—DAVIS.—On February 4, at the Parish Church, Clevedon, Ernest Alison Hingston, Esq., of Clifton, Bristol, younger son of Charles Hingston, M.D., of Plymouth, to Mary Ellen, youngest daughter of Theodore Davis, Esq., of Lea-grove, Clevedon. No cards.

JEFFERY—SMYTH.—On February 4, at St. Nicholas Church Great Yarmouth, Albert Wilson, second son of John Jeffery, Esq., the Lynes, Northampton, to Rosa Elizabeth, eldest daughter of Spencer T. Smyth, M.D., of Great Yarmouth. No cards.

MACLAGAN—SCUDAMORE.—On February 3, at Newcastle, Co. Down, by the Rev. A. Creery, Prebendary of Rasharkin, uncle of the bride, assisted by the Rev. W. R. Slacke, T. J. Maclagan, M.D., Dundee, to Isabel, eldest daughter of the late Charles Scudamore, Esq., Maidstone, Kent.

MANDY—HARRIS.—On January 27, at the Catholic Church of St. Mary, Clapham, Stephen Mandy, Esq., of Grahan's Town, Cape of Good Hope, second son of Stephen Day Mandy, Esq., of Belsize-park, Hampstead, to Mary Anne, eldest daughter of the late Henry Barham Harris, Esq., M.D.

PAYS—BRENAN.—On February 8, at the parish church, Croydon, Surrey, by the Rev. W. J. Stobart, M.A., and previously by registration, George Pays, Esq., of Moatlands, Sussex, to Augusta Jane, only daughter of the late Dr. Thomas Brenan, Royal Navy, of St. Edward's, Southsea, and granddaughter of the late Herbert Allen, J.P., Hants. No cards.

WELLS—MAY.—On February 3, at Maldon, William Woodcock, eldest son of Joseph Wells, Esq., of Woodhouse, Broomfield, to Mary Alice, eldest daughter of George Parker May, Esq., M.D., of West House, Maldon.

DEATHS.

CRAINE, ROBERT E., M.R.C.S.E., of Ramsay, Isle of Man, on January 25.

JONES, ELIZABETH, only daughter of the late Dr. Jones, of Pendre, Llanrwst, North Wales, at her residence, Ledbury-road, London, on February 2, aged 33.

MCDOWALL, JANE, wife of R. McDowall, M.D., R.N., of Cheltenham, on February 6, aged 73.

NEWELL, H. A., M.R.C.S., etc., second son of the Rev. R. H. Newell, late of St. Bartholomew's Hospital, on February 7, aged 45.

ORTON, THOMAS, Esq., M.R.C.S., L.A.C. London, and Medical Officer of Health for the Limehouse District, at his residence, 5, Brunswick-terrace, Ratcliff, Commercial-road E., after a few days' illness, on January 30, aged 63.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BOOTLE DISPENSARY, NEAR LIVERPOOL.—House-Surgeon; must be M.R.C.S.E. and L.S.A. Applications and testimonials to J. R. Rennes, Esq., Hon. Sec.

BURY DISPENSARY.—Resident Medical Officer; must be registered. Applications and testimonials to Rev. E. J. Smith, St. John's Vicarage, Bury, Lancashire. The gentleman elected will be required to enter upon his duties on April 1.

CARMARTHENSHIRE INFIRMARY.—Physician; must be M.R.C.P. Applications and testimonials to Mr. H. Howells, 58, King-street, Carmarthen, on or before March 24, election on April 9.

CLINICAL HOSPITAL AND DISPENSARY FOR CHILDREN, CHEETHAM-HILL-ROAD, MANCHESTER.—House-Surgeon; applications, with testimonials, to the Chairman of the Medical Board on or before February 26.

COTTAGE HOSPITAL, NORTH ORMSBY, MIDDLESBOROUGH.—House-Surgeon; applications and testimonials to W. Wynn Lloyd, Esq., Gisborough, Yorks.

GENERAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN, BRIDGE-STREET, MANCHESTER.—Resident Medical Officer; must be duly qualified and be registered. Applications and testimonials to the Secretary at the institution, on or before the 25th inst.

INFIRMARY FOR EPILEPSY AND PARALYSIS, CHARLES-STREET, PORTMAN-SQUARE.—Assistant-Physician; must be a Graduate in Medicine and a Member or Fellow of the Royal College of Physicians. Applications and testimonials to the Secretary at the Infirmary. Election on February 18.

KENT AND CANTERBURY HOSPITAL.—Physician; must have been in practice as a Physician for two years previous to his election, and be a Graduate in Medicine of some university of Great Britain or Ireland, and F. or M.R.C.P. Lond. Applications and testimonials to the Secretary at the Hospital on or before February 25. Notice will be given of the day of election.

KENT AND CANTERBURY HOSPITAL.—House-Surgeon; must be unmarried, and between 23 and 41 years of age, and have the diploma of some British College of Surgeons, and be L.S.A. and L.R.C.P. London, Edinburgh, or Dublin. Candidates must produce their diplomas of qualification both from the College and Hall, likewise their certificate of baptism, at the meeting of the Board on February 26; election on the same day.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon; must be unmarried, and under 40 years of age, and either M.R.C.S. or L.S.A. Testimonials to the Secretary at the Hospital on or before February 26. The election will take place on the same day. Personal attendance of the candidates is desirable.

LEICESTER BOROUGH LUNATIC ASYLUM.—Resident Medical Superintendent; must be qualified to practise Medicine and Surgery, and be legally registered under the Medical Act, 1858. Applications, enclosing testimonials and stating age and qualifications, to be sent to Mr. S. Stone, Town Clerk, Leicester, on or before March 11 next.

MALE LOCK HOSPITAL.—House-Surgeon; send testimonials to Henry J. Ker Porter, Secretary, 91, Dean-street, Soho-square, W., on or before February 13.

MELTON MOWBRAY UNION.—Medical Officer; must have the qualifications required by the Poor-law Board. Applications and certificates of qualification to F. J. Oldham, Esq., Melton Mowbray, on or before February 24. Election on February 25.

PARISH OF BIRMINGHAM.—Resident Workhouse Medical officer; must possess the double qualification required by the Poor-law Board, and be duly registered in the Medical Register. Applications and testimonials "to the Guardians of the Poor of Birmingham," on or before February 22. Election on February 24.

PORTLAND TOWN FREE DISPENSARY.—Resident Medical Officer; must be M.R.C.S. Testimonials and applications to the Secretary, 7, York-terrace, St. John's-wood, N.W., before the end of this month.

ROYAL KENT DISPENSARY.—Resident Medical Officer; must possess the double qualification and be registered. Applications and testimonials to C. J. Carttar, Secretary, Catherine House, Greenwich, on or before February 16; election on Thursday, February 25.

UNIVERSITY COLLEGE HOSPITAL.—Physician to the Skin Infirmary. Applications to John Robson, Esq., Secretary, at the College, on or before February 22, from whom further information may be obtained.

UNIVERSITY COLLEGE.—Professorship of Hygiene. Applications to John Robson, Esq., Secretary at the College, on or before February 22, from whom further information may be obtained.

WALLASEY DISPENSARY.—House-Surgeon; must possess both Medical and Surgical qualifications. Testimonials to Mr. G. Holmes, 9, Somerville, Seacombe, Birkenhead, on or before March 10.

WALLINGFORD UNION.—Medical Officer; must be duly qualified. Applications to John Carthew, Esq., Wallingford, on or before February 22. Election on March 2.

WEST ASHFORD UNION.—Medical Officer; applications and testimonials to Edward Norwood, Esq., Charing, Kent, on or before February 13.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Salford Union.—The First Salford District is vacant; area 310; population 37,533; salary £120 per annum.

Penrith Union.—James Mitchell, M.D. Edin., M.R.C.S. Edin., to the Second Division of the Second District.

Wallingford Union.—Mr. Charles A. Barrett has resigned the First District; area 9880; population 5476; salary £113 per annum; also the Workhouse, salary £56 per annum.

APPOINTMENTS.

Bramley Union.—John C. Clarke, M.R.C.S.E., L.S.A., to the Second District.

Bristol Incorporation.—Christopher H. Dowson, M.R.C.S.E., L.R.C.P. Edin., L.S.A., to the Second District.

Croydon Union.—Ebenezer Diver, M.D. St. And., M.R.C.S.E., to the Coulsdon District.

Farnham Union.—Robert O. Clark, M.R.C.S.E., L.S.A., to the Workhouse.

St. Giles-in-the-Fields and St. George Bloomsbury Parishes.—John Carr, M.R.C.S. Eng., L.S.A., Assistant-Medical Officer for the Workhouse.

ROYAL COLLEGE OF SURGEONS.—At a meeting of the Council of this institution, on Thursday last, Mr. Richard Partridge, F.R.S., late President of the College, was almost unanimously re-elected a member of the Court of Examiners, a result which was generally expected, and which is only a proper acknowledgment of his earnest endeavours to improve the examinations for the Fellowship and Membership of the College. At the same meeting of the Council Mr. Alfred Leggatt, of William-street, Lowndes-square, having previously been elected a Fellow of the College, was admitted as such, his diploma of Membership bearing date August 29, 1837. The Members will, perhaps, be glad to be reminded that Mr. Quain, the President of the College, will deliver the Hunterian Oration on Monday next, at 3 o'clock.

UNIVERSITY INTELLIGENCE, OXFORD.—The Examiners for the Burdett-Coutts Scholarship give notice that an examination will be held in the University Museum, on Monday, February 15 and following days, for the purpose of electing a Scholar on that foundation. The Scholarship is open to all members of the University who at the time of election shall have passed the public examination before Moderators and the public examination in the School of Natural Science, and who shall not have exceeded the fifth year from their Matriculation. Candidates are requested to call on the Professor of Geology, at the University Museum, with certificates of their standing, and the consent of the head or vicegerent of their College or Hall, on Thursday, February 11, between ten and two o'clock.

UNIVERSITY OF DUBLIN.—At the Spring Commencement, held on Shrove Tuesday, February 9, 1869, the following degrees in Medicine and Surgery and licences in Medicine were conferred:—*Baccalaurei in Medicinâ:* Gulielmus Hanna Bradshaw; Cuthbertus Johannes Clibborn; Johannes Joseph Lough; Joseph Gualterus O'Malley Martin; Johannes Gulielmus Washington Nason; Josua Parker; David Johannes Sherrard; Gulielmus Magee Tredennick. *Magistri in Chirurgiâ:* Cuthbertus Johannes Clibborn; Johannes Joseph Cranny; Johannes Gulielmus Washington Nason; Fredericus Taylor; Gulielmus Magee Tredennick. *Licentiati in Medicinâ:* Chichester Alexander Bell; Alexander MacAlister.

UNIVERSITY OF DURHAM.—MEDICAL REGISTRATION EXAMINATION, APRIL 20 AND SEPTEMBER 21, 1869.—In accordance with a resolution of the General Council of Medical Education and Registration of the United Kingdom, the Warden and Senate of the University of Durham give notice that all candidates for this examination will be required to satisfy the examiners in one of the following optional subjects:—1. Greek grammar, with Xenophon's Memorabilia. 2. French grammar, with Voltaire's Charles XII. 3. German grammar, with Goethe's "Dichtung und Wahrheit." 4. Elementary questions in mechanics, hydrostatics, and pneumatics.

DR. W. A. GUY, F.R.S., will read a paper at a meeting of the Association of Officers of Health, on the 20th inst., at 7·30 p.m., on "Indiscriminate Almsgiving as a Cause of Disease and Crime." The meetings of the Association are held at the Scottish Corporation Hall, Crane-court, Fleet-street.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—At the usual monthly meeting held on Monday, February 1, J. H. Barrett, Esq., President, in the chair, Mr. Sewill, M.R.C.S., L.D.S., read a paper on the comparative value of the materials used in taking impressions of the mouth, which gave rise to a prolonged discussion.

ELECTION OF SURGEON AT THE CHELTENHAM HOSPITAL.—Our readers are aware the competition for the vacancy in the Medical staff at the General Hospital, caused by the resignation of Mr. Hawkins, was reduced to a contest between Mr. F. A. A. Smith and Mr. Gooding. A poll, demanded by Mr. Gooding, was opened at the Hospital on the 27th ult., and at its close Mr. Smith was found to be elected by a majority of upwards of 300. Mr. David Hartley, the House-Surgeon and Secretary, has kindly forwarded us the return, which is as follows:—Mr. F. A. A. Smith, 731; Mr. Gooding, 414.

THE PROPOSED INFIRMARY FOR OLDHAM.—A long and somewhat animated discussion of the committee of the above Institution, respecting the propriety of the site proposed for the new building, took place on Monday evening. It was successfully contended by Mr. Thomson that the proposed site in West Union-street was most ineligible. It was too central, noisy, and near to unhealthy localities. Eventually a resolution as follows was carried:—"That, as there appears to be a difference of opinion as to the situation in which the Infirmary should be placed, the question be, and is hereby, referred back to the Sites Committee for further consideration."

THE Société Protectrice de l'Enfance held its fourth annual meeting on Sunday, January 31, at the *Conservatoire des Arts et Métiers*, Paris. The President, Dr. Bairier, and the Secretary, Dr. Mayer, gave an account of results. Two hundred Physicians in the departments around Paris gratuitously watch over the nurselings in their districts. Births are now registered at home. Medals of gold, silver, and bronze were awarded to the authors of essays on the physical education of infancy, and to such of the inspecting Physicians as had distinguished themselves by their zeal. Mons. Thiron gave a summary history of infants "from the times of antiquity to our own." Medals and prizes were given to deserving *nourrices*, and after the election of new members of the committee, the meeting was brought to a close.

THE APOTHECARIES' HALL OF IRELAND AND THE LORD LIEUTENANT.—In answer to an address of congratulation to the Lord Lieutenant from the above body, his Excellency said:—"I thank you for your congratulations upon my appointment to the office of Viceroy. I concur with you in the opinion that sanitary measures are of vital public importance, and demand the careful attention of the authorities, both imperial and local. Among those measures I recognise as of paramount importance the improvement of the dwellings of the poor, the provision by improved railway communication of a ready access for our artisans to the environs of our great towns, and the purification of our rivers. I shall gladly avail myself of the assistance which you, as conservators of the public health, proffer me, in the consideration of such measures as these."

THE HEALTH OF LINCOLN.—Mr. Charles Harrison, in his annual report of the state of health of Lincoln, says: "The death-rate was a little over 24 per thousand—rather high, accounted for by the very high rate of mortality during the September quarter. Of the 607 deaths, 294, or nearly one half, were of children under five years of age. Four deaths were registered from small-pox, the first cases probably brought from Hull; three cases occurred in one family. The mother (vaccinated) had the disease mildly, and recovered; her two children (not vaccinated) took it and died. Afterwards cases appeared in various parts of the town, and two children (not vaccinated) died. One of these children lived in Beehive-court, St. Swithin's—a very bad case. In the same room where the children were lying ill, and afterwards dead, was a lodger. This man got his living by selling mills, wreaths, and flowers made of paper. His stock-in-trade was kept in the room. The articles were made in the room, and remained there all night. The next morning this man would be in the street selling his

wares, and probably spreading the disease about the town. As the cases came under my notice, I reported them to the board, and recommended what I considered necessary to prevent the spread of the disease. On November 3 I reported a bad case. This report was returned to me, with the intimation that it was not a matter for the consideration of the board. Since then I have not reported the cases, but I wish to state that at the present time there are some very bad cases of confluent small-pox under treatment in the town." One paragraph in this report is worthy of especial attention; we should be glad to know whether the statement of the local board that the prevention of the spread of small-pox was not a matter for their consideration is consistent with the duties of the board. Surely there must be some mistake in this matter. If not the sooner the local board is done away with the better.

Health of Canterbury in 1868.—Mr. Rigden, Surgeon to the Dispensary, reports as follows:—"The principal epidemic in Canterbury during the past year has been scarlet fever, which has prevailed throughout the year, 9 cases being admitted on the books of the Dispensary in January, 12 in February, 10 in March, 10 in April, 4 in May, 10 in June, 19 in July, 14 in August, 17 in September, 11 in October, 4 in November, and 11 in December; of these 119 terminated in recovery, 5 died, and 7 at the termination of the year were still under treatment. Measles prevailed at the commencement of the year, and 24 cases were attended by the Dispensary, which terminated in recovery. Continued fever, principally of the typhoid type, has not been so prevalent. 1 case was admitted in January, 3 in February, 8 in March, 3 in April, 4 in May, 8 in June, 4 in July, 2 in August, 6 in September, 1 in October, 8 in November, and 7 in December; 42 of these terminated in recovery, 1 was relieved, 2 died, and 10 remain under treatment. Diarrhœa prevailed principally in the summer months, 2 cases being admitted in January, 5 in February, 1 in April, 3 in May, 6 in June, 46 in July, 37 in August, 17 in September, 2 in October, and 1 in December; of these 108 terminated in recovery, 11 died, and 1 remains under treatment. Of ague there have been 10 cases. Of erysipelas 13 cases; 8 of these were cured, 1 died, and 4 remain under treatment. There have also been admitted 4 cases of chicken-pox, 2 of hooping-cough, and 1 case of carbuncle; these have all terminated in recovery."

Poor-law Medical Service. — *St. Pancras.* — Mr. Hardy, one of the late candidates for the out-door Medical officership, was appointed to act during the illness of Dr. Gibson, at a salary of five guineas per week. *Hackney.*—Mr. Aveling, district Medical officer, applied for an increase of salary under the following circumstances—his duties were more than double those of any other officer in the union; diarrhœa had been prevalent, the cost of medicines heavy, and he had been called up eighteen nights in succession, while his salary was but five shillings per day. The application was referred to a committee, which surely will not allow such a state of things to continue. *Woolwich.*—Dr. Seaton has expressed himself highly dissatisfied with the negligence existing in this district in respect of vaccination, and urges the guardians to serve notices to defaulters at once. This will necessitate the appointment of a vaccinating inspector.

Lo, 35 years of age, a small merchant, had his arm dislocated at three years of age. The forearm was bound to the humerus by a bandage, and the hand was thrown in on the inner aspect of the forearm, giving it a peculiar appearance. The parts greatly atrophied. He refused to part with this useless member, as he makes it an object of charity. He offered to give me the arm, if I would maintain him ever afterwards. He could make it move about in all directions, giving it the most fantastic movements.—*The Sixth Annual Report of the Peking Hospital, by Dr. Dudgeon.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Poggio.—Your letter has arrived. Please to let us know the London address of Messrs. Bischof and Company.

An Old Subscriber.—Write and inquire of Dr. Oppert, 10, Charlotte-street, Portland-place.

A. B. C.—Under the Poor-law Act, a union Medical officer cannot be elected a guardian.

Dentieus should make application to Dr. F. Hawkins at the Medical Registration Office, Soho-square.

Student.—The list is published immediately after the examination. Examinations take place twice a year.

Nemo.—Dr. Wm. Hunter lived in Great Windmill-street, Haymarket. The house in which he resided is now a French hotel. The splendid museum room is a printing-office.

B. D. should memorialise the Court of Examiners, who probably, under the peculiar circumstances of the case, would admit him to examination.

A Pupil, before making the complaint public, should appeal to the lecturer to whom his letter refers.

Dr. S. Weir Mitchell's second note did not arrive, as he will have observed, until after the publication of his paper. The passage in question is very instructive.

Dr. R. P. B. Tuaffe's letter on the Brighton Hospital for Sick Children should be sent to the journal that has, almost in the same breath, "praised and condemned" the institution. The Hospital appears to be well established, well conducted, and supported by a large number of influential Medical Practitioners in Brighton. Under these circumstances, it can surely afford to treat with unconcern either praise or blame from a writer who does not know his own mind, or changes it with the moon.

A Surgeon in General Practice.—Complaints of a similar kind are constantly reaching us. The out-door system of relief as carried on in some of our Hospitals is a "mockery, a delusion, and a snare." Not only are thousands of persons annually in receipt of gratuitous Medical advice at these institutions who are well able to pay for it, but the young gentlemen who officiate as House-Surgeons and clinical clerks are too much in the habit of passing criticisms on the practice of their seniors in the Profession. They have, it is true, the excuses of youth and inexperience, but they should reflect that the great charm of youth is modesty, and the great evil of inexperience is to "rush in where angels fear to tread."

A Patient.—There is no parallel between the cases. Letters of advice or consolation from a clergyman to one of his parishioners are given without charge, because he has a certain stipend for performing certain duties, and amongst these duties is giving advice by letter. The Medical Practitioner is placed under very different circumstances. He is paid only for what he does—if paid at all—and relies for his income on the advice he gives his patients. Now, nothing can be clearer than the injustice of taxing his time, knowledge, and skill by asking for his advice by letter without fee or reward. Such a system might be carried on to a ruinous extent. Indeed, we know that, in many instances, it has acted most prejudicially to the interests of some of our brethren who answer letters, as a matter of course, without payment. It is high time the pernicious system should be terminated; and, as the remedy is simple, we think that it may be carried out.

"*The Faculty of Birmingham and the Working Classes.*"—Under the above title an inflammatory handbill has been circulated amongst the working classes of Birmingham, accusing the Medical men of practising illegally.

"Many Practitioners in Birmingham are practising midwifery without a licence, although it is well known that none but Licentiates in Midwifery are allowed by law to operate with obstetrical instruments. This law being violated so frequently is the reason we hear of so many deaths by blundering Practitioners. All who have had Medical accounts rendered, or may hereafter receive them, are requested to send them to a committee of working men, shortly to be formed, who will examine and correct illegal charges before they are paid. It is also recommended that a committee be organised in every town in England for a like purpose, and thus put a stop to illegal Practitioners preying upon the public."

The working classes may be assured that they will receive cordial support from every Medical Practitioner in this crusade against illegal practice; but it is clear that, as yet, they have little notion of what is, or is not, legal.

Greenway's Fracture Apparatus.

A Hospital Surgeon in the West of England writes:—

"I have treated several cases with it, and find that not only does it tend to keep the leg in better and safer position than any other apparatus I ever saw, but it affords an immense degree of comfort to the patient. Mr. Greenway is a Surgeon practising at Plymouth."

We believe that plenty of other testimony is to be had to the value of Mr. Greenway's invention.

Spear v. Doidge.

The following additional sums in aid of Mr. Doidge's legal expenses have been received:—

E. Bowen, M.D., Birkenhead	£2	2	0
Mr. Perry, Shutta Kelly	0	10	0
— Pretty, Esq., per *Medical Times and Gazette* ...	1	1	0
Mr. G. Sercombe, Exeter	0	10	0
Mr. J. Oliver, Launceston	0	10	6
— Lamb, Esq., Barnsbury, per *Lancet*	0	10	6
W. M. Kelly, Esq., M.D., Taunton	2	2	0
F. Trevan, Esq., Port Isaac, Cornwall	1	1	0
E. B. Forman, Esq., Stoke Newington	1	1	0
A. Prideaux, Esq., Liskeard...	1	1	0

Extract of Meat for the London Hospitals.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—With regard to supplying gratis Liebig's Extract of Meat for a comparative trial in the metropolitan Hospitals as offered by the Australian Meat Company in your last week's issue, will you allow us to make the same offer, nothing doubting the result in a comparative trial with the South American Extract?

We are, &c. W. J. Coleman and Co.

13, St. Mary-at-Hill, London, Feb. 9.

Naval Medical Officers.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I purpose noticing in the form of a pamphlet the conduct of the Admiralty in the establishment of a sinecure governorship at Greenwich Hospital, together with their treatment of the Medical staff.

I am, &c. Frederick James Brown, M.D.

Rochester, Feb. 8.

Unqualified Practitioners.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I can scarcely find it in my heart to pity "M.D.," or sympathise with him in his cry against unqualified Practitioners. The evil he complains of originates in himself. I do not, of course, allude to "M.D." personally, but as a representative of the class of general Practitioners in England.) What can he expect but that as he sows, so he must reap! He first sanctions unqualified Practitioners by employing them as assistants, and having taught them that there is no harm in illegal practice, so long as it is for his own benefit, he grumbles when they turn their experience to their own account; he is very wroth because he has to compete against an unqualified Practitioner, forgetting that he has upheld a similar unfair competition against qualified assistants. It is these, the junior members of the Medical Profession, who have really fair grounds for protest. No wonder that, with such disadvantages, they are forced to accept the miserable £50 a year commented on lately in the *Medical Times and Gazette*. It seems to me that the whole system of assistantships is just as much in need of reform as any other branch of the Profession, and one of the first steps should be to prohibit by law unqualified men from engaging in practice otherwise than as students without remuneration. It may be—it has been—said that qualified assistants are not *au fait* at general Practitioner's work, probably not at first, but they must have a beginning just as the unqualified assistants must have had; they have, to be sure, to divest themselves of the principles of high practice acquired in the Hospitals where economy does not enter into the treatment of a patient, whereas the unqualified assistant begins with an unprejudiced mind, and a happy ignorance of lavish expenditure of quinine, tinctures and other expensive medicines. But these selfish principles are not those which should guide "M.D." in choosing an assistant; he is bound to consider the Profession to which he belongs and the public whom he serves, and, whilst faithfully doing so, he does not injure himself, for, by only acknowledging qualified men as legitimate Practitioners, whether as principals or assistants, he effectually secures to himself the protection he now seeks, besides which he elevates his own status and that of the Profession generally; for he who employs a quack to attend his patients is himself little better in sentiment.

I am, &c. Not an Assistant.

COMMUNICATIONS have been received from—

Dr. Hermann Beigel; Mr. Samuel Mills, Lincoln; Mr. Maunder; Dr. Langdon Down; Mr. Haynes; Dr. George Harley; Dr. Lawson Tait; Mr. A. Bruce; Dr. Gordon; Dr. R. Douglas Powell; Mr. W. Denny; Dr. E. Woodward; Mr. G. M. Gifford; Mr. J. Moore; Mr. John Burton; Dr. Weir Mitchell (second letter); Mr. Wm. Tallack; Mr. A. Beatland; T. G.; Not an Assistant; Dr. A. A. Davis; Mr. E. G. Ravenstein; Dr. W. Dickinson; Dr. F. J. Brown; Quod Scripsum Manet; Dr. Gray; Dr. T. Britton; Mr. J. Z. Laurence; Dr. D. Devereux; Dr. J. B. Maurice; Dr. Robert Cooke; Mr. J. St. S. Wilders; An Old Subscriber; Dr. Taaffe; Messrs. Coleman and Co.; Dr. J. G. Davey; Mr. J. F. Collingwood; Mr. Berkeley Hill; Dr. J. G. Richardson; Dr. J. N. Vines; Mr. W. Adams; Dr. Barnes; Mr. J. Chatto.

BOOKS RECEIVED—

Ransome on Epidemics—Indian Medical Gazette, vol. iv. No. 1—Dr. Philipson's Report on the Health and Meteorology of Newcastle and Gateshead, 1868—Canterbury Dispensary Report—Joined Twins: the Obstetrical and Surgical Mananagement. By Dr. Cook—Dr. Schwartze, Archiv für Ohrenheilkunde—Cazeaux's Theoretical and Practical Midwifery—American Journal of Insanity, vol. xxv. No. 3—Saint Louis Medical and Surgical Journal, September, 1868—Richardson on the White Corpuscles of the Blood—Dominion Medical Journal, vol. i. No. 5—Fleischmann's Letter.

NEWSPAPERS RECEIVED—

Cheltenham Express—Irish Times—Sheffield Daily Telegraph—Gazette Hebdomadaire—Lincoln Gazette—Scarborough Gazette—Oldham Chronicle—Medical Press and Circular—Parochial Critic—Brighton Daily News.

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 6, 1869.

BIRTHS.

Births of Boys, 1134; Girls, 1182; Total, 2316.
Average of 10 corresponding weeks, 1858-67, 2132·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	799	832	1631
Average of the ten years 1858-67	757·1	731·8	1488·9
Average corrected to increased population	...	...	1637
Deaths of people above 90	...	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	1	...	11	...	8	10	1	...
North	618210	2	6	4	1	17	14	3	...
Central	378768	...	...	6	1	4	8	...	...
East	571158	1	3	13	...	16	15	2	...
South	773175	5	8	11	1	19	16	3	...
Total	2803989	9	17	45	3	64	63	9	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·621 in.
Mean temperature	49·2
Highest point of thermometer	61·6
Lowest point of thermometer	35·1
Mean dew-point temperature	44·9
General direction of wind	S.W. & S.S.W.
Whole amount of rain in the week	0·65

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, February 6, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending Feb. 6.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Feb. 6.	Temperature of Air Fahr. Highest during the Week.	Temperature of Air Fahr. Lowest during the Week.	Temperature of Air Fahr. Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London Metropolis	3170754	40·7	2316	1462	1631	61·6	35·1	49·2	0·65	65
Bristol (City)	169423	36·1	127	76	*112	61·3	38·4	49·1	1·05	106
Birmingham (Boro')	360846	46·1	261	175	149	58·0	37·2	48·9	1·44	145
Liverpool (Boro')	509052	99·7	401	295	208	61·7	37·0	49·2	1·41	142
Manchester (City)	370892	82·7	270	210	*221	61·8	33·5	47·2	1·10	111
Salford (Borough)	119350	23·1	92	60	67	60·5	34·4	48·0	1·09	110
Sheffield (Borough)	239752	10·5	193	126	121	61·6	36·1	48·5	0·84	85
Bradford (Borough)	138522	21·0	127	71	74	...	...	...	...	...
Leeds (Borough)	253110	11·7	201	129	128	60·0	39·0	49·1	0·97	98
Hull (Borough)	126682	35·6	68	59	55	57·0	33·3	46·4	0·95	96
Newstl-on-Tyne, do.	130503	24·5	99	69	85	58·0	32·0	43·2	1·14	115
Edinburgh (City)	178002	40·2	134	86	114	56·7	28·0	43·3	0·40	40
Glasgow (City)	458937	90·6	372	268	326	55·9	31·9	45·1	0·88	89
Dublin (City and some suburbs)	320762	32·9	206	158	193	59·0	33·2	48·6	0·15	15
Total of 14 large Towns	6546587	35·5	4958	3244	3574	61·8	28·0	47·4	0·93	94
					Week ending Jan. 30.	Week ending Jan. 30.				
Vienna (City)	560000 (1863)	...	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·621 in. The barometrical reading increased from 28·83 in. on Monday, February 1, to 30·12 in. on Friday, February 5.

The general direction of the wind was S.W. and S.S.W.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

February 13. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Royal Institution, 3 p.m. Prof. Odling, "Hydrogen and its Analogues."

15. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London. 8 p.m.: Casual Communications. 8½ p.m.: Dr. Anstie, "On the Popular Idea of Counter-irritation."

16. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Anthropological Society, 8 p.m. Dr. Charnock and Mr. A. L. Lewis, "Locmariaker." Dr. John Beddoe (President), "Physical Characteristics of the People of Bretagne." Dr. James Hunt, "Remains at Carnac."

Pathological Society, 8 p.m. Meeting.

Royal Institution, 3 p.m. Prof. Westmacott, "On Fine Art."

17. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

18. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Harveian Society, 8 p.m. Mr. W. F. Teevan, "Practical Remarks on the Treatment of some Diseases of the Genito-urinary Organs."

Royal Institution, 3 p.m. Dr. M. Foster, "On the Involuntary Movements of Animals."

19. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Royal Institution, 8 p.m. Mr. Greville Williams, "On the Female Poisoners of the Sixteenth and Seventeenth Centuries."

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HUNTERIAN ORATION,

DELIVERED AT

The Royal College of Surgeons

ON MONDAY, FEBRUARY 15,

By RICHARD QUAIN, F.R.S.,
President of the College, Surgeon Extraordinary to the Queen.

WHEN arrangements were made for the meetings of which one occurs to-day, the intention was stated to be that of "showing a lasting mark of respect to the memory of John Hunter, which shall, at the same time, express the very high sense they (the founders) entertain of the very liberal conduct of the Royal College of Surgeons in supporting and preserving the Hunterian collection." It was then doubtless contemplated that the time of the meetings should be largely occupied with a discourse upon the labours and the merits of Hunter; but since that period almost every aspect of the genius and industry of Hunter has been placed before such meetings as the present. The story of his life has been told more than once: his writings have been collected and made easily accessible; above all, his greatest work, the collection in the museum, has been described in the catalogues prepared for this College. Considering, then, what has been published in those many volumes, what has passed from those volumes into the common knowledge of the Profession, I feel that I could but borrow from one source and another already in print were I to dwell at any length upon the labours and the influence of Hunter. Nevertheless, some few facts may be stated—stated again, if it must be—for there will always be facts in the career of one so original, so singularly placed, to fix the attention again and again of those looking at all narrowly into its history.

Having at the outset of his career worked most assiduously during ten years in assisting his brother, then a teacher of anatomy, and in the Hospital, Hunter became unwell, and a warmer climate being advised, he sought and obtained an appointment as Surgeon in the army then on active service. A few years were very profitably spent at the seat of war. Observations were made which resulted in the work on gunshot wounds. Those few busy years were occupied also with that other pursuit which, in combination with the observation of disease, was ever after to engage all his attention—'A manuscript catalogue," says Mr. Owen, "in Mr. Hunter's handwriting, probably written soon after his return from Portugal in the year 1763, briefly defines the nature of about 200 specimens of morbid structure, and of others marked beasts, lizards, and snakes—the specimens of natural history collected for the most part in Portugal, Spain, and Belleisle. This was the germ of the future Hunterian collection, and the foundation of its several departments." And now the army Surgeon, with 200 preparations arranged in order, had formed the plan of his life. In the language of one of his pupils, he returned to England from the army "with his mind teeming with knowledge and full of great designs, determined to display the structure and to investigate the functions of living beings in general in the states of health and disease." "He allowed himself but five hours' daily rest during the remainder of his life." He had to create his own museum, to procure all the materials, to bear all the expenses.

What was supplied to other naturalists from the national funds, as to his contemporaries, Buffon and Daubenton, in France (there were none in England), Hunter had to procure by his own exertions in the practice of his profession as a Surgeon. So, and during the rest of his life, he might be said to have done the work of two professions, two occupations, which would in that time, as now, amply employ two vigorous minds. Withal he pursued his course alone, without help, without even the approval or sympathy of other men. "Few, we are told, perceived the ultimate aim of his pursuits." "His inquiries into the structure of the lower kinds of animals were regarded as works of unprofitable curiosity, and no one felt an interest in them; therefore (continues his pupil), without the solace of sympathy or encouragement of approbation, without collateral assistance, did he labour to perfect his designs." And so he continued to the end.

His aim was different from that of other men cultivating natural science, and his means were different. He stood alone while living, and his name stands now alone, as that of the first and greatest physiologist and Surgeon of all time. It might be truly said of Hunter as has been written of one of the foremost of his contemporaries, one great with a very different kind of greatness—"He was distinguished by qualities great in their separate excellence, unrivalled in their combination."

Hunter's greatest work—the Museum—the basis of all his other works—that which has been progressive in other hands—was not fully appreciated by any one during his life, nor, indeed, till several years after. He himself and his immediate pupils recognised no other object in the collection than that of ascertaining the functions of organs, or physiology, with the sole aim of applying that knowledge to the advancement of practical Surgery. Hence when the President of the Royal Society after Hunter's death was asked to use his influence with the Government in order that the collection might be purchased for the State, he declined to do so. "Had I (he wrote) thought my friend John Hunter's collection an object of importance to the general study of natural history, or indeed to any branch of science except to that of Medicine, two years would not have elapsed without my having taken an active part in recommending to the public the measure of purchasing it." But naturalists have learned to take a different view of the museum. In his address to the British Association for the Advancement of Science in August last, the President of the Association, treating of museums and their value for the instruction of the people, after speaking of his obligations in early life to "that now unrivalled series of catalogues," and to one of the editors, or authors more properly (Mr. Owen), continues in these words—"From the Museum of the Royal College of Surgeons the national and provincial museums of England have much to learn and to copy, and, thanks to the wisdom and munificence of the Council of the College, and to the zeal and ability of the present Conservator, Mr. Flower, it retains the position it attained thirty years ago of being the best and richest institution of the kind in Europe."

Meanwhile Hunter's collection has ceased to count for more than a portion of the whole, insomuch that now the original collection is computed to constitute one-third of the present museum of the College of Surgeons. You will not be unprepared to hear that the large additions—the conservation, so to call it—the buildings, the catalogues, and lectures, have involved considerable expense. A few figures will show how the account stands:—

The State has paid for the original purchase and for buildings, spread over fifty years	£57,000
The College has paid	248,000

Hunter's conceptions of the animal economy far outran the knowledge of his age, and it is in reference to his age that every man must be judged. By infinite original labour and far-reaching thought he did all that man could do to make organs themselves observed on the largest scale, in the various phases they present in the animal kingdom, and in the changes they undergo in individual bodies from time to time, explain their functions—with the aid of experiments well devised to settle or to widen doubts and thoughts suggested by anatomical inspection. Much beyond this he could not go, for he lacked that knowledge of nature which physicists and chemists have gained for us since his time. He was well stricken in years when the first great step was made in animal chemistry when Lavoisier, going on where Black had stopped, gave to the world his solution of the chemistry of respiration. Though less than a hundred years old, and in many of its greater triumphs less than half that age, the chemistry of life has made vast additions to our knowledge of respiration, of digestion, of oxidation working its effect throughout the system. By the labours of chemists and physicists, or of physiologists working by chemical and physical methods, many phenomena, before vaguely assigned to vital action or to a vital principle, have been shown to be the results of complex and yet ordinary chemical or physical processes. Year by year the line which marks, or is supposed to mark, the boundary of the kingdom where vital forces alone absolute has been driven farther and farther back: while in these later years the doctrine of the conservation of force has passed the limits and proclaimed the kinship and convertibility of all the forces of nature of what kind soever.

For the purpose I have before me, I may presume on your acquiescence in this conclusion, that progress has been due on the one hand to the observation by anatomists of the varied structures of animal beings, and on the other to experiments suggested and rendered possible by an increasing knowledge of the facts and laws of chemistry and physics. But I would add

that, while the advances in physiological knowledge are in truth but a fragment of those which have been made in various and many directions under the influence of the same sciences (physics and chemistry), other sciences have been equally fruitful—astronomy and geology for instance; all natural sciences, in short, making marvellous additions to our knowledge and aiding intellectual progress.

I would now briefly advert to the chief hindrance to the progress of true knowledge with which history makes us acquainted. There had been progress as early as three or four centuries before the Christian era, under the influence of Plato, Aristotle, Hippocrates, and in the school of Alexandria. But from that time (says the historian of inductive science) no material advance was made in science. "What great men had already taught mankind (he continued) was perverted or forgotten by their degenerate followers. The schools for the philosophers resounded with systems old and new, with wranglings and boastings; but this availed not to urge on the intellectual progress of man or even to prevent his sliding backwards. The mechanical truths which had been brought to light at an earlier time were overgrown with the rank vegetation of later days and lost sight of, and were not resumed and pursued till a thousand years and half a second thousand had elapsed. It is a manifest mistake to ascribe the decay of science to the incursions of the northern nations."

That condition of the intellect in the schools and among educated men of the period had its influence on the Medical Profession; and indeed all history shows Medicine reflecting in its various aspects the philosophy of the time. And so it might be expected to do, for members of the Medical Profession had their training in the schools, and were necessarily affected as others were by the prevailing system. Submission to authority, with its attendant cessation of all real progress in knowledge, is a prominent characteristic of that dark period and of the mental condition engendered by the mere study of language and of speculations however ingenious. Reference to the history of a single man will illustrate that statement. Galen lived in the second century; his anatomical works possessed much merit for the time in which they were written, and they became the sole, the unquestioned authority, admitted in all schools up to the sixteenth century. It was then that Vesalius appeared. He is the most remarkable person in the history of human anatomy. At an early age he seems to have been drawn, so to say, by an irresistible passion towards the study of anatomy. He sought the means of cultivating his favourite science with incredible ardour. In his time, and for long ages, the study of human anatomy was discountenanced and rendered impossible by the customs respecting sepulture and the psychological notions of almost all people—impossible except to a daring enthusiast. Such Vesalius was. "*Per omne genus periculi, perque ferrum fere et ignes, cadavera sibi comparavit,*" says the great historian of anatomy. As a teacher, he himself tells us that for years he had, like other men, been a commentator upon Galen; but, at length, having found on many an occasion that the great authority who ruled with unquestioned sway for fourteen hundred years was often in error, having found his description of parts to have been taken not from the examination of man, but of other animals, he proclaimed his conviction of the existence of many errors in Galen's work. He resolved to write a treatise on the structure of the human body, and he completed, before he had reached his 29th year, that work which is, in fact, the foundation of all works on human anatomy. But now came his miseries. He had examined the human body, he had rebelled against the sovereignty of Galen; he was accused of having opened a living body. He died miserably from shipwreck while making a pilgrimage to expiate the imputation of wrong-doing. But it may be said that was a solitary case, from which, as a solitary case, no reasonable inference may be drawn. Not so. About the same time, in the year 1559, here in London, a Doctor of Medicine of Oxford was summoned before the College of Physicians, on the accusation of one of the Court Physicians of having stated that Galen had erred; and in the citation it was set forth, if he had not given a satisfactory reply to the complaint before a certain time, he was to be imprisoned, "*in carcerem deduci.*" However, he made submission, and in these terms:—"*Ego Johannes Geynes fateor Galenum, in iis quæ proposui contra eum, non errasse.*" And so we have seen how, under the system prevailing in the schools, progress was stopped for fourteen hundred years—how the authority of a name, of a book, reigned absolutely, and even over the minds of those ministers of nature, anatomists and Physicians.

The best use of any part of the history of the past is that it should afford us guidance as to the present and the future. Has the lesson, which our review of two different periods in the history of knowledge and of intellect teaches, received any application in our system of school and college instruction? That history has, I fear, not been permitted to exercise any influence whatever.

It is believed by many thoughtful people, and I most fully share the belief, that the early period of life, the school time, has long been spent, and is spent, in pursuits which minister but little to the culture of the mind, or to the communication and reception of knowledge useful to any class of society in proportion to the time consumed. But (and I make this statement very deliberately) it is at that early period of life that the first step—the almost, if not altogether, indispensable step—in healthy progress must be taken, whether in the Medical Profession or in the world at large. The early training fitted for those intended for the Medical Profession cannot be parted even in thought from the early training of those who are to be engaged in the legislative profession, the clerical, the legal, or any other profession. Nor can it be separated from the instruction of those in any sphere of society among the so-called educated classes.

At the threshold of any inquiry into this subject, reference to the chief places of instruction of the youth of the country is necessary, for the system pursued in the chief colleges and schools controls the teaching of all the youth of the country. In order to its being fully appreciated, the public school system, though it be familiar to most of those here as household words, ought to be looked at, even however briefly, as a whole. The former—that which, for want of a fitter name, I would call "the out-of-school part"—has been extolled, and I believe deservedly, by a distinguished French statesman; and the French Commissioners, who last year reported to their Government respecting our schools, express on the whole approval of it as being well suited to the people of England, though not applicable to their own countrymen, to whom, as a "military nation," the strictly military arrangements existing in their own schools are, they say, best adapted. But, interesting and important as I believe this portion of our school customs to be, I must pass on to the school instruction. Of this the French Commissioners do not report their approval. Indeed, their conclusion is that we have long been stationary here, while the world has been moving on. The words "*immobile Angleterre*" are applied to us, and we are said to be a "self-taught" as well as a "self-governed" people.

If any justification were needed for occupying your attention with this subject, it would, I hope, be found in the large number of volumes before you devoted to the results of inquiries into the condition of colleges and schools, as well as in the names and the number of the public men who conducted those inquiries. I would fain add my own conviction of the extreme importance of the subject to the future of the Medical Profession, as well as of the whole community.

The system of instruction was instituted about the time of the foundation of several of the schools in the sixteenth century. The classical languages and grammar being the subjects to be taught. The phrase "grammar school" was used, and that phrase was interpreted by the highest law court, even in this century, to mean the teaching of grammar of the classical languages. At the time the schools were founded, Latin was the language of the learned, written and spoken. Even a century later John Milton, who wrote and spoke Latin with much skill—how he wrote English no one need say—has told, in the story of part of his own life, that, when about to visit the Continent of Europe in early life, he practised the foreign pronunciation of Latin in order to communicate the more easily with the learned of various Continental countries.

So, too, all writing, for instance, in anatomy and other Medical subjects at the same period, and for many centuries before it, so far as there was any writing in anatomy and Medicine, was in the Latin language. Vesalius, in the sixteenth century, Harvey and Sydenham at a later period, and down to the middle of the last century most writers used Latin. All the writings of the admirable Haller, including his great "Elements of Physiology," were in the same language. It is curious to notice how even the names of writers were then translated into a classical form—usually a Latin one. It was the custom of the time. Thus Dubois, the contemporary of Vesalius, became Sylvius, Rindfleisch Bucretius, Stenson Stenonis, and so forth, while Wittius, his family being of a place named Wesel, became Vesalius. But in that olden time, in the whole of the so-named Dark Ages, there was a motive stronger than any consideration for the learned and learning to enforce the all but exclusive cultivation of the Latin language: that motive existed in the fact that it was considered the language

of orthodox theology. In the beginning of the sixteenth century, Collet, then a dean of the cathedral in this neighbourhood, having founded and endowed the school known as St. Paul's School, was accused, by the Bishop of London of the day, of heterodoxy, one of the charges alleged in support of the accusation being that he had translated the Lord's Prayer into English for the use of the school.

During all the time when Latin was the language of the learned, the language of prayer and of orthodoxy, that language was indispensable to all but the commonest purposes of life, and one is not surprised to see that the classical languages had the foremost place in school instruction then. But now, with the changes which are known to all, when the learned no longer try to speak Latin or to write Latin, the very same system is continued, and its continuance as the chief means of instruction is justified by various arguments. Thus it was stated before one of the Royal Commissions by several witnesses, schoolmasters engaged all their lives as learners and teachers under the present system, that the great object to be attained in training youth at school is not to communicate to them interesting or useful knowledge so much as to employ in their regard an instrument of mental discipline, and it was said that to accomplish that result (the discipline of youthful minds) no mental exercise is comparable to the study of the Latin language and Grammar.

Has it served as a good discipline of the mind? I assume that, to be advantageous as a means of discipline or in any other way, a reasonable amount of acquaintance with it must be attained. Some evidence may be cited here. Dr. Smith, the editor of the large dictionaries to which classical scholars owe so much, and who has for twelve years been an Examiner at the University of London, says, in answer to questions before the Commissioners of Inquiry in reference to the progress of boys in schools, "I think the knowledge which most of them acquire exceedingly meagre. Judging both from the examinations in the University of London and from the examinations I have conducted elsewhere, I have rarely met with boys who can translate the easiest piece of Latin or Greek *ad aperturam libri*." "I think that if the boys had acquired a fair knowledge of Latin and Greek there might be something to be said for the present system, but seeing that they learn hardly any Latin and Greek, there can be no harm in trying to introduce some other subjects which they might learn."

Another witness, W. H. Besant, M.A., Lecturer and late Fellow of St. John's College, Cambridge, a former Senior Wrangler, says, in answer to a question, "I have observed such deplorable ignorance on the part of a great many young men who enter the University of Cambridge (I must confine my remarks to those I am acquainted with), that I think it would be a very valuable thing if they could be taught experimental facts, not at all looking upon that as a part of their intellectual training. Question: But for useful purposes? Answer: Yes. Question: Do you conceive that the teaching of a natural science could be introduced into the middle-class schools as well as into the upper schools without interfering with other studies? Answer: I think it could be done. I do not see any very serious difficulty." The caution and the bias of the last inquiry by the commissioners about "interfering with other studies" may be noticed, those "other studies"—the usual studies—having been tried, and having left "a great many young men in deplorable ignorance," though trained for a series of years expressly for a great university.

The prevailing system, then, fails to teach many what it professes to teach, and keeps them from subjects they might have profited by.—We have now had information of the extreme deficiency as to classical languages in our schools. How fares it with the mother tongue? "The schools," says the Examiner of the University of London, "give comparatively little attention to French or English, and other subjects which they might teach with advantage." "In spelling they are very defective—that I know from the University of London." Indeed, every examiner—even every Medical examiner, every examiner of this College—could bear testimony from his own experience to the same defect.

The greatest difficulty of early manhood, next after the difficulty of attaining to thorough knowledge of any subject, is to acquire a mastery of the mother tongue—the power to communicate thought or knowledge in good English, clear, sufficient, without redundance. Much help might be given in early life to conquer the difficulty by good teachers. None is given. Whatever we think is thought in English; whatever we learn (even the classical languages) is learnt through English; whatever we speak or write is no longer in Latin, but in English; and yet the English language, composition, literature, form, as a rule, no part of the training in our schools. An obstacle in the way of teaching the English language and literature was suggested to the Royal Commissioners—namely, the difficulty of finding competent teachers. It is said first—and the evidence is quoted by the Commissioners as worthy of especial attention—"that to teach English as a study is a far more rare and difficult accomplishment than to teach Latin." If that be so, surely that greater difficulty of English is but a reason the more for its being taught—that is to say, if the interest of the pupil, and not that of the teacher, is the matter desired. And, again, it is said, "But a scholarly acquaintance with the English language of the humblest kind can be most quickly as well as most thoroughly gained through the medium of Latin." Yet, notwithstanding the deep knowledge of "the medium" possessed by schoolmasters, they cannot teach English.

Is it not a demonstration of the defects of our system, and of its insufficiency as a substitute for training in English language and literature, that, after Greek and Latin have had sole sway in universities and schools for centuries, Royal Commissioners should feel compelled to adopt the statement that competent teachers of our own tongue are not to be found. I know not if those who direct the instruction of the youth of the upper and middle classes of the country fully think out the responsibility of England, of the education of England, with respect to the English language. I may be allowed to use the help here of a foreigner. An eminent public writer, giving an outline of the recent history of his own country (France), with a view to its future, makes the following statement regarding England:—"We," says the writer, "with our comparative ignorance of foreign languages and contemporary history, are only accustomed to look to our home and our immediate neighbours: we scarcely give a glance or a thought to the rest of the world. But if we look over the chart of the whole globe," he continues, "you will see that two rival powers, who are, however, but one in race, in tongue, in customs, and in laws—England and the United States of America—united, dominate (Europe excepted) the rest of this planet; or, to speak more correctly, they only exist there. The United States will rule all the western continent; England has India, Australia, New Zealand. At this very day a book written in English is read by an infinitely larger number of human beings than if written in our tongue, and it is in English that the seaman is spoken with in almost every navigable part of the globe."

If this be so, does not the duty rest somewhere to take good care that the language so widely spread over the earth should be taught and learnt, spoken and written with some purity. Is that to be the care of the pioneers of civilisation in new and distant lands, or does it not rest with the mother country, the parent of the people and of the language?

But there is something even more important than the cultivation of our own language, if different degrees of value may be assigned to two subjects both of which are absolutely necessary, which should be inseparable. I allude to the knowledge of the works of Nature, in the midst of which we are placed. It is curious to see how, in that of which I have spoken as the "out-of-school" system of the country, Nature bears full sway, while the moment the school is entered Nature is deposed. The door seems closed against her; and yet to almost all human beings the knowledge of the productions of Nature is most attractive, as it is most useful. It is the natural pursuit of the young mind; it is necessary to all of every class in society—to some in the extreme, to all in a degree.

Take the great landed proprietor—he knows the wealth his possessions give, and the influence among men. He enjoys the amusements, the healthful exercise of his country pursuits—and that is well. But would it not be better still to go further—for instance, to that knowledge which teaches the wondrous history of the earth—the part of it he owns not excepted—to that knowledge which would teach how he himself and all others which inhabit the earth have their being? With the help of such knowledge the great proprietor would better understand what the wants of all around him require; he would know better how their health, their general well-being may be provided for. He would know then, even more fully than he does now, how he may best fulfil the great duties that accompany the great privileges of his possessions.

Or let me take a man at the opposite end of the scale of society—the working hind. I would submit that it would be well that he should have some clear understanding of the way in which the work he is engaged in, the manure he spreads, the rain, the sunshine, fertilise the soil—how drought works evil. It would be well that he should know why water, food, pure air, cleanliness are necessary to himself, to the team he drives,

to the cattle he tends. Follow that human being from his work to his home. I have done so. He can read, but he does not read; and much fault is found with him because he does not. In truth he knows nothing useful about which to read. His intellect is scarcely engaged in any part of his occupation; and he does not improve in intelligence with time as he might do if he had gained in his youth the elements of knowledge which would enable him to understand more of himself, more of the things in the midst of which he has been placed;—which would enable him to think, and to move upwards if he have the power to do so. And if perchance some few endowed by Nature with larger capability—Nature does not deny her great gifts to the low-born—should raise themselves to an eminent position in any of the sciences or arts dependent upon them, the higher position they attain to will not depress others in position, or lessen their stores. The country wants all the ability that Nature has given to it, and it ought to cultivate that ability as the soil is cultivated, leaving nothing waste. Intellectual wealth, moral wealth are not less precious, less worthy of regard than the wealth of the corn market.

There has lately passed from us a great man whose life is full of interest and ought to be full of instruction. He was born of the working classes. When a child he lived for ten years with his family in a mews a few minutes' walk from this room. At an early age he was apprenticed to a bookbinder. "Now," he says of himself, "it was in those books, in the hours after work, that I found the beginning of my philosophy. There are two that especially helped me—the 'Encyclopædia Britannica,' from which I gained my first notions of electricity, and Mrs. Marcet's 'Conversations on Chemistry,' which gave me my foundation in that science."—"I felt that I had got hold of an anchor in chemical knowledge, and clung fast to it. Thence my deep veneration for Mrs. Marcet, first as one who had conferred personal good and pleasure on me, and then as one able to convey the truth and principle of those boundless fields of knowledge which concern natural things to the young, untaught, and inquiring mind." Would the country be willing to lose her share in the fame of Faraday? And yet the country had no share in creating it. In his early poverty he had no school to resort to but "a very humble one in which he learned to read and to write."

It must surely be wrong that, while progress around has been active and most fruitful, colleges and schools should remain stationary. "Education," say the Royal Commissioners, presided over by Lord Clarendon, "is with us, in this respect, narrower than it was 300 years ago."

But I would not have the necessity of some branches of the knowledge of which I speak being taught and learned in early life rest solely on considerations of expediency, however great, and I believe them to be beyond measure great. I would venture to go one step further. Young people are taught, and properly taught, to speak reverently of the Creator in such passages as this; and their elders adopt them as expressing their own feeling:—

> These are thy glorious works, Parent of Good
> Almighty!—thine this universal frame
> Thus wondrous fair.

If the instructors of the young in schools and colleges believe—if parents believe that the things of this world are in truth the work of the Creator, ought not that belief, without anything further, to settle the question for them? Ought not those glorious works to be acknowledged as subjects for diligent study—not disregarded as they now are? Can it be justified to place the humanities, classical languages, and human inventions first, either in time or in importance? Are men—our educated, thinking, leading men—are any men justified in their homage, their devotion to scholarship, the *literæ humaniores*, as they are called, while they pass unheeding by those other letters, the *literæ divinæ*, traced through all nature?

To the full advantage of natural knowledge as a branch of education it is essential that the instruction in some branches should begin at a very early age. "In my juvenile lectures (says Faraday, before the Royal Commissioners, in support of that view) I have never found a child too young to understand intelligently what I told them. They came to me afterwards with questions which proved their capability."

Again, to whatever extent elementary teaching or learning may go, it must be real, thorough, as far as it goes, giving a complete acquaintance with things and their properties, not with words only. Words should come after, and should strictly represent facts. A philosophic writer has said, "Words are wise men's counters—they but reckon by them; but they are the money of fools."

It was my desire to address to you some remarks upon the use as well as the abuse, now so prevalent, of examination, and upon the necessity of good teaching, with the necessity also of provision by the State in aid of those who devote themselves to the service of the State in what I believe to be the most important branch of its service. Time, however, admonishes me that I must now be very brief. I know not to what extent the State recognises the higher education of the country. It has only come to my knowledge that the professors of all colleges in Scotland have allowed to them the advantages which are given to civil servants of the Crown, in the shape of superannuation and retiring pensions. Whether or not the same privileges have been conceded to professors or teachers in England, in London, or in Ireland, I am not informed.

A few words as to our special Medical course of instruction, and the influence upon it of such changes in the elementary schools as I have mentioned. The student now enters at once upon several sciences—physics, chemistry, anatomy, physiology, botany, pharmacy, therapeutics—all these, the facts and the language and the laws of each, to be mastered in eighteen months. Up to the beginning of the Medical course many have learned little. We cannot claim anything better than the Examiner of the University of London and the Cambridge lecturer have reported for their Universities.

Supposing that at school young people had acquired some exact elementary knowledge in physics, chemistry, and a branch of natural history—say botany—with the physiology connected with it, they would then have gained necessary knowledge, with some practice in inductive reasoning. The whole studies are processes of observation and induction—the best discipline of the mind for the purposes of life—for our purposes not less than any. "By such study (says Dr. Whewell) of one or more departments of inductive science the mind may escape from the thraldom of mere words."

By that plan the burden of the early Medical course would be much lightened, and more time might be devoted to practical studies, including Sir Thomas Watson's "final and supreme stage" of the knowledge of Medicine.

I am unwilling to quit this part of my undertaking without stating Hunter's judgment respecting it in connexion with his own course in life. When a young man he was entered as a gentleman commoner at a college in Oxford; but he speedily left the University. In giving an account of that incident in his life in after years, he said: "They wanted that I should stuff Latin and Greek; but those schemes I soon cracked as they came before me." And more he said in his usual plain and rough manner. I may perhaps venture to speculate that, had he remained at the University, had he adopted the studies of the place, he might, with his genius and indomitable industry, have made a name for success in tracing the development of language, in worrying words, or in commenting on the lost meaning in passages (if they ever had any) of some ancient author (not Galen now—Vesalius had been more than a sufficient commentator in his case); but I more than doubt if, in that case, any number of his countrymen would be assembled eighty years after his death by the desire to do honour to his name. It was a hundred years after Hunter's visit that a beginning was made to establish a museum at the University.

In a conversation which I had many years ago at Berlin with Humboldt (not the scholar who did so much for the present form of the education of all the people in Prussia, but the naturalist, Alexander Humboldt), he said to me:—"You have in England your two great rich universities; here you will find several scattered about Germany—small places, each with its philosophical apparatus, and chemical laboratory, and museum, and skilful professors; each a little sun, diffusing the light of knowledge around it."

We want teaching-places, with apparatus and laboratories, and skilful teachers strewed thickly around; and till they exist the people throughout this land must be without the light of true knowledge.

We want that, whatever besides may be taught, every person shall be taught to speak and to write correctly his mother-tongue—that tongue in which all the concerns of life are dealt with—all his thoughts are expressed—all he speaks is spoken—from the first articulate sound he utters to the last hope he breathes.

We want that every person, without regard to station or to sex, shall in early life acquire an elementary knowledge, but a solid knowledge, of the productions of nature amidst which we have been placed, and of the laws of nature. We want all this, and I trust we shall speedily see the want supplied.

Meanwhile, we want that this training of youth should be the first, or among the first, cares of the governing classes of the Parliament and the Government of the country. The neglect

of this hitherto has been wrong—wrong to all the people. The further neglect will be still more wrong—nay, more—irreverent to this great creation and the Creator.

ORIGINAL COMMUNICATIONS.

ON THE EARLY PROGRESS OF ARMY SANITATION IN INDIA.

By C. A. GORDON, M.D., C.B.,
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Barracks and Hospitals.

(*Continued from page* 140.)

6. *Ghazepore.*—In 1840 a new range of barracks was erected at Ghazepore, and the drainage of the station much improved, but even since that period severe outbreaks of sickness have from time to time occurred among our troops there, leading to the withdrawal on more than one occasion of regiments from it.

The barracks that existed in 1828, and from that time on to 1840, were thus described(a) :—"They were originally built for stables for three regiments of native cavalry, but are now used for the accommodation of one regiment of European infantry." It is further stated, with reference to the barracks in question, that they had "neither doors, windows, nor verandahs, which," said Dr. Burke, as well he might, "renders them very cold during December, January, and part of February. They are, however," he adds, "shut up at night with a kind of matting, which in a slight degree excludes the cold winds."

7. *Cawnpore.*—Of the nature of the barracks in which, in 1829, our troops, cavalry and infantry, were accommodated at Cawnpore, we obtain the following particulars:—"It is recorded(b) that, the prevailing winds being from east and west, the barracks for the former were erected so as to face directly north-west and south-east." Again,(c) it is mentioned that "ventilation is in this locality utterly disregarded, for when the east wind prevails the building on the extreme right enjoys it, but precludes it from all the others; when the west wind blows, the one building on the left has it, to the exclusion of the others."

These barracks had a single verandah of nine feet broad. The breadth of the barrack room was only twenty-one feet, so that there was but little space between the feet of the men's beds on opposite sides. Adverting to these defects, the principal Medical officer thus wrote:—"The verandahs were too low and narrow to be of much use;" and he adds "that in a climate where the sun's heat is so fierce and destructive for many months in the year, it is important that the men off duty should be confined as strictly as possible to their barracks at those hours when exposure is so dangerous."

At the time of which we speak, there were no baths attached to these barracks, and personal cleanliness became, even to such as were most disposed to observe it, a matter of considerable difficulty; for, as we read in the earlier reports,(d) "it cannot be in the slightest degree attended to without a total disregard of decency." The Ganges, which passes at no great distance from this station, was described as too remote for purposes of ablution; and in the hot weather, when this is most required, it is almost out of the question. With reference to this circumstance, Dr. Burke wrote:—"It is indeed lamentable to think that an object of such vital importance to the comfort and salubrity of the body, and, by direct sympathy, to the cheerfulness of the mind, in this land of listlessness and languor should be so utterly neglected."

That the want of such means was duly represented to, and urged upon, the local authorities is evident, for we find Dr. Burke again remarking, in his report for 1834,(e) that "Government have *not yet* erected or appropriated any buildings suitable for the purposes of bathing." What the government had failed to do, however, was effected in this instance through the liberality and energy of one man. The 16th Foot was then quartered at this station, and the commanding officer of that regiment, as is recorded, "with characteristic consideration constructed a temporary bathing room in rear of the barracks, where the men have the means of washing their bodies. Colonel, afterwards Sir David Ximenes, was the commanding officer here referred to; and such were the good results that followed his liberality, that in the report for the succeeding year it is mentioned, with reference to the appreciation by the men of these baths, that Dr. Menzies, of that regiment, enumerated them among the means of amusement."(f)

It would appear that, at the time to which I now refer, drainage was but in an imperfect condition at Cawnpore, as elsewhere, and that its condition attracted the serious attention of Dr. Burke, who in his report(g) makes special reference to it. "The so-called drains," he remarked, "are mere ditches, instead of being lined with masonry as *those* at Meerut were." It is evident from this that the subject of drainage had at some stations been attended to.

8. *Agra.*—This station was first occupied by king's troops in 1832, at which time, as we learn from official reports, it was considered to offer many advantages, both in regard to the position of the barracks, and in respect to the healthiness of the site. Each range of barracks consisted of a central apartment 280 feet in length by 24 in breadth inside. There were two small apartments at either end, each room being 18 feet by 11½. A verandah extended all round, having a breadth of 10 feet. There were thirty doors on either side, and four at either end; and we are informed that the building was intended to accommodate one company, equal to 100 men. If, however, we inquire into the amount of space which, under this arrangement, each man would have, we discover that it would be 67 superficial feet. Probably, therefore, we may consider this as having, when these barracks were erected, been looked upon as the *proper* "unit."

9. *Meerut.*—With regard to the barracks here, we find, in 1827, the Surgeon of the 11th Light Dragoons observing that they will admit of great improvements, and such as would benefit the service, as well as save lives. We, moreover, learn that "the buildings are very bad, being originally built of sunburnt brick." It is added, however, that "those which were at the time in course of erection for the 31st Regiment were each calculated to accommodate twenty-five or thirty men, with a double verandah all round, which will keep them very comfortable during the hot winds."(h)

I would ask attention to the number of men here stated to be accommodated in each room. It is true that the "unit" here quoted is that laid down by Dr. Robert Jackson many years previous to the time of which we are now writing, but it is no less true that it expresses precisely the principles which are stated by some partially informed persons to have been for the first time introduced into India since the institution of sanitary commissions took place in England.

One great advantage, however, the soldiers occupying these barracks enjoyed over those at any other station in India. It was here that baths and sufficient means of ablution were for the first time supplied, although it would appear that these were not added until some time after the completion of the new infantry barracks; for Dr. McLeod, writing of 1836, makes the remark that "two bathing houses had been erected there, one for men and one for women," and adds, "This is a most useful appendage to a barrack, especially in India, and I am sorry that this is the only instance in this country in which it has been attended to." Three years(i) afterwards, in alluding to the plunge bath here, he states that there existed "a large bath, capable of admitting fifty men at a time. It was enclosed, had a thatched roof, and was provided with a sufficient supply of water." He, moreover, added the remark, the correctness of which will probably not be questioned, that "its use added greatly to the comfort of those using it;" but its size was inadequate for the use of all the troops at the station.

10. *Kurnaul.*—This station had ultimately to be abandoned, in consequence of the extent to which the troops quartered in it suffered from fever. We elsewhere see, in the course of these notes, that a very severe outbreak of that disease occurred among the men of the Buffs, quartered there in 1841. We learn, however, that in 1836 fevers were prevalent, not only in the station itself, but in the surrounding districts; that the inhabitants were affected in great numbers; and that among the native troops here more severe disease existed than in any other part of the Bengal Presidency. This great prevalence of fever was believed to be occasioned by the waters of the large canal which immediately adjoins the station having overflowed their banks and inundated portions of the surrounding country.(k)

Of the nature of the barracks at Kurnaul, we find that they consisted of eighteen buildings, each intended to contain half

(a) Report for 1828, p. 325.
(b) Report for 1829, p. 252.
(c) Report for 1833, p. 208.
(d) Report for 1829, p. 253.
(e) Page 60.
(f) Report for 1835, p. 434.
(g) Report for 1833.
(h) Report for 1828, p. 317.
(i) Report for 1839.
(k) Inspector-General's Report for 1829.

a company—another instance, let it be observed, of the adoption many years ago of a principle which some writers would have us believe is but a discovery of yesterday. Each building was 105 feet long and 24 feet broad. They formed two lines at the distance of fifty-two yards from each other. We learn, however, that "their ends pointed east and west, which is exactly the reverse of what they should be, and causes a great defect in ventilation." (l)

We see in the arrangement here described that remarkable combination of what was good and what was bad which more or less pervaded all the early arrangements for our troops in India. The barracks were doubtless good in themselves, but who that for an instant really considered the means of preserving health, would have arranged them *end on* to the prevailing winds, and would have continued the occupation of a position subject, as Kurnaul was, to be inundated by a canal? It was well indeed that our regiments were withdrawn from it in 1842.

11. *Umballah.*—In 1843 new barracks were finished for a cavalry regiment at Umballah, but it does not appear that the opinion of a Medical officer had been asked or obtained in reference to the plan according to which the various buildings were erected. With regard to them, Dr. Clarke wrote:—"A free circulation of air is undoubtedly a matter of vast importance in a barrack in this country, but here the thing has been overdone, for it admits so much air as to cause the barrack to be very cold in winter, and during a storm lets in wind, rain, and dust in such quantity as to be exceedingly uncomfortable to the men. A plan for obviating this inconvenience, by means of shutters which can be opened and closed at pleasure, has been suggested by us, but not yet adopted."(m) Dr. Clarke, also alluding to the arrangement *en échelon* of these barracks, described it as "extremely novel, and deserving of particular attention."

Here, as we have seen was also the case at other stations, a Hospital was the last building provided for the use of troops to be quartered at the place. This omission, we need not wonder, forcibly struck Dr. Clarke, who, in 1843, referred to it in his report. "Although," he said, "the Medical officers have often and urgently represented the necessity for better accommodation for their sick, it is somewhat strange that Hospitals for the 3rd Light Dragoons and Honourable Company's horse and foot artillery have only been begun, and a portion of the walls of one building is only yet in progress. The foundation of the Artillery Hospital has not yet been laid." May it be taken as some sort of consolation, that if "the Honourable Company" was remiss as regards the requirements of the imperial forces, who were for a time lent to them, they were equally remiss in regard to the troops in their own service?

12. *Loodianah.*—The barracks at this station are now chiefly remembered from the circumstance of the terrible destruction of life in the 50th Foot that was caused by several of those buildings having been thrown down by one of the hurricanes that from time to time pass over Northern India. The flimsy nature of the materials with which these buildings were erected and their faulty construction are both described by Dr. Davidson, Surgeon of the regiment, in his account of this terrible accident. "All the buildings," he observes, "were of *kutcha*, or sun-dried bricks; the nature of the clay in the vicinity varying much in its cohesive quality. The roof or *chopper* was of thatch, and the principal beams were of pine or *saul*(n) timber. The length and breadth of each building was 300 by 32 feet, the height (of the walls) 12 feet, and the thickness of wall *one* brick and a half, without buttresses or support of any kind, except the pillars in the interior, and the gables, which formed two rooms, each 12 by 12 feet. There were nineteen doors on each side. The floors were *kutcha*. There were no drains to carry off the refuse water."

That soldiers should have been put into buildings such as are here described cannot be designated as other than disgraceful to the responsible officers. Indeed, the system of erecting what are called *temporary barracks* in India of such flimsy materials as have been just described has occasioned an amount of sickness and mortality that, in money cost, has far outbalanced the sum necessary to erect buildings such as should have been provided for our troops.

13. *Kussowlie.*—Mr. Taylor, of the 29th Foot, writing in 1847 of the barracks occupied by that regiment at Kussowlie, commented strongly on the faulty construction, imperfect ventilation, and limited space which these buildings afforded, and remarked that "the means of renewal of the air should be provided at the ordinary rate of four to ten feet per minute." "The minimum space," he thus continued, "considered absolutely necessary for the preservation of health, is stated to be 500 cubic feet, and this in a European climate." "Prison inspectors allow 1000 feet for each prisoner. It cannot be expected that the soldier can be healthy in barracks at this elevation when the superficial space allowed him is little more than half again the size of his cot, and the cubic space to his share not quite 450 feet. Thus, the soldier at this station, in a rarefied and tropical atmosphere, has not half the space allowed him which is allowed to prisoners at home. This crowding, and the total absence of any special means of ventilation, taken together with the foul atmosphere, are agencies fully sufficient to explain the sickness in the corps, and to destroy the utility of all calculation as to the sanitary value of hill stations."(o)

It is only necessary to add to these remarks that the barracks just described were erected with a view to give to an entire regiment the benefit of residence in a cool climate. It is a strange commentary, however, that, by faulty construction and improper arrangement of the building, the good effects which under more favourable circumstances would doubtless have been obtained were so completely counterbalanced that for several years after the first occupation of Kussowlie, that station had an unenviable notoriety for the amount of sickness which prevailed among the soldiers quartered there.

(*To be continued.*)

(l) Report for 1839. (m) Report for 1843.
(n) *Shorea robusta.*

(o) Report for 1846-47.

NOTES ON THE PNEUMOTHORAX OCCURRING IN PHTHISIS.

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(*Concluded from page* 167.)

THE treatment of a case of pneumothorax will vary according to the manner in which life is threatened—whether by asphyxia, shock, or exhaustion.

In all cases in which death is imminent from asphyxia, puncture of the chest should be practised if the other lung do not present signs of such extensive disease as to render all interference hopeless.

It is still a question what kind of opening is most suitable—whether a small opening or a free one. The latter would give the lung the most absolute rest, and, with the other lung tolerably sound and the assistance of the valuable disinfecting agent carbolic acid as a lotion, might be tried with success.

Rest should be secured as much as possible to the affected lung, to give the opening in the pleura an opportunity of closing. A broad strip of plaster round the affected side, extending in front and behind, a little across the middle line, will be useful for this purpose.

Purgatives.—The way in which relief is naturally afforded to the circulation in pneumothorax and in obstruction of the pulmonary system of vessels from other causes, is by engorgement of the venous system, and more particularly of the portal system, the veins of the latter having no valves. The cautious administration of such purgatives, therefore, as will produce a watery flow from the intestines, and are not depressing, will give relief. The tartrates of soda and potash, the sulphate of magnesia, decoction of aloes, etc., with some stimulant, may be recommended.

Opiates are extremely useful to relieve the shock, to calm the patient, and to check that dyspnœa which is not mechanical. The subcutaneous injection of morphia will be a convenient form of administration.

Stimulants may be absolutely necessary at the moment of attack to avoid death from syncope, but if no immediate danger from this cause be present, they had better be given sparingly. Opium, indeed, is the best stimulant in these cases.

An abstract is here given of those cases only in which the pressure within the chest has been tested post mortem, and only brief notes are added which appear necessary to explain the peculiarities of each case.

Case 1.—A patient who died at the Chelsea Home. (No notes taken of the case except the pressure.) Trocar inserted below the nipple. Pressure = 4 inches of water.

Case 2.—S. T., aged 22, male, out-patient at Brompton Hospital, under Dr. Sanderson. Ill eight months with noisy cough, dense expectoration, emaciation, night sweats. Hæmoptysis. Condition of chest:—Consolidation of upper third of right lung. Seized on June 18 with sudden dyspnœa and well-marked symptoms and signs of pneumothorax on the right side.

Died June 20. Autopsy:—Trocar thrust in at the fifth interspace. Pressure = 5⅞ inches of water. Two perforations found in the lateral and upper part of superior lobe of right lung communicating with small cavities. Three-quarters of a pint of turbid fluid in the pleura. Some consolidation and softening of left lung. There was no decomposition present nor distension of the abdomen.

Case 3.—S. F., aged about 25, female, out-patient at Brompton Hospital, under Dr. Powell. Ill some time with troublesome cough, but chief suffering latterly had been from relaxed bowels, with tympanites and frequent vomiting and eructations. Condition of chest: Moderate amount of softening at both apices. Seized on July 15 during a violent fit of retching with severe pain in the left side and much dyspnœa. Marked hyper-resonance extending over the cardiac region; respiration very distant, feeble. Heart's impulse not perceptible to touch; detected by the stethoscope to be displaced to the right. Posteriorly, hyper-resonance, blowing amphoric respiration at angle of scapula, with some metallic tinkling. Died in a few days. Pressure within the chest tested = 2 inches of water; no further examination made. This patient after the first attack did not suffer greatly from dyspnœa; died from exhaustion from diarrhœa and vomiting, which resisted all treatment. The well-marked amphoric breathing indicated a tolerably free communication.

Case 4.—J. P., aged 44, male, in-patient at Brompton Hospital, under Dr. Sanderson. An ordinary case of phthisis. On admission consolidation and softening of both sides were observed; some cavernous rhonchi at the left apex. Doing well until July 18, when, while walking in the grounds, he felt some pain of a cutting character in the right side. He went in shortly afterwards, and on examination a few moist superficial rales were heard in the right axilla at the seat of pain. There was no dyspnœa at this time. Dyspnœa came on gradually, and increased steadily until death. Respiration distant, not amphoric in quality. Died July 20. Pressure tested = 3½ inches of water. Perforation in left lung at outer and posterior part of upper lobe, 3 inches from apex, perfectly valvular, a slit a quarter of an inch broad communicating with a slanting canal running through the thickened pleura and terminating by a rounded opening in a small cavity. Right lung infiltrated with tubercle; a small cavity at apex. This case was remarkable for the absence of shock, the few physical signs present, and the rapid destruction of the patient.

Case 5.—T. W., aged 23, male, in-patient at Brompton Hospital, under Dr. Sanderson. Admitted suffering from cough, expectoration, dyspnœa, etc.; cavities at both apices, with softening below on right side. Seized on October 6 at 12.30 a.m., when he was found lying in bed rolling about in intense agony. Countenance dusky; pulse quick, small; respiration very frequent and shallow; extreme tenderness on percussion at right anterior base, where the pain was most intense, with hyper-resonance, and some distant tubular breathing. Died October 7 at 7 a.m. Autopsy: Trocar inserted at fifth right interspace. Pressure = 2 inches of water. Opening not found, the lung having been cut into. Base of right lung collapsed. This was the only portion of lung which was not extensively diseased. Left lung extensively diseased throughout. This patient died rapidly from the collapse of the only part of lung available for respiration left him. Mr. Young, Resident Clinical Assistant at the time, kindly furnished the notes of this case.

Case 6.—C. M., aged 34, male, in-patient at Brompton Hospital, under Dr. Quain. Admitted as an ordinary case of phthisis, with double cavities and extensive disease of both lungs. Seized on the evening of March 29 with sudden pain in the right side and great dyspnœa. Right anterior and axillary base resonant; respiration inaudible; much creaking and friction sound, with some fine rhonchus. Dyspnœa increased, and side became bulged and hyper-resonant. Died in the morning of March 31. Autopsy: Pressure = 4 inches of water. At lateral part of right lung three inches below the apex, there is a circular opaque patch, forming one side of a superficial flattened cavity, at the apex of which is a small slit. The thin pleural side forms a very complete valve. Lung compressed and tuberculised throughout. Large cavity at apex of left lung, which is tuberculised throughout. Right cavities of heart somewhat dilated. Pulmonary artery measures across valves 5⅝ inches; left cavities nearly empty; aorta measures 3½; liver large (58 ounces); much hepatic congestion; spleen not enlarged. The absence of amphoric respiration, with very valvular opening, were well illustrated here. Paracentesis was useless from extensive disease of the lung. (Vide *Transactions of the Pathological Society*, 1868.) Mr. Murphy, Clinical Assistant, kindly furnished the clinical notes.

Case 7.—G. H., aged 17, male, in-patient at Brompton Hospital, under Dr. Quain. Autopsy: Pressure = 1½ inches. Two openings at base of the left lung communicating with small cavities. Lung much diseased. Pericardium contained air, which had entered from pleura through an opening apparently congenital. Other lung considerably diseased. In this case the openings were free and the pressure very slight.

Further notes of this case, lately exhibited at the Pathological Society, will appear in the Transactions *for* 1869.

Case 8.—R. B., aged 24, female, in-patient at Brompton Hospital, under Dr. Pollock. On admission in June, 1868, suffering from moderate dyspnœa, with some lividity, but able to walk about. Expansion fair on both sides, less so on left; no bulging on left side; hyper-resonance to fourth rib, with dulness below that level anteriorly and posteriorly; amphoric respiration in scapular region. Succussion signs, etc., obtained. Cardiac impulse to right of median line; apex at ensiform cartilage. Signs of effusion increased, leading to considerable dyspnœa. Patient died suddenly July 1, 1868, with signs of perforation of opposite lung. Pressure left side = 3·5 inches of water; of right side = 2·7 inches of water. Left pleura contained two quarts of pus. An aperture the size of a sixpence existed at the apex of lung, communicating with a large cavity, the walls of which were very thin. Right pleura distended with air. There was a small aperture at apex communicating with a small cavity which itself communicated by means of a narrow sinus with a larger cavity. Heart healthy; cavities empty, except about half an ounce of blood in the left ventricle. When patient was first seen about three weeks before death, it was concluded from the amphoric breathing and absence of pressure-signs, that the displacement of the heart was simply the result of partial collapse of the opposite lung. The pressure found post mortem on the left side was no doubt due to the later accumulation of fluid rendering the opening practically valvular. The pressure of the opposite side was the result of the valvular opening, and though the patient only survived ten minutes, it had risen to 2·7 inches. Post-mortem was made by Mr. Gill, Resident Clinical Assistant.

These notes of cases were originally intended to be arranged in the tabular form, and are consequently very condensed and abrupt.

CASE OF RUPTURE OF THE BLADDER.

DEATH ON THE THIRTEENTH DAY FROM PERITONITIS AND EXHAUSTION.

By J. HANCOCKE WATHEN, L.R.C.P. Edin., M.R.C.S. Eng., etc.

I was called in great haste about 10 p.m., October 1, 1868, to Mr. ——, aged 31 years, a Surgeon, then on a visit in this neighbourhood, who had been injured by his horse rearing back on to its haunches and then falling on its rider. Mr. —— had been spending the evening convivially with some friends, and in all probability his bladder was tolerably well distended. I found him in the road about half a mile distant hanging on two of his friends' arms; he seemed to have very little power over his legs; he was sensible, but lapsed off to sleep immediately he was laid down on the roadside. When spoken to loudly, he answered, and had a vague idea of uneasiness over the abdomen. From his aspect and the general history of the case I considered that the seat of injury was in some of the abdominal or pelvic viscera (probably the bladder or kidneys). While waiting for a conveyance he expressed a desire to pass water, which he insisted on attempting, but failed to void any. He was removed in a dogcart to the house (nearly half a mile) at which he was on a visit. He assisted himself to undress and stood up; while he was standing, leaning a little forward, percussion over abdomen gave a dull note, but after he had been got to bed, and while on his back, a moderately clear note was elicited. Pulse 65; extremities cold; very drowsy; did not complain of any pain; pupils rather sluggish. I administered ℈j. of sulphate of zinc, which had the desired effect of establishing some reaction. While I was waiting for a catheter the patient got on a night chair and passed about one ounce of bloody urine. A silver catheter was introduced, and nearly three ounces of bloody urine drawn off. This did not flow in a stream, but quietly welled up to the mouth of the catheter, and then ran down by the side of the instrument. As I had no gum elastic catheter with me, I did not deem it advisable to leave a metal one in the bladder. Ordered hot fomentations to be kept constantly applied to the abdomen.

October 2.—10 a.m.: Patient in great pain; great distension of abdomen; tympanitic over front; dull in both flanks, especially so in the right and over region of bladder. A catheter was introduced and about four ounces of very bloody urine drawn off; between eight and nine hours had elapsed since the previous introduction of the catheter. Pulse 136; temperature 99·6°. Rupture of bladder and extravasation of urine into cavity of peritoneum were diagnosed, in which opinion my father, who saw the case with me, coincided. A large gum elastic catheter was tied in, and a flexible tube attached, so that the urine could drain off immediately. Ordered gr. ss. of powdered opium, gr. v. of gallic acid every two hours. Hot fomentations to be continued. At 10 p.m. Mr. Phillips, of Haverfordwest, saw the case, and perfectly agreed with the diagnosis. Pulse 140; respirations 40; very thirsty; vomiting has come on; tympanitis increased. To take beef-tea, brandy and egg mixture, varied with champagne in small quantities at a time. Opium increased to one grain every two hours. Twenty-five ounces of very bloody urine has drained off since the morning.

3rd.—Pulse 136 to 140; temperature 98·6°; retains nothing on his stomach; great pain and tenderness over abdomen; tenderness on pressure over left renal region; tongue slightly coated. Ice, which we hitherto could not obtain, to be sucked. Hot poppy fomentations alternated with turpentine stupes. Opium and gallic acid continued.

4th.—Pulse 128; temperature 98; less pain; great distension; frequent eructation of flatus; more decidedly urinous odour about the fluid voided; not so bloody.

5th.—Pulse 120, intermitting; temperature 97·6°; has slept a little; vomiting still, but not so frequent. ℞ Acidi hydrocyan. gtt. j., nepenthe mxv. ter die sumend.

6th.—Administered a turpentine enema, which had a most marked effect in relieving the distension, bringing away a great quantity of flatus and a few scybala; the sickness nearly ceased. ℞ Tinct. ferri perchlor. mxx. ter die sumend. ex aqua.

7th.—Pulse 120, intermitting every fourth or sixth beat; temperature 99°. Another enema administered, producing a copious motion. No vomiting since yesterday morning; takes milk diet and chicken broth.

8th.—Pulse 120, intermitting, a little fuller; temperature 99·2°; respiration 32; tongue slightly coated. A little blood still in urine, smells most offensively; dulness in right flank increased to within three inches of mesial line. Sleeps well; does not complain of pain.

9th.—Pulse 120, intermitting; temperature 99·6°; has passed forty-eight ounces of bloody urine during the last twenty-four hours. A turpentine enema given; takes nourishment and stimulants well; is able to move himself in bed with ease.

10th.—Pulse 120, steadier and fuller; temperature 99·6° in left axilla (where all the previous observations were made), 97·8° in right axilla. Vomiting returned last night; bowels acted naturally; and whilst at stool he passed some ounces of urine in a regular stream, the catheter being out. A great deal of spasm when the catheter is introduced. The urine undergoing rapid decomposition, a silver catheter being blackened by the slightest contact. Once there was a great gurgle, and a large escape of gas by the catheter. From this date the vomiting continued, rejecting everything immediately introduced into stomach; the patient gradually became weaker and weaker, until death from exhaustion closed the scene on the 13th about 9 p.m.

Autopsy Twenty-four Hours after Death.—Rigor mortis well marked in upper extremities; cadaveric staining present on back; a small bruise on right forearm, and another on the right side of sacrum; anterior abdominal wall well lined with adipose tissue (1¼ inch). Peritoneum very much discoloured, especially just above the pubes; adhesions between the coils of intestine and peritoneum, but easily separated. A large mass of omentum nearly the size of one's hand, and two inches thick, dark and gangrenous, was found on the right side, corresponding to the dulness mapped out in the right flank during life. The bladder and pelvic cavity completely shut out by the adhesions, which I separated, a large quantity of sulphuretted hydrogen gas escaping immediately. The pelvic cavity contained rather over a pint of sero-purulent fluid, somewhat similar to what had been drawn off by catheter during the last day or two of life. On searching for the bladder I found what I thought at first to be the contracted viscus under the pubes, but this was merely the fundus. There was a rent on the posterior surface of the viscus about two and a half inches long; it extended transversely about one inch and a half below fundus; the edges of the rent were about one inch and a half apart in the centre. An elastic catheter similar to what I had used in the treatment just reached the rent. Both kidneys considerably enlarged, and in a granular state; the pelvis of left a little injected; ureters very dark, especially the right. Ascending colon in a state of gangrene—in fact, all parts were more or less undergoing a process of decomposition.

Remarks.—Rupture of the bladder is one of the most fatal of injuries that can happen to any of the abdominal or pelvic viscera. Mr. Birkett says: (a) "The records of fifty examples of this injury show that, with the exception of three, all the cases terminated fatally. Of the three cases which recovered from the injury, in one only the symptoms were those of extravasation of urine into the peritoneum; in another the extravasation was into the pelvic connective tissue, and this was complicated with fracture of the pelvis; and the third was of the same nature, but without this complication." The length of time patients survive varies; thus Professor Erichsen mentions a case which survived ten days.(b) Mr. Cusack also records a case which died delirious on the eighth day.(c) There are two cases lately reported in the *British Medical Journal*, in which the patients survived respectively three and four days. The case of Mr. —— is remarkable from the length of time he survived the accident (twelve clear days), especially when we trace his history previous to the receipt of the injury. I find he had for some time suffered from chronic granular disease of kidneys, together with threatenings of hemiplegia, which one would suppose would have rendered it nearly impossible for him to survive so long.

Fishguard.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF CHOREA TREATED BY THE CALABAR BEAN.

(Under the care of Dr. GEORGE HARLEY, F.R.S.)

Dr. George Harley has kindly sent us the following interesting case of chorea, in which a child, aged eight years, took, in divided doses, as much as 158 grains of the Calabar bean; but, although the result was satisfactory, it does not appear that the recovery was due to the specific action of the remedy, but rather to the general hygienic conditions which surrounded the patient.

Caroline K., aged 8, was admitted into University College Hospital on November 14, 1863.

History.—About a month ago (October 14 or 15) patient fell down and broke a valuable jug. She was very much frightened, and afraid that her father would beat her. About three days afterwards her friends noticed that "she spoke and twisted herself about very much." Three months previously she had had scarlatina. For three weeks before admission she attended as an out-patient under Dr. Harley, who, seeing no improvement in this time, but rather that she was getting worse, took her into the Hospital.

When seen the day after admission, the choreic movements were well marked. The child spoke with difficulty and in a drawling way, dragged her legs about when she walked, and constantly moved her head and hands. These movements were notably more marked on the left side. When told to extend the arms and approximate the fingers, she only succeeded in getting the fingers together after several attempts and with the hands held close to the breast. In other respects the child appeared perfectly healthy. Her diet was continued as it had been at home—viz., ¼ lb. of meat, little potato, and bread, with a pint of milk and a custard pudding. For breakfast and tea—bread and butter and tea.

November 15.—At 5.55 this evening, one grain of the powdered Calabar bean was given, with a little sugar. About ten minutes afterwards, she did not seem at all affected by it, talked to another girl in the ward, and walked about just as before. When pulse was endeavoured to be taken she cried lustily, and pulled herself about, it appeared to be about 144. Pupils not yet affected. At 6.50 p.m. pupils were contracted to half their former size, and pulse still 144. By 8·20 p.m. the pupils were of medium size again (but now she was in bed and further from the light); respirations about 25; child seemed to

(a) Holmes's "System of Surgery," vol. ii. p. 481.
(b) "Science and Art of Surgery," p. 408. Fourth Edition.
(c) *Dublin Hospital Reports*, vol. ii. p. 312.

take a long breath, hold it during some seconds, and then suddenly expire; pulse 120, regular, small. Seen asleep at 10.45 p.m. and 12.45 at night; lying quite quietly; pupils contracted to size of pins' points (if not roused at all); skin warm and moist; respiratory movements calm and regular, about twenty-four in the minute; pulse 76.

16th.—To-day the child seemed about the same as yesterday. Pupils perhaps rather small, but not notably so. Choreic movements unaffected. One grain of the bean given at 10.30 a.m., at 2 p.m., and again at 8 p.m. Pulse at 2 p.m. 160; at night, when asleep, pulse 96 and 80.

17th.—General condition much as before; pupils normal; pulse from 104 to 140; one grain given at 10.15 a.m. and 2 p.m.; none given at night.

18th.—Pulse this morning 88 when first counted, but immediately rose to 108. Child is always more or less frightened when pulse is taken. Two grains given at 10 a.m. and at 2 p.m., without any notable effect on pupils or pulse.

19th.—Pupils natural; pulse 160 in morning, but child was crying at the time; two grains given at 10 a.m.; no marked difference in amount of choreic movements.

20th.—Three grains given at 10 a.m. and at 11.30 a.m. Child was sick, and brought up three or four drachms of what looked like partially digested bread and butter. She had been playing by fire all the morning. Pulse about 112. Pupils as before. Three more grains given at 2 p.m.

21st.—Three grains given at 10 a.m., 2 p.m., and 9 p.m.; pulse from 108 to 120; pulse only 72 when asleep; pupils natural. Nurse reports that about dinner time (noon) child suddenly began to cry loudly, and complained of pain in stomach. Then she had dinner, and afterwards cried again in the same way for some minutes. She did not vomit at all, and seemed quite well again a few minutes afterwards.

22nd.—Three grains given at 10.30 a.m., and at 2 p.m. and 9 p.m. Pulse 88 to 96, and 76. Pupils natural. Has been quiet all day. No notable improvement in choreic movements yet.

23rd.—Three grains given at 10 a.m. and 3 p.m. Pulse 84 to 96. Pupils natural.

24th.—Four grains and a half given at 10 a.m. At 11 a.m. cried lustily for some minutes, and appeared to be suffering from pain in the belly. Bowels open. She did not vomit, and was soon laughing and talking as before. Dr. Harley saw her this afternoon, and thought her much improved. She put her fingers together better than formerly, and the movements generally were considerably lessened. Pulse, 92 to 108.

25th.—Took four grains and a half at 11 a.m., and at 12.30 began to cry loudly, and screamed on for about thirty minutes. She did not complain of any pain anywhere, but seemed very frightened, and constantly clutched her throat. There was nothing to be seen on looking into throat. Pupils normal. Pulse 84 to 120.

26th.—Four grains and a half given at 2 p.m. No apparent effect. Pupils normal. Pulse 92.

27th.—Four grains and a half given at 11.30 a.m. At 12.30 again began to cry and scream, and wriggle about. When in bed, lies with knees drawn up, but does not put hands to belly, nor does she complain of any pain anywhere when asked. Does not clutch her throat as she did two days since. Has retched a good deal, and vomited about two or three drachms of a yellowish semi-transparent fluid. Can walk, unsteadily, but without seeming increase of pain. Pupils normal. Crying is increased on pressure being made over abdomen.

28th.—No medicine given to day. Pupils normal. Pulse, 72 to 100. Has been sewing some calico tolerably evenly, but she pricks her finger a good deal in the operation.

29th.—No medicine to day. Pupils normal. Pulse, 72 to 80. Dr. Harley thinks her much improved. She puts her fingers together now with hands held away from the chest, which she has not done hitherto.

30th.—No medicine given. Pupils normal; pulse 64 to 96.

December 1.—No medicine given. Dr. Harley does not see much improvement in the last three or four days, and as she has been free from pain, she is to recommence the medicine to-morrow. Pupils normal; pulse 80 to 96.

2nd.—Four and a half grains given at 11.45 a.m. At 12.15 began to cry again, but left off directly when put into a room by herself. Pupils normal; pulse 64 to 88.

3rd.—Four and a half grains given at 10.30 a.m. Pupils normal; pulse 56 to 84.

4th.—No medicine to-day. Pupils normal; pulse 96. There is notable improvement since last week. She holds her hands straight out much better than she did, and she says she "can carry a teapot in her left hand now," which she could not do before.

5th.—Six grains given at 10.30 a.m. Pupils normal during day; pulse 92. Has complained of no pain at all.

6th.—Six grains given at 10 a.m. Half an hour afterwards she began to scream and writhe about on the floor. She asked to go to bed, and when there began to mend speedily, and was quite herself again an hour afterwards. She did not complain of any pain in the stomach. Pupils normal; pulse 68 to 84.

7th.—No medicine given. Began to cry a little after dinner, but left off almost directly. Pupils normal; pulse 84 to 108.

8th.—Six grains given at 11.30 with no notable effect. Pupils natural; pulse 76 to 104.

9th.—No medicine given to-day. Pulse 68; pupils natural.

10th.—Six grains given at 10 a.m. Began to cry and double up as before; as usual, said she was not in any pain when questioned. Pupils natural; pulse 72 to 104.

11th.—There is now great improvement in the child's condition; she holds out her hands and puts her fingers together very well and steadily. After some time the left hand falters slightly. Six grains given after dinner. Did not cry during day. Pupils natural; pulse 72 to 92.

12th.—Six grains given at 6 p.m. Did not complain at all afterwards. Pupils normal; pulse 100 to 104.

13th.—Six grains given at 11 a.m. Quite quiet during the day. Pupils normal; pulse 68 to 84.

14th.—Six grains given at 9.45 a.m. At 11 a.m. was sick and began to cry. Brought up six or eight ounces of partially digested matters, chiefly bread-and-butter, which she had recently taken for lunch. She had been sitting close by the fire since lunch. When questioned, said she was in no pain, but cried because she felt so sick. Pupils natural; pulse 64 to 96.

15th.—Six grains given at 10.15 a.m. Quiet during the day. Pupils as usual; pulse 68 to 96.

16th.—Six grains given at 10.15 a.m. Has not cried during the day. Pupils natural; pulse 92.

17th.—Six grains given at 10 a.m. No marked effect. Pupils unaffected; pulse 80 to 120.

18th.—Six grains given at 9.30 a.m. Did not cry during the day. Pupils natural; pulse 80 to 88.

19th.—Six grains given at 10 a.m. Was sick at 11 a.m. suddenly, and cried a little, but this seemed to be because she had vomited upon the floor. Pupils normal; pulse 68 to 100.

20th.—Six grains given at 10.30. Pupils natural; pulse 68 to 88.

21st.—Six grains given at 10 a.m. Twenty minutes afterwards wished to lie down, and was sick, vomiting remains of breakfast. Pupils as usual; pulse 68 to 72. Dr. Harley saw her to-day, and considered her well enough to leave the Hospital. She can now hold out her hands together and quite steadily for a long time, and readily put together the fingers in the way which served as a test of her restlessness on admission. Her speech, too, is greatly improved, and she walks quite steadily and well. When unusually excited she is still apt to exhibit certain choreic movements, but these are very slight.

Remarks.—Altogether, the child took 158 grains. Notes of the case were taken twice each day or oftener. At no time were the pupils notably affected, except perhaps about an hour after taking the first dose (one grain). The pulse was taken two or three times a day, and its lowest and highest rates are recorded in each note. At no time after the first day was the respiration affected at all. In one only of the attacks of twisting about and crying did she complain of any abdominal pain.

LINCOLN COUNTY HOSPITAL.

SEVERE CHOREA TREATED BY THE SUCCUS CONII—RECOVERY.

(Under the care of Dr. MITCHINSON.)

For the following very interesting case we are indebted to Mr. Samuel Mills, House-Surgeon at the Hospital. The treatment of chorea having been recently the subject of discussion at the Clinical Society, we shall take an early opportunity of reporting cases treated by the various methods advocated by different authorities.

Henry G., aged 23 years, single. Has the build and appearance of having been a fine, strapping young fellow, but is now thin and attenuated from the result of disease. He has a strong syphilitic history, and states that he had a chancre last March, for which he attended at this Hospital. On referring to his case I find that he was treated for a hard Hunterian chancre, and that the sore did not heal until the following

May, when secondary symptoms showed themselves in the form of ulcerated throat and a severe skin affection, nearly the whole of his body and limbs being covered with well-marked syphilitic acne. Copper-coloured pittings in the skin are now observable in various parts of the body—evidences of the previous acne. He got sufficiently well to begin work again at harvest-time.

He was admitted into Hospital for chorea on November 2, 1868. This last affection had been coming on about three weeks previous to his admission. At this time the involuntary choreic movements simply affected the left upper and lower limbs. The movements noticed in his left upper extremity consisted in a frequent shrugging up of his shoulder towards the neck, and a throwing outwards and forwards of the elbow and forearm from the side; in walking he threw his left leg outwards in a peculiar jerky manner, and his left knee seemed weak, as if it would give way under him every now and then. He was treated successively with iodide of potassium, iron, the mixed acids, and bark, belladonna, and bromide of potassium, but all failed in giving relief—in fact, he became more unsteady every day. His state a month after admission was as follows:—The fingers of both hands were constantly moving, twitching backwards and forwards apparently without the knowledge of the patient; both arms were equally restive, twisting and jerking about in the most irregular manner, the left arm being still the worse of the two—in fact, he could not control its movements for a single movement. The movements of his head were also characteristically choreic, nodding backwards and forwards and from side to side in a jerky manner. He was continually twisting his mouth about and protruding the lips forwards; the elevator muscles of the angles of the mouth were markedly affected, as also were the masseter muscles. When asked to put out his tongue he would suddenly jerk it out of his mouth, and as suddenly draw it back again. He could not drink out of a cup without spilling the contents, and once he bit a piece out of the side of the vessel, so that he was obliged to take his food from a feeder. His gait was now much worse and more unsteady than on admission. When he kept his bed he was constantly writhing from side to side, and a nurse was obliged to sit by him and control his movements, as it was difficult to keep the clothes on his bed. Speech was also affected, causing him to stammer. Reflex movements were greatly exaggerated; the slightest touch on the soles of his feet would throw him into violent contortions. There was some tenderness of the spine in middle dorsal region. Altogether his state was most pitiable.

At this date, December 4, with the sanction of Dr. Mitchinson, I commenced giving large doses of succus conii, as recommended by Dr. John Harley in a recent number of the *Practitioner*, with the most marked success. The first dose consisted of two drachms in an ounce of water at 11 a.m. No appreciable effect being noticed, this dose was again repeated at 3 p.m., and at 7 in the evening three drachms were given. Half an hour after the last dose says he felt a little giddy and light-headed; but this feeling soon went off, and he slept much better that night than on the night previous, and the jerkings of his limbs were not so troublesome.

5th.—During the next twenty-four hours he had an ounce and a half of the succus given in four doses. After the last dose, which was half an ounce, he felt a slight numbness in his limbs and also some giddiness, but both these symptoms soon passed away. He says that the medicine makes him quieter for some time after he has taken it. He continued to take an ounce and a half during each day in three divided doses with daily improvement.

On the 8th he could articulate quite distinctly, and the involuntary movements of facial muscles were scarcely discernible, but the twitching of the hands was still very troublesome. I gave him one dose of an ounce, which in twenty minutes caused distinct numbness of his feet and hands, light-headed feeling, and threw him into a smart perspiration. He slept for a couple of hours, and the nurse states that he was very quiet and tranquil after it. I repeated the ounce dose in the afternoon of the same day with similar, but less marked, effects. He was now ordered to take the conium juice in half-ounce doses regularly three times daily.

On the 12th, the ninth day of treatment, he was so much better that he was ordered to get up and walk about. His gait was wonderfully improved, and there was only very slight jerkiness of his left leg. He had lost the choreic movements of the head and neck, and could hold things in his hands pretty steadily. He still twisted his mouth about slightly.

16th.—No movement of fingers or upper limbs; can walk without any perceptible jerking of his knee—in fact, the only involuntary movements now noticeable are slight working of his lips backwards and forwards and occasional contraction of the masseter muscles of face. The succus conii was continued in half-ounce doses three times a day.

21st.—He seems quite steady in every way; complains of dryness of mouth and throat, also of sore-throat; his tonsils are both rather enlarged and reddened. Solution of nitrate of silver applied; omit succus conii.

30th.—For the last eight or ten days has been taking iodide of potassium (gr. viij. doses) three times daily in simple infusion of gentian, and there is a slight return of the choreic movements in the fingers of the left hand, and also the old twitchings about the mouth. He was ordered to return to ʒss. doses of the succus conii, with equally marked benefit as at first.

January 18, 1869.—Discharged cured.

Remarks.—About the really good effects of the conium juice in this particular case I have not the slightest doubt. During the time he was taking the conium juice he took no other medicine, except an occasional dose of castor-oil, to prevent his bowels being confined. Altogether he took about three pints of the succus. It had marked effect in controlling the involuntary movements, caused him to perspire freely, and gave him rest and sleep on the first day he took it. It caused no inconvenient effects, if we except the occasional dizziness and giddy feelings, which soon disappeared. The improvement was rapid—more so, I think, than in the cases recorded by Dr. J. Harley—and up to the present time (the patient being still under my notice) he has not had any relapse. The patient himself is perfectly convinced that nothing but the medicine saved his life. The medicine did not affect his pupils, heart, or respiration; it occasionally produced slight dryness of mouth and throat.

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SATURDAY, FEBRUARY 20, 1869.

PHYSIQUE OF THE RURAL POPULATION.

The current number of the *Contemporary Review* contains some interesting remarks on the above subject by the Rev. C. Merivale, D.C.L. He assumes that a country parish of about 800 inhabitants, closely connected with a small market town, not far from two considerable country towns, but at a distance from the great manufacturing centres, within a few miles of the sea-coast, and two hours by rail from London, may be taken as the type of a vast number, and believes that the observations made upon its social state may be generally applicable to a large portion of the country. He then proceeds to announce that, from local observation, he is induced to take a very unfavourable view of the physical condition of the mass of the people, and is anxious to know whether his opinion is supported or contravened by the experience of others elsewhere. He regrets that he should have neglected to make accurate observations of facts sanitary, educational, moral, and economic, during the twenty years of his con-

nexion with his parish, which would have been a valuable contribution towards a registration of the vital forces of the country, and considers this an object of sufficient national importance to warrant the compilation of statistics as to strength and stature of the population from Hospitals and workhouses and the combined experience of the Medical Profession. We hardly think that Hospitals or workhouses would be the sources from which to draw correct information on such subjects. Dr. Merivale's other suggestion that the dynamometer should be systematically applied to test the strength of recruits for both services, of applicants for workhouse relief, and of any other classes of men who come in any way under public supervision, and that the results should be accurately registered, is hardly more practical. Some years ago an attempt was made to gauge the muscular strength of soldiers, but the results were so irregular—it was so difficult to determine whether a man was actually employing all his strength, to do which requires a considerable amount of training and practice—that it was soon found that the experiments were valueless, and they were accordingly abandoned. The same remarks apply to experiments with the spirometer.

At the same time the statistical returns of recruiting in the various reports of the Army Medical Department, of the existence of which Dr. Merivale may not be aware, supply a large amount of facts on many of the points on which he desires information. The average ages, heights, and weights of recruits, their occupations, countries, states of education and vaccination, and causes of rejection, have been therein accurately recorded yearly since 1860. As fully one half of the recruits inspected for the army belong to the agricultural and labouring classes, information concerning them may be considered to represent to a certain extent the physical condition of that portion of the community, of which no other class supplies anything like the same proportion of recruits. We have neither space nor leisure to compile a full abstract of these returns, but have extracted the following items of information:—From 1864 till 1866, in a total number of 73,055 recruits inspected for enlistment, 43,658, or 598 per 1000, were of the class of labourers, husbandmen, and servants; of this number 18,467, or 423 per 1000, were rejected.

We have not been able to extract such definite details from the earlier returns from 1860 till 1863, as they are differently arranged and do not distinguish with the same accuracy between the primary and secondary inspections of recruits or those inspected by Army Medical officers and Civil Practitioners.

The chief causes of rejection during the above years were in the following proportions per 1000:—

Syphilis	16·4
Scrofula	11·3
Phthisis	6·0
Other constitutional diseases	5·4
Diseases of eyes and eyelids, chiefly short sight	33·7
Disease of heart	22·1
Varicose veins	42·5
Small or malformed chest and curvature of spine	41·6
Loss or decay of many teeth	15·1
Hernia	14·9
Laxity of abdominal rings and tendency to hernia	10·0
Varicocele	28·7
Muscular tenuity	28·0
Defects of lower extremities from fracture, contraction, luxation, etc.	35·7
Weakness of intellect	1·7
Unsound health	22·9

These particulars are of course only approximative as regards the rural population, for many of the class returned as "labourers" are of town extraction, but from them we may form a tolerably fair estimate of the physical condition of the recruits returned under the heading "labourers, husbandmen, and servants."

Although Dr. Merivale admits a certain amount of improvement in the general sanitary conditions of the rural population of his parish, and that possibly the average age of the long-lived is as great or greater than ever, that infant mortality is not so great as in other localities, that death in childbed is one of the rarest of all accidents, that the malignity of the most infectious and dangerous diseases has been much diminished, that there has been an improvement in the Medical skill now accessible with increased facility to the poorest classes, he is of opinion that the physical condition of the people is slowly and gradually, but still to some extent, deteriorating. He cannot say that there has been any sensible improvement in the food of the poor agricultural labourer. While some articles are cheaper, others are dearer as a counterbalance. Wages are still regulated precisely by the price of corn, and have not risen either positively or relatively. Sanitary improvements have no doubt occurred, aud

"The average length of life is greater; for this means that more children survive their infancy, more cases of serious illness are recovered from in middle life, old age is prolonged by a few years, hopeless infirmity is protracted through a few months by the causes and appliances above mentioned. These instances may go a great way in raising the general average of life in a limited society, but they tell us nothing of the physical condition of the mass; they give us no help to determine whether, during the years of labour, the poor man meets his work with improved health and strengthened resources. An increase in the number of babes and old people is no increase in the production and economic force of a parish, but very much the contrary. What are called vital statistics may be a very fallacious index to vital forces."

In Dr. Merivale's parish the tendency to consumption and general debility is very marked; it cannot be eradicated, or its fatal facility of transmission be in any degree diminished. A general languor and want of energy appear to be characteristics of the people—there is little or no emigration, few of the young men enlist. Girls going to service generally break down in health and return as invalids to be patched up, merely to break down again, and at last give up the attempt; but, notwithstanding, they marry, and become established in the parish as mothers of families as delicate as themselves; and it becomes the duty of the Doctor, the clergyman, and every other charitable man of means to help them through their troubles, and to preserve the wretched little lives they thrust upon their attention.

This is certainly not a cheerful state of affairs. Let us hope that the reverend Doctor's anxiety and care for his flock have to some extent exaggerated in his mind the amount of the evils he describes. He adds:—

"If I am obliged to say that, in my view, the saving and sustaining of weak and sickly life tends more to produce physical degeneracy among us than to avert it, I trust that I shall not be supposed for a moment to discourage or deprecate the efforts in which, as believers in a spiritual existence, we are most solemnly bound to persevere, even against the most unfavourable appearances."

We have read Dr. Merivale's short essay with much pleasure. It is evidently the work of a man whose heart and head are ever active on behalf of his people. The questions which he raises are, however, not new to members of our Profession—they are confessedly difficult of solution, but, on the whole, we are inclined to take a more cheerful view of the matter. Improved sanitary conditions benefit those already in good health possibly more than the weakly. The apparent relative increase in numbers of the latter is most probably compensated for by a still greater increase among the healthy portion of the community. As we are taught to judge of a tree by its fruits, we see no reason for forming the opinion that degeneracy of the physical powers is a characteristic of the present generation, or is likely to become so in the future.

Mr. Henry C. Wine, Honorary Surgeon to the Temple Church School Sick and Provident Society, Bristol, has been presented with a valuable inkstand, "in grateful recognition of his gratuitous Professional services for the last seven years."

THE BONY MARROW AS A BLOOD-FORMING ORGAN.

Many of our readers, mindful rather of that succulent dainty, a marrow-bone, than of the nature of the structures which constitute its texture, may be inclined to smile at the above heading, yet in support of their belief MM. Bizzozero and Neumann, who have been chiefly engaged in the research, have been able to array a goodly rank of facts. Hitherto it has been supposed that the marrow of the bones of quadrupeds, like the air in the hollow bones of birds, was intended to constitute a light padding rather than to fulfil any definite function, until in 1865 Bizzozero drew attention to the peculiar character of the red bony marrow of frogs. Now it is this reddish substance found chiefly in young subjects or in animals growing rapidly, not the fatty marrow of more mature individuals, which is held to be the blood-producing organ in question. The first thing noticed was that certain of the cells in the red marrow presented amœboid movements similar to those observed in the white cells characteristic of lymphatic glands. These globules are very numerous, and have been described by M. C. Robin as *medullo-cells*. In structure they appear to be identical with the white corpuscles of the blood. But besides these bodies there are others to be seen in the bony marrow which are not only structurally similar to the white corpuscles of the blood, but which also possess a distinct yellow or red colour—in short, which are supposed to be intermediate products between white and red corpuscles. The characters of these red corpuscles are not constant; some appear to be larger, others smaller, some lighter, some darker red; their shape and their elasticity would also seem to vary in like manner. Such variations are held to indicate degrees of transformation from white into red blood-corpuscles, as seen in the frog.

Having settled, then, the existence of such elements in the bony marrow, we should next consider the peculiar structure of the marrow tissue, and see whether it bears any relation to the glands which are believed to be most concerned in the elaboration of the blood. In the red marrow of bones, capillaries are numerous, and of considerable size, about six times that of those found in muscle. The marrow-arteries are always *smaller* than the capillaries in which they terminate. Each artery speedily terminates in a large bundle of big capillaries, so that they seem suddenly to dilate like a funnel, whilst the capillaries appear to pass slowly into veins. Such an arrangement must produce a speedy and important influence on the rapidity of the current of blood passing from the arteries into the capillaries, for the stream will become slower as the containing channels widen. Further, in these wide capillaries M. Neumann says he has discovered the corpuscles we have described as intermediate between the white and red corpuscles of the blood. In the frog the bony marrow is almost entirely fatty in winter and red in summer, and during the spring months the blood which leaves the large bones presents a brownish instead of a dark-red appearance. This is found to be due to the number of white and intermediate corpuscles then contained in the outgoing current. As to the marrow tissue itself, it closely resembles the so-called adenoid or cell-forming tissue of His, consisting of masses of the cells already described enveloped in a very fine meshwork of connective tissue. This tissue, then, is held to be the field where the cells are produced, and where they undergo certain of their changes; they closely surround the capillaries, and are also known to be abundant within them. The amœboid movements these cells exhibit even under the microscope, and Cohnheim's doctrines as to the changes which take place in the capillaries of an inflamed or irritated—that is, an abnormally active—part, will readily explain the mode of their transmission from the outside to the inside of the vessels. Finally, to complete the chain of metamorphoses, Bizzozero, in a recent contribution to the *Gazetta Medica Italiana*, has pointed out the existence of bodies which would also seem to indicate the destruction of the red blood-corpuscles in the bony marrow. Thus, whether it be true or no that the bony marrow is a blood-forming organ, it is quite evident that it is a much more important structure than has been supposed. M. Henocque, in an excellent article on this subject in the *Gazette Hebdomadaire*—an article which we have chiefly followed—points out the important bearing these discoveries have on the changes known to take place in bone in connexion with certain diseases, as scrofula, rickets, etc., and also on the effects which certain bony tumours have on life. The whole question is one of interest, and deserves careful elucidation.

THE WEEK.

TOPICS OF THE DAY.

The Council of University College, London, have determined upon establishing a Professorship of Hygiene and Public Health in the Medical Faculty. Of the value of such a course to the Medical student, especially to those who intend practising in the public services or hope to obtain appointments in the civil Medical service at home or in the colonies, it is unnecessary to write. The authorities of the University of London have already made hygiene a part of their examination in Forensic Medicine; the Army Board also examine in hygienic subjects, and before long we may expect that a knowledge of the best method of raising and preserving the standard of public health will be demanded from every applicant for a British Medical diploma. We hear that there are several candidates for the Professorship in the field. Amongst them the names of Drs. Ballard, Richardson, and Anstie are mentioned. We need not say that either of these gentlemen would fill the post with no ordinary fitness and ability. But it has long been felt that University College has not done justice to its own *alumni*. Of the early students of the College few have left their mark so high in its list of honours as Dr. Ballard, and perhaps none has so distinguished himself in the practical study of the special subjects which a Professor of Hygiene has to teach. If the Council of University College wish to retrace their steps in a course which has done much to alienate the affections of old students from their *alma mater*, we think they cannot take a wiser and surer step than that of appointing Dr. Ballard. The office of Physician to the Department for Skin Diseases is also vacant. Drs. Tilbury Fox and Balmanno Squire are candidates. Both have paid great attention to skin diseases, and either would, no doubt, do justice to the appointment.

The advocates of greater freedom in the election of examiners in the College of Surgeons have gained a step. At the last meeting of the Council Professor Humphry, of Cambridge, proposed and carried a motion to the effect that when a vacancy exists, or is about to occur, in the Court of Examiners, notice of that vacancy shall be given to members of the Council, that they may have the opportunity of proposing at their next meeting "any Fellow or Fellows of the College for ballot at the special meeting to be held for the purpose of electing an examiner; and that the name or names of the Fellows so proposed, as well as the name or names of any Fellow or Fellows subsequently proposed in writing addressed to the President, and signed by two or more members of the Council, shall be stated in the circular summoning such special meeting." A straw indicates which way the current is setting, and we think the fact that this motion was carried may be taken as a certain indication that the generally expressed opinion of the Profession in favour of the introduction into the Court of Examiners of Fellows specially qualified for examining will at no very distant period be acted upon. No doubt the majority of the Court of Examiners always will, and ought to be, composed of gentlemen whose experience and success in public and private practice and as teachers have obtained for them seats in the Council of the College; but there are few outside the Council who do not acknowledge that the qualifications for

which a Councillor is selected are not necessarily those which constitute a good examiner; whilst, on the other hand, a man may be specially versed in those branches of science, a knowledge of which the progress of the day demands from the student, who yet has no claims, either by age or by position in the practising ranks of the Profession, to a seat in the Council of the College.

The Directorship of the Medical Department of the Navy has not yet been filled up. Reports are certainly in favour of one of the three candidates we have already named. If seniority be disregarded, and neither Sir David Deas nor Dr. George Burn be selected or accept the post, it is currently believed that Dr. Armstrong will be appointed. We hope that the present Government will not show themselves less mindful of the claims of Medical men to State honours than their predecessors. The retirement of Dr. Bryson affords an opportunity for honouring a most able Physician and administrator, and we hope that it will not be allowed to pass. Surely to perform well the duties which devolve on the head of either the Army or Navy Medical Department affords as good a claim on the honour of knighthood or a baronetcy as being appointed to a colonial judgeship or consistently giving a silent vote on all occasions to the Minister of the day. Dr. Bryson has deserved well of the country and of the service, and the present Government will do well to show their sense of the value of such services in the way we have suggested, and also by granting his successor greater authority in the Department, and greater facilities for increasing its efficiency and raising its popularity than Dr. Bryson possessed.

In our last number we stated that an amount of dissatisfaction which we could not help thinking reasonable had been created in the minds of the Medical officers of the public services by the appointment of a Commission composed of civilian Medical men, however high their Professional and personal standing, to visit and report on the management and administration of the Naval Hospitals of the country. In judging the feeling thus produced, it must be recollected that the Naval, even more than the Army Medical service, has been subjected to an accumulation of indignities heaped upon it by successive administrations, and it is hardly to be wondered at that Mr. Childers' Commission has been looked at by a light derived from previous events. It is but fair to the Admiralty administration, and especially to the three able Medical men who form the Commission, that it should be known that it is no part of the business of the latter to interfere with or inquire into the Medical management of the patients treated in the Naval Hospitals. We are enabled to say that the Lords of the Admiralty are quite satisfied with the high standard of excellence attained in this respect. The business of the Commissioners, we are informed, is to report upon the organisation of the Naval Hospital system, as seen from without—by men who carry on a system of Medical and Surgical aid in civil life. The principal point of the inquiry is, in fact, the economic management of the Naval Hospital system, compared with the civil—though what Hospitals or Hospital should be taken as the standard of the civil is itself a question which a commission might well be appointed to decide. We hear that the visits of the Commissioners terminate on Thursday, February 18. On Thursday and Saturday last week they were engaged at Haslar Hospital and the Marine Infirmary at Portsmouth. We believe that the general conclusions at which the Commissioners have arrived will be in the hands of the First Lord of the Admiralty in a few days.

Relapsing fever has been epidemic in Poland, and a few cases of the disease have within the last two months been imported into London. In nearly all, if not all, the instances, the patients have been Polish Jews, living in Whitechapel and Shoreditch. Several have been treated at the London Fever Hospital and at the German Hospital, Dalston. Scarlatina is on the decrease in London. The mortality in the first week in this month had fallen to 45, whereas in the week which ended September 26, the number of deaths was 101. In the week, however, which closed on February 13, there was a slight increase, the deaths amounting to 56. A larger number of patients (3657) was admitted into the London Fever Hospital last year than in any year since its foundation. Of them 1970 were cases of typhus, chiefly from the East-end; 461 cases of enteric fever; 369 cases of scarlet fever, and 665 cases were sent to the Hospital as fever, but proved to be other diseases—a fact not creditable to English diagnosis. Although fever was thus plentiful, the mortality in the Hospital was not more than 15·2 on the whole number, and this included some persons who had died in cabs on their way to the Hospital, and persons who died immediately after admission. The Registrar-General's return for the week ending February 6 includes the deaths of two persons from "continued fever" and "typhus" accelerated by removal to the Fever Hospital in cabs. Inquests were held in both cases.

The "Nomenclature of Diseases" published with the authority of the Royal College of Physicians is now in full circulation. We may observe that the Committee who have prepared it have not committed themselves to any scientific system of classification properly so called, but have grouped together different affections according to their anatomical seats. A perfect classification of diseases we suspect to be as hopeless a matter as a perfect classification of plants and animals, and probably for the same reason—that a perfect classification does not exist in nature—that diseases, like species of plants and animals, are not separated by sharp lines of demarcation, but that one group, almost insensibly through the intervention of varieties, fades into others. The Committee, we think, have done wisely, therefore, to adopt a topographical arrangement rather than a scientific nosology. How far the book will be really a useful one remains to be seen. It is very carefully edited and very full. The synonyms in French, Latin, German, and Italian really form a valuable dictionary, which will be of great use to Medical men who cultivate the foreign literature of the Profession. But whether the book is not too elaborate for the use of busy Practitioners is a question which we may leave time to answer.

We lately noticed the report of a death from the injection of carbolic acid into the bowel which ocurred in the Worcester Infirmary. It seems, from a correspondence which has lately been published in the *Times*, that the mistake arose from the use of the word "injection." The Surgeon, Mr. Budd, directed the use of a solution of carbolic acid, which was to be injected, a tea-spoonful at a time, with a glass syringe in the case of a patient suffering from urinary fistula. The dispenser mislaid the direction, and sent the solution to another patient who was also in the Hospital with urinary fistula, to whom the nurse administered it as an enema. The man died within a few minutes. Mr. Budd promises the publication of an accurate account of all the circumstances of the case after it has been investigated at a special meeting of the governors of the Hospital.

We are glad to observe that at the last meeting of the Metropolitan Asylum Districts Board a letter was read from the Poor-law Board suggesting the expediency of postponing the erection of a third Hospital. The Poor-law Board thinks it is very desirable "that sufficient time should be afforded for ascertaining by actual experience how far the accommodation which will be afforded by the two Hospitals at Homerton and Stockwell will be sufficient. If further permanent accommodation should be found necessary, the third Hospital at Hampstead may then be built; and, in the event of a sudden outbreak of fever in the meantime rendering the accommodation in the two Hospitals inadequate, it appears to the Board that the emergency might be readily met by the erection of temporary buildings on the site in question." We think that the ratepayers of London will cordially agree with the Poor-law Board.

SURGEONS TO MILITARY PRISONS.

A CORRESPONDENT writes that he hopes, through our columns, to impress upon the notice of Mr. Cardwell an instance in which several Medical officers of the army, particularly Surgeons on half-pay, anxious and fit to return to the effective list, and Assistant-Surgeons awaiting promotion, feel aggrieved and injured that the interests of one Medical officer should have for so long been an obstacle to the fulfilment of the desires of some other individual belonging to one of the above-named classes of officers. It appears that the appointment of Surgeon to the Military Prison at Dublin has been held for several years by Surgeon-Major Tufnell, who has been permitted to remain at home for almost the whole of more than twenty-seven years' full-pay service. He is now entitled to retirement with a step of honorary rank. Should he accept this, either a half-pay Surgeon would be restored to full pay, or an Assistant-Surgeon would be promoted. As the establishment of Medical officers of the rank of Surgeon-Major or Surgeon is fixed, Surgeon-Major Tufnell's remaining on full pay of course prevents this. He is, we are assured, the only full-pay Army Medical officer attached to a military prison, and he would most likely continue to hold that appointment while on the retired list. Great as are his personal and Professional merits, the fact of his long home service, and the injustice to other Medical officers, as stated above, are obvious. Mr. Cardwell will probably look into the matter; otherwise some independent member of the House of Commons may, with an eye to retrenchment of the estimates for the military prisons, ask for information as to the cause of Surgeon-Major Tufnell's retention on the full-pay list.

POISONING BY COLOURED SOCKS.

IT is understood that a committee which has been formed to investigate the ill-effects said to arise from coloured socks finds that there is more material for its labours than was at first suspected. The number of persons who have suffered from the coloured socks is very large, and their complaints of protracted pain, lameness, and utter inability to attend to business, are only equalled by their invectives against our unhappy fraternity for not having sooner detected the cause of the mischief. One gentleman, who was unable to attend to his business, and was absent from home and under Medical care for more than six months, is said to have forwarded to the committee a list of eight Physicians of eminence whom he consulted, and of whom three pronounced the cause of his illness to be "poverty of blood," three called it secondary "enthetic" disease, spite of the patient's denial that he had ever had primary disease of the kind; one called it indigestion, and one said it was a "skin affection," which last diagnosis was indisputable. We need not be too sensitive to the ridicule attaching to such diversities of judgment, but we may take the hint that new causes ought to be suspected and looked for when we meet with new and unusual symptoms. Thanks to Mr. Webber, we have a new morbific cause demonstrated, and the College of Physicians must coin a new name for the effects thereof. One most important hint we may give for the public, that, until further advised, they had better abstain from the use of all articles whatever which are dyed with the poisonous coal-tar colours. We hear not only of ladies whose skins have suffered from tinted flannel waistcoats, but seamen whose backs and arms are excoriated by wearing "singlets," *i.e.*, tight woollen tunics similarly dyed; we hear of beautiful pink soaps which irritate the skin, of pink sweetmeats which produce aphthæ and diarrhœa in children, pink jellies which unaccountably disagree with young ladies, and even of factitious wines and cordials better suited for the eye than the stomach. There may be exaggerations, but the now well-proved fact of poisonous socks was similarly scouted as an exaggeration at first. We would say, in conclusion, that, in cases of obstinate irritation of unusual character, these dyes should be suspected and inquired for; and, until the facts are fully investigated and settled one way or the other, *nimium ne crede colori*.

POOR-LAW MATTERS AT BIRMINGHAM.

WE invite the attention of our readers to a memorial from the Medical Practitioners of Birmingham to the Poor-law Board, which they will find in another column. Two years ago it was the deliberate opinion of a committee of guardians that *six* Medical officers were inadequate to the duties which it is now proposed to intrust to five, each of whom would have the nominal care of a district containing 45,000 inhabitants. It is said that the change now deprecated has been effected with the advice and concurrence of Mr. John Clay, Professor of Midwifery at Queen's College, and a member of the Board of Guardians. There is a large Professional circle at Birmingham who would be glad to hear Mr. Clay's reasons for this peculiar line of policy, the more especially as it is said that the present Medical officers have had no opportunity of giving their opinions on the matter.

FROM ABROAD.—THE PARIS MEDICAL CONSTITUTION IN DECEMBER —FRACTURE OF THE CLAVICLE—EXPERIMENTS WITH VENOM OF THE VIPER.

M. BESNIER, in his monthly report on prevalent diseases, presented to the Hospital Medical Society, draws attention to the extraordinary elevation of temperature observed in Paris during the whole of the month of December, especially on the 5th and 6th of that month, when the thermometer rose to 16·5° (60·15° F.) and 16·9°, an elevation never attained at this time of the year since 1815. As to the mean temperature of the month, it was 8·6° (46·10° F.), a temperature never reached since 1805, exceeding by 4° the mean temperature of the preceding month, which was only 4·9° (39·10° F.). Although it is obvious that this exceptional clemency of temperature has been favourable to persons liable to affections of the air passages, yet it constitutes only one of the elements influencing the Medical constitution of the month. In spite of it the general Hospital mortality has continued to rise from last September, when the deaths amounted to 965, increasing to 1010 in October, 1051 in November, and 1067 in December, this latter figure being higher than that attained in the month of March, which usually supplies the maximum of the year. Moreover, if this December be compared with the Decembers of 1866, 1867, and 1868, there is no indication of any benefit having accrued from this unusual high temperature. Thus, while the mortality from phthisis and pleurisy has been almost identical in the respective years, that from pneumonia, typhoid fever, and diphtheria has increased in 1868. As a general observation, it may be stated that the undoubted influence of season on the frequency of certain affections is not so unlimited as is generally believed. Certainly, if we compare August with January, the difference is great, at least as regards certain affections; but if we compare two entire seasons, that of winter and summer, each represented by six months, we are surprised at the narrow limits between which variations of different diseases are comprised. The only marked difference in favour of this December consists in the diminution in the gravity, if not in the number of cases, of bronchitis, and especially in the almost entire absence of influenza. The frequency of all other affections of the respiratory organs has been as great as usual. The deaths from pneumonia were 34·18 per cent., as compared with 32·40 per cent. for the entire year—confirming the statement made by M. Vacher, derived from private practice, that pneumonia has of late proved unusually fatal. Pneumonia, in fact, has been unusually prevalent in the Hospitals during all 1868, there having been admitted 2259 cases, with 722 deaths, as compared with 2009 cases and 651 deaths in 1866, and 1970 cases and 702 deaths in 1867. For some years past both the frequency and fatality of phthisis have been on the increase; and in 1868 there were 3028 deaths

in 5834 cases, or the high mortality of 51·93 per cent. Variola continues to prevail epidemically, and the Hospital mortality from this source in 1868 has been unusually large—viz., 224 deaths in 1771 cases, not comprising 405 individuals suffering from varioloid.

At a recent meeting of the Paris Société de Chirurgie, M. Dolbeau read a report on a paper sent in by M. Baizeau upon "The Inutility of Bandages and Apparatus in Fractures of the Clavicle," detailing a series of cases in which this accident was treated with perfect success by simple suspension in a sling. The reporter observed that the writer's views on the inutility of apparatus in these cases only express the conclusion to which the experience of the generality of Surgeons of our own times has led them. M. Chassaignac, however, protested against the accuracy of this statement, feeling certain that this abstention from treatment is not the rule of the majority of the Paris Hospital Surgeons. In his own opinion, such a rule would be attended with inconvenience and danger. He has met with pseudarthroses, irregular callus, loss of power in the limb, deformities of an unsightly character, especially in women, and the necessity of resorting to excision—a blue to the abstaining from treatment of the original accident; and he regards it as something like an insult to Surgery to affirm that there are fractures of the clavicle which the Surgeon's skill cannot reduce and maintain reduced. He maintains that no such fracture can resist the reducing procedure which he has described under the name of *emplexation*. As to maintaining the reduction when once produced, it entirely depends upon the permanence of the extension and upon the diffusion over a large surface of the pressure exerted by the bandage. This end is attained by resorting to certain attitudes, such as the forced elevation of the point of the shoulder, combined with the application of an irremovable bandage or plaster apparatus, the pressure of which can be so conveniently extended over the whole upper limb and the lateral part of the neck. Since employing such means, M. Chassaignac has never met with a case in which union has not been accomplished in a satisfactory manner. M. Marjolin considers the opinion delivered by the author and reporter too absolute, since there are cases in which the application of some form of apparatus is indispensable in order to prevent, or, at all events, diminish, the inconveniences resulting from the accident. M. Trélat expressed a similar opinion, adding that an apparatus capable of preventing the mobility of the fragments is also necessary on account of the pain, which is often very considerable for the first few days, and which is induced by the movements and contractions of the muscles. M. Le Fort stated that he had witnessed the success of M. Chassaignac's treatment in a case declared by Malgaigne to be irreducible, in which the fracture was reduced, and kept reduced, by this apparatus. Still even this is not infallible, for there are cases which, in spite of every care that can be bestowed on them, will be followed by deformity. A simple sling will not suffice, and Mayor's sling, which is sufficient in many cases in which there is not any fear of deformity, is, in fact, a true bandage. M. Demarquay observed that there are cases in which the Surgeon must interfere and effect reduction and maintain the reduction. He referred to one treated by Mayor's sling, in which he was obliged to reduce the fracture, one of the fragments of which projected under the skin, and caused intolerable pain. After the reduction all suffering ceased. M. Dolbeau still maintained that, providing you can secure the immobility of the fragments by a properly applied sling, that is sufficient, as, indeed, is seen in the practice of most Hospital Surgeons. As to supposing that a fracture of the clavicle can be treated without leaving any deformity, it is an illusion but of course we must take every means, especially in the case of young women, to render the deformity as slight as possible. M. Giraldès observed that we must distinguish in these fractures whether they occur in children or adults, with or without laceration of the periosteum, etc. The great difficulty is, not to reduce them, but to maintain them reduced; and to this end the irremovable bandages are the worst of all, inasmuch as the contraction of the sterno-cleido-mastoideus and the respiratory movements are constantly displacing the mould. An apparatus is required that can be supervised and modified daily during at least ten days, and the most suitable bandage cannot be stated beforehand. The Surgeon must contrive this himself at the bedside, and adapt it to the peculiarities of each case. M. Verneuil observed that it is true that most of the Paris Surgeons are content to treat these cases by the sling, but then it is Mayor's sling, which is a true fracture apparatus.

An abstract of some of the results of experiments on the poison of the viper, performed last September by MM. Chéron and Goujon, has just been published in the *Union Médicale*. A rabbit was bit on the ears and neck by a *vipère-aspic*, common in the forest of Fontainebleau, and died in thirty hours. Twenty-four hours had passed when considerable œdema around the bitten parts was observed, and it became easy to collect sixty or seventy grammes of a reddish serosity, having a fetid odour, coloured by blood globules, and containing a few *leucocytes*. The serosity, heated and treated by nitric acid, did not coagulate. About two grammes of this serosity having been injected under the skin of another rabbit, in an hour and a half afterwards it became very cold and staggered in walking, and in half an hour later it died in convulsions. At the autopsy, performed immediately, a large quantity of colourless and transparent serosity was found in the abdominal cavity. Around the point where the injection had been made there was not the ecchymosis and œdema observed after the injection of the venom in the other rabbit. The muscles were very pale, and did not react under the stimulus of the induced current. All the viscera were also void of colour. The venæ cavæ were gorged with black blood, and the arteries were completely empty. The bladder contained a large quantity of urine.

PARLIAMENTARY.—THE SICK POOR.

In the House of Commons on Wednesday, February 17,

Mr. M'Cullagh Torrens gave notice that on Wednesday, March 10, he should call the attention of the House to the present condition of the metropolis as regarded its liability to rating under the various Acts for the relief of the poor, and should ask the opinion of the House on a resolution to the following effect:—"That the proposed expenditure under the Act of 1867, entitled the Metropolis Sick Poor Act, is excessive, and that, with a view to the more effectual relief of the poor and to the ability of the ratepayers of London and its neighbourhood to bear enhanced burdens, it is desirable that no sanction to any further outlay should be given by the Poor-law Board until a full inquiry shall have been had as to the necessity for the existence of such district asylums as are proposed to be erected, and as to the ability of the ratepayers to bear such increased burdens."

THERE were two deaths from gangrene, the result of frostbite. The winters are severe, the thermometer for several nights standing a little below zero. The beggars, who are numerous and ill-provided for, too often sleep in doorways and on the public street, and not a few of them have had frostbite. In the case of one of the men who died, all attempts to stop the spread of the disease failed. Before his death he requested to be dressed for burial, a custom common among the Chinese. His brother who was in attendance secured him suitable clothes, in which he might with propriety appear in the next world. His face was covered with a sheet of white paper. In this way they are often starved to death. The brother remonstrated when congee, or water, or wine was administered, as simply retarding his death, and giving himself and me trouble. He frequently called upon him to be quick in dying; we were all waiting, he said, and the cart at the door hired in the belief of a speedy dissolution. This practice is revolting to our more humane feelings. The Chinese are to a large extent dead to mere feelings of humanity—they are utilitarians *par excellence*.—*The Sixth Annual Report of the Peking Hospital, by Dr. Dudgeon.*

REVIEWS.

Stone in the Bladder: with special Reference to its Prevention, Early Symptoms, and Treatment by Lithotrity. By WALTER J. COULSON, F.R.C.S., Surgeon to St. Peter's Hospital for Stone and other Diseases of the Genito-Urinary Organs, and to the Lock Hospital. London: John Churchill and Sons. 1868.

In this work Mr. Coulson republishes in a somewhat extended form the substance of three lectures delivered by him at the special Hospital to which he is attached. The objections urged by the Profession against the establishment of this institution have never led to any personal ill-will against the gentlemen connected with it, and we may therefore calmly examine this work upon its own merits without expressing an opinion upon the vexed subject of specialism. The object of the volume is, as stated in the preface, "to draw particular attention to the early symptoms of stone in the bladder," with a view to its early recognition, prevention, and treatment. But although throughout the volume the author exhibits a manifest desire to attain this desirable end, we cannot discover that any new facts have been brought to light, or any new aids in diagnosis or treatment have been discovered; at the same time we freely admit that Mr. Coulson has succeeded in placing before his readers a carefully arranged summary of the knowledge at present possessed by the Profession upon this subject. The first lecture is devoted to the consideration of the early symptoms of stone, and the author draws special attention to the influence of exercise and rest in developing and masking such symptoms—a point to which Surgeons formerly paid much attention, as the habits of life and modes of travelling on horseback or by coach rendered these facts especially patent to every observer.

In making a preliminary examination Mr. Coulson advocates the use of the lithotrite in preference to the sound—a plan which we think but few Surgeons would wish to adopt, and which would not prove very acceptable to the patient. We cannot agree that this instrument causes less discomfort in its passage through the urethra than that produced by a moderate-sized sound, whilst its more formidable appearance might well create much uneasiness in the mind of the patient at his first interview with the Surgeon. The argument that "it enables you to deal with the enemy at once" is of but little value, as it can rarely happen that a Surgeon would venture to crush a stone the moment he has detected its presence without any preparation on the part of the patient.

The second lecture will probably prove the most useful to those for whom the work is specially designed. It contains some excellent advice upon the preparatory treatment of the patient and upon the method of conducting the operation of lithotrity, every step of which procedure is carefully described in a clear and practical manner. Mr. Coulson urges the importance of students making themselves familiar with the use of the lithotrite by frequent practice upon the dead subject, and he draws attention to the fact that in no London school are proper facilities afforded for this kind of study. We believe that this is in the main true, but at some schools at least the operation is taught as a part of the regular course of operative surgery, and we hope that this may soon be rendered compulsory by the examining boards.

The third portion of the volume is devoted to the chemical and physical characters of the various calculi, to the conditions under which they may be produced, and to the preventive and solvent treatment which may be adopted in such cases. Here the author acknowledges that he is chiefly indebted to Drs. Broadbent and Roberts for the facts and opinions stated in the text, and he advances nothing but what has already become part of the common stock of Professional knowledge upon this subject. The work will probably prove useful to those who have not time to study any of the larger and more elaborate works which have preceded it.

THE Siamese Twins, now exhibiting at the Egyptian Hall, Piccadilly, appeared in London for the first time about forty years ago. Curiously enough, there was a pair of female "Siamese twins" born at Biddenden in Kent, about 500 years ago, and the memory of the "Maids of Biddenden" is still perpetuated by the distribution annually, on a particular Sunday, in the parish church of Biddenden, of some cakes marked with an outline of their figures in bold relief.—*Guardian.*

GENERAL CORRESPONDENCE.

HOSPITAL ADMINISTRATION.

LETTER FROM DR. FLEETWOOD BUCKLE.

[To the Editor of the Medical Times and Gazette.]

SIR,—As the author of the paper on the above subject, read before the Social Science Association, commented on in your impression of January 30, and transcribed into the provincial papers, I trust you will allow me a small space to reply to these criticisms.

All Hospital reformers must anticipate interested opposition, but I certainly did not expect the insignificant and obviously vexatious quibble, raised by Messrs. Hawkins and Wilkinson, as to the relative cost of in- and out-patients, and per bed (the latter depending on the sum spent on the in-patients); they saddle the indoor sick with nearly the whole of the expenditure. I maintain the out-patients should bear their fair share of the cost of management, salaries and wages, printing and advertising, and drugs. It is obvious to any one acquainted with the vast crowds who daily assemble in the London out-patient rooms, that large sums must be expended under these headings for them. Now of the £216,000 disbursed by the twenty-two metropolitan general Hospitals, Messrs. Hawkins and Wilkinson would apportion £213,000 to the in-, and less than £3000 to the out-patients (who are ten times as numerous) —a sum utterly inadequate for the purpose. My figures would show £146,000 and £70,000 respectively—a much more accurate estimate. However, it matters little to the public which way the division is made: in either, the averages show marvellous and totally unexplained differences in the cost of administration in the various institutions.

My book on Hospital statistics has done such good service in forcing prominently before the public the unsatisfactory nature of the reports issued by Hospitals, and has so long been accepted as an authority, that whether individuals are able to prove their theories by it or not is of little moment. Mr. Hawkins must surely have been angry when he insisted that draft reports were usually issued; the public do not see them. I would remind this gentleman that the statistics he would not accept were supplied to me by the secretaries to the various Hospitals—St. Mary's amongst the number—who at least could not be suspected of giving unfavourable figures.

Notwithstanding the opposition, the points I have so long been working for, and sparing neither time nor money to carry, have at last been adopted, and we may now hope soon to see proper and uniform reports issued, drawn up in so clear a manner that the public can check the expenditure of their money; the accounts carefully supervised by a Government official, public auditor, a committee, or some central directing body; the working Medical officers remunerated; some check put to indiscriminate Medical almsgiving; the income of the general Practitioner more rarely trenched upon by persons who, though able to pay for treatment, are tempted to seek assistance from some puffing special charity; the panperisation of the working classes lessened by making them feel the necessity of self-reliance; a mutual relation existing between Hospitals supported by voluntary contributions and those under the control of the Poor-law Board; and the poor-rates consequently decreased.

I am, &c.

FLEETWOOD BUCKLE, M.D.

7, Allcroft-road, Haverstock-hill, N.W., February 15.

RESULT OF AN OPERATION FOR MALIGNANT GROWTH IN THE EYEBALL SIX YEARS AGO.

LETTER FROM MR. ROBERT BRUDENELL CARTER.

[To the Editor of the Medical Times and Gazette.]

SIR,—In the *Medical Times and Gazette* for December 5, 1863, you did me the favour to publish an account of a case in which, on the 10th of the preceding January, I had removed from a child an eye containing a malignant growth. Six years have now elapsed since the operation, and I have just received a letter from the patient's father. He informs me that the child has had uninterrupted health, that there has been no return of the disease in the orbit, and no reason to suspect it elsewhere. I shall be much obliged if you will give publicity to this, the sequel of the history, which certainly supports the views of those who advocate early operations in such cases.

I am, &c. ROBERT BRUDENELL CARTER.

8, Princes-street, Hanover-square, W., February 16.

NOTICE TO POOR-LAW MEDICAL OFFICERS.

LETTER FROM DR. JOSEPH ROGERS.

[To the Editor of the Medical Times and Gazette.]

SIR,—I should feel obliged if you will allow me, through your columns, to inform the members of the Association and Poor-law Medical Officers generally that gentlemen who intend to petition the House of Commons for a redress of their grievances must forward their petitions as soon as possible to me, as I intend, at an early date, to hand those already received to a friendly member for presentation.

I am, &c. JOSEPH ROGERS.

33, Dean-street, February 17.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

MONDAY, JANUARY 18, 1869.

Dr. RICHARDSON, F.R.S., President, in the Chair.

MR. HAYNES WALTON brought forward a double case of Conical Cornea on which he had performed four operations.

Mr. DE MERIC then read a paper entitled "How Syphilis begins and ends." The author, in stating the results of his whole experience of cases of syphilis, discussed its possible initial symptoms under the following heads:—1. Gonorrhœa. He had not met with a single patient who suffered syphilitic symptoms after a simple gonorrhœa. The difficulty of diagnosis, however, in females rendered it impossible to state that the law was infallible, though it appeared to be so. 2. Balanitis. This he had never known to be an initial symptom of syphilis. 3. Bubo. This could, the author considered, result from local irritation of the lymphatics propagated to the lymphatic glands, and, when thus directly produced, was not an initial symptom of syphilis. 4. Simple Abrasion. At first it was probably impossible to diagnose between simple abrasion and commencing chancre; time, however, soon solved the difficulty. 5. Soft Chancre. The author believed this could initiate syphilitic symptoms. 6. Hard Chancre or Hard Erosion. The author entered at length into the subject of this affection as the initial symptom of syphilis. 7. General Symptoms. The author considered that secondary symptoms may be communicated without any obvious primaries. The question of the endings of the disease was then considered. The disease may prove fatal, usually from phagedæna or necrosis, or it may pass away entirely from the system, and the patient completely recover. In twenty years' experience, the author had only met with twenty deaths.

Mr. Dunn, Mr. Hunt, Mr. Adams, Dr. Semple, Mr. Wolff, Dr. Colomiati Meredyth, Dr. Camps, Mr. Weeden Cooke, and Dr. Gibbon took part in the debate. The author replied, and the meeting adjourned.

HARVEIAN SOCIETY OF LONDON.

THURSDAY, JANUARY 21.

E. HEADLAM GREENHOW, M.D., President, in the Chair.

THE PRESIDENT, on taking the chair, delivered a brief address, in which he referred to the important work which the Society had done scientifically as well as socially. Many years since he had induced the Society to move the Government to make the first Medical officer to the Privy Council a permanent one. This had been done—with how much advantage to science and humanity all knew. The results which the Society had achieved in dealing with questions such as those of Prevention of Infanticide and the Repression of Venereal Contagion, were matters of national importance. Important scientific papers were promised, and constant contributions of clinical matter in the way of short cases might be expected, as had been customary.

Mr. J. ZACHARIAH LAURENCE showed a patient in whom there was a very high degree of Hypermetropia, and suggested that, in order to meet the convergent obliquity of the eyes which occurred in associated vision, it was useful to give to the spectacles a correspondingly oblique plane. With this view he had the frames bent so as to give a suitable degree of inclination to the glasses.

Mr. ERNEST HART read a portion of a detailed paper on the Ophthalmoscopic Signs of Constitutional Disease. The nervous and vascular tissues of the eye, as observed by the ophthalmoscope, gave characteristic indications, according to the author, not only of a number of cerebral and spinal diseases, but of many cardiac, visceral, and vascular diseases. The part of the paper read (the whole being too long for the purpose) gave a minute description of the changes of the optic nerve and retina in spinal and cerebral affections. The general views were in most respects opposed to those of Bouchut, whose conclusions were not accepted: those of Galezowski being stated to be more accurate. Mr. Hart said that he had been called upon, from time to time, to give an ophthalmoscopic diagnosis to physicians of St. Mary's Hospital, not only with a view to the elucidation of the degree of organic change accompanying any particular series of brain symptoms, but in order to help to distinguish between simulated or hysterical and real disease. In private life the ophthalmoscope had decided the diagnosis when the question lay between typhoid and meningitis, and had indicated more than once impending cerebral or other organic disease where only failure of sight was complained of. In a recent case he had prevented an insurance company from advancing a heavy sum on the life of a gentleman already insured, but in whom there had been ground for ophthalmoscopic observation, owing to an anomaly of sight. The examination led to the conclusion that the arteries of the brain were atheromatous, which subsequent events have confirmed.

Mr. J. Z. LAURENCE said the subject was one which only ophthalmic Surgeons in connexion with general hospitals had much opportunity of following out, and constituted in itself quite a speciality in ophthalmic research. The paper was so full of valuable data that he hoped it would soon be printed for reference and discussion.

Mr. BOWATER VERNON showed a beautiful specimen of Tubercles in the Choroid, from a patient who had died in King's College Hospital. The tubercle had been seen during life by Mr. Soelberg Wells with the ophthalmoscope.

The PRESIDENT referred to remarkable cases of loss of vision during and after pregnancy.

The author replied.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, FEBRUARY 3.

THOMAS SWAIN, Esq., in the Chair.

MR. W. S. MANN was appointed one of the Honorary Secretaries, and a number of new Fellows and members were elected.

Mr. WILLIAM THOMAS exhibited a patient, aged 14, with numerous Exostoses on the Long Bones. Nearly all the long bones are thus affected, the largest tumours being on the lower end of each femur, upper end of each tibia, and head of each humerus. The structure of two of them which had been removed was found to be light and cancellated, like the heads of the long bones. The principal fact of interest about these tumours is that each corresponds with the situation of the epiphysal cartilage. This is most marked in the enlargements found on the phalanges and metacarpal bones. If the tumours thus correspond with the epiphysal cartilage, as they appear to do, and spring from them, it will be interesting to ascertain whether or not they cease to enlarge when the bones become fully developed.

Dr. JOLLY showed a Malignant Tumour of the Tibia, removed by amputation from a girl aged 18 years, of twelve months' duration. The tumour was globular, hard, and inelastic, involving the middle and upper third of the right tibia. The surface was somewhat irregular, and the integument covering it presented a glistening appearance, but was not discoloured. The tumour was the seat of intense pain, worse at night. There was no affection of the neighbouring glands. The muscles attached to the affected portion of bone were found on dissection to be extensively infiltrated with cancer cells. The disease presented a good example of osteo-cephaloma, originating in the medullary membrane and periosteum covering the bone.

Dr. JOLLY also exhibited a Cancroid Ulcer of the Heel, removed by amputation of the leg from a man aged 40. The disease originated two years previously in a slight abrasion caused by a tight boot. The growth continued to increase slowly for several months, and caused the man little inconvenience. It then became painful, and began to grow with more rapidity. When the patient first came under observation the sore had all the characteristics of a chronic ulcer in connexion with

disease of the bone, except at its lower and outer part, where the granulations were elevated into tuberous, hard, warty projections. All means having failed to heal the sore, and the man's general health becoming unsatisfactory, the leg was removed at the middle third by Teale's method. The stump healed rapidly, and the patient's health is now excellent. A microscopic examination of the warty growths showed them to contain nucleated cells in all stages of development, with molecules, granules, and naked nuclei.

Mr. J. F. West brought under the notice of the Society a case of large Femoral Aneurism in a man aged 38, healthy and apparently free from atheromatous disease in other parts, which had come on spontaneously and without any history of strain or other injury. The aneurism in three weeks had attained the size of a child's head. The tumour was on the point of bursting when Mr. West ligatured the external iliac artery. The ligature separated on the seventeenth day, and the patient was able to leave his bed at the end of a month, the aneurism having became quite solid and greatly reduced in bulk. Mr. West made a few observations on the treatment of femoral and inguinal aneurisms, giving a brief abstract of Dr. Norris's and M. Broca's papers on this subject. In Mr. West's opinion, the Hunterian method of applying the ligature to the external or common iliac arteries in these cases is, as a rule, preferable to the old method which has recently been recommended and used by Mr. Syme, as also to that of compression as practised in Dublin. Mr. West advocated a further trial of the method employed by Drs. O'Ferrall and Mapother, of Dublin, of entirely arresting the flow of blood through the aneurismal sac, in preference to that of moderating the current by partial and intermittent pressure.

ARMY MEDICO-CHIRURGICAL SOCIETY OF PORTSMOUTH.

Wednesday, February 3.

Deputy-Inspector General Dr. Gordon, C.B., in the Chair.

Assistant-Surgeon Power, of the 2nd Battalion 13th Light Infantry, read a paper on the Topography of the Mauritius in relation to the Epidemic of Malarial Fever of 1867. Having given an outline of the natural features and geological formation of the island, more particularly with reference to the districts where the fever prevailed and those which entirely escaped, he entered into particulars regarding the meteorology of the island and the peculiarities which characterised the hot season 1866-67—viz., an absence of rain in the proper rainy season, greater and more continued heat than usual, the absence of the usual electrical phenomena, as thunder and lightning, and the absence of cyclones. There was thus a comparative stagnation of the atmosphere, the breezes which did prevail being purely local in their nature. He observed that high temperature and an absence of rain, acting upon soil saturated with organic matter, were the exciting causes of the fever, many parts left dry having heretofore been always covered with water, and the temperature being further raised by the circumstance of the sun's rays being absorbed and retained by the thinly covered basaltic rocks. He believed that this view was confirmed by the fact that those parts where the greatest rainfall occurred and where the soil was moist were almost entirely free from fever.

Assist.-Surg. Alcock, 35th Regt., read a paper on the Influence of Nervous Power in controlling the Temperature of the body. Starting with the generally received theory that "the blood itself is the seat of those chemical changes that develope force in the body," he alluded to the mechanical part played in the development of heat by the dilatations or contractions of the capillaries coincident with paralysis or irritation of the sympathetic nerves, as proved by the experiments of Bernard and Brown-Séquard. Accepting destructive metamorphosis as the only source of the production of heat, he suggested that, as the process of formative nutrition could only be carried on in the presence of a certain temperature, it was allowable to infer that some heat may be abstracted and rendered latent by this act, so that, on the diminution of nutrition by disease, another cause arises why its outward manifestations should be greater. To exemplify the direct influence of the nervous centres over the metamorphosis of tissue, he instanced the sixfold increase of urea in the urine of the rutting ram as proved by Professor Haughton. He thus reasoned that preternatural heat was the result of three conditions—suspension or exhaustion of the functions of the sympathetic, diminished nutrition, and increased metamorphosis—but believed the second and third to be consequences of the first, and brought forward heat apoplexy as a disease in every way typical of an exhausted sympathetic, in support of which he showed that, in two out of eleven cases of this affection which occurred in the 35th Regiment in Mooltan, there was a distinct history of previous nervous exhaustion from fatigue, intemperance, or disease. In conclusion he laid before the meeting the thermometric record of a case in his own practice in India, in which uterine hæmorrhage caused temporary paralysis of the right half of the body, with lowering of the temperature of that side. Fever supervened, and then the temperature on the paralysed side rose considerably above even the fever heat shown on the sound side, thus proving the elevation of temperature on invasion of disease to be in direct proportion to the previous nervous depression.

A case of Calculus in the Bladder, reported by Surgeon Porter, 97th Regt., was then read. The patient was a native of India, aged 22 years. The calculus was readily detected. There existed a fistulous opening in the right lumbar region through which passed urine, pus, and "gravel." The lateral operation was performed, and the calculus extracted with difficulty. It consisted of the triple phosphates, and weighed three ounces and four drachms. The fistula in the lumbar region closed, and in six weeks after the operation the man returned to his home.

OBITUARY.

JOSEPH HODGSON, ESQ., F.R.S.

At the ripe age of 81 Mr. Hodgson died on Sunday, the 7th inst., having survived his wife about twenty-four hours. He had been long in failing health, and had not practised his Profession for several years. Mr. Hodgson's father was a Birmingham merchant, and articled his son to Mr. George Freer, a leading Medical Practitioner in that town. Owing to reverses in business, the elder Mr. Hodgson was unable to defray the expenses of his son's education in London, but funds were supplied to the extent of £100 by an uncle, and with this young Hodgson repaired to the metropolis and entered as a student at St. Bartholomew's Hospital. Having obtained the diploma of the College of Surgeons, he commenced practice in King-street, Cheapside, but did not remain there long. During this period, he eked out his scanty income by taking pupils and writing articles for the *London Medical Review*. He subsequently became editor of this periodical, but its circulation gradually declined, and it ultimately collapsed. On leaving King-street, he obtained, through the interest of Mr. Travers, a Medical appointment at the York Military Hospital, Westminster, where he remained for some time in comparatively comfortable pecuniary circumstances. On removing to Birmingham he was elected Surgeon to the General Dispensary, and in 1821 became Surgeon to the General Hospital. This office he filled for nearly thirty years, obtaining a large and lucrative practice, and a reputation which was equal to that of any Surgeon of the day. During a large portion of the time he resided in Birmingham political and Professional feeling ran very high, and probably many of the hot and bitter quarrels in which he was engaged were inevitable. However, this may be, they had no effect upon his reputation or success, and he maintained to the last his position as the leading Surgeon of the midland counties. On his retirement from the Birmingham Hospital in 1848, the Governors subscribed for a portrait of him by Mr. Partridge, which was placed in the committee-room. During his practice in the town he was mainly instrumental in founding the Eye Infirmary, which was opened in 1824, Mr. Hodgson being the only Surgeon attached to it; his first colleague was Mr. Middlemore the present Consulting Surgeon to the institution. Mr. Hodgson, before leaving Birmingham, was solicited to become one of the Surgeons to the Middlesex Hospital, and he was subsequently invited by the Council of King's College to accept the post of Professor of Surgery to that institution—a post which had become vacant in 1840 by the resignation of Mr. Arnott. Both these invitations he declined. When he settled in the metropolis in 1849, honours were almost heaped upon him. Thus, in that year, he was elected a member of the Council of the College of Surgeons; subsequently he became an Examiner in Surgery at the University of London, and resigned this appointment in 1856 to become one of the Examiners of the Royal College of Surgeons. He was President of the College in 1864. He

served the office of President of the Royal Medical and Chirurgical Society, and was also a Fellow of the Royal Society.

As an author Mr. Hodgson is best known by his work on "Diseases of the Arteries and Veins," which obtained the Jacksonian prize for 1811, and which he subsequently enlarged considerably and published. He contributed some articles to the *Transactions of the Royal Medical and Chirurgical Society*. As a Practitioner, and like most of the provincial Hospital Surgeons, he practised generally. He was celebrated for the accuracy of his diagnosis; he was most laborious in his examination of a case, and in surgical diseases was generally accurate; but his great caution, and the tendency of his mind to take a gloomy view of diseases of a medical character, made him less fortunate in that class of complaints. As an operator he was by no means brilliant, and was inferior in many respects to at least one of his colleagues, Mr. Wood. As a man, he was much respected and beloved for his benevolence and kindliness of manner; but his *suaviter in modo*, in later years at least, stood out in prominent contrast to his *fortiter in re*. He appeared always desirous of pleasing, but seemed to lack the courage to take any decided action. If there was any exception to this, it was in his consistent opposition to all reforms. He was, perhaps unconsciously, in this respect an imitator of his friend Lawrence, but he was free from the inconsistency of that eminent person: he commenced as a conservative, and he never swerved from his first principles. He steadfastly opposed the formation of a Medicine in Birmingham, and whilst on the Council of the College of Surgeons voted, we believe, on all occasions, with the "let-alone" party. The system had worked well in his own individual case, and there is no reason to believe that he acted on any but conscientious convictions. His year of office as the President of the College of Surgeons was not characterised by any important event, so far as he was personally concerned, and, as President of the Royal Medical and Chirurgical Society, his term of holding that distinguished position was favourable to him as one of the most urbane and dignified persons who ever filled that post, but that he was less decided and suggestive than had been expected of him. As a speaker he was somewhat diffuse, but he gave evidence of a mind well stored with "Surgical experiences."

Mr. Hodgson was one of a class of Surgeons who in the provinces of England have shed great lustre on the art and science of Surgery. He was better known as Hodgson of Birmingham than Joseph Hodgson, President of the Royal College of Surgeons. Like his great contemporaries, however, Hey of Leeds, White of Blackburn, Sodeu of Bath, Martineau of Norwich, Mayo of Winchester, Kerr of Northampton, James of Exeter, and others of the same stamp, his reputation was not confined to the locality of a country town, but was as great in every part of the world where Surgery is acknowledged as one of the highest branches of art and science. Hodgson was fortunate in his pupils, amongst whom were Partridge, Bowman, and Vose Solomon. We have spoken freely of the shortcomings of our late venerable friend, because we feel the importance of drawing a correct portrait and not a mere picture of so distinguished a member of our Profession.

JAMES WARDROP, M.D., SURGEON TO GEORGE IV.

At a quaint-looking old house in Charles-street, St. James's-square, one door east of the London and Westminster Bank, died on Saturday last one of the most remarkable men who ever were connected with the Profession of Medicine. James Wardrop, son of James Wardrop, was born at Torbane Hall, in the county of Linlithgow, on August 4, 1782. He was educated at the High School, Edinburgh, attended the literary classes of the University, and subsequently entered upon the study of Medicine as a pupil of his uncle, Dr. Andrew Wardrop, a Surgeon of eminence in Edinburgh. He assisted Dr. Barclay, the celebrated anatomist, and at the age of 19 was appointed House-Surgeon to the Royal Infirmary. He subsequently studied in Paris and Vienna. In the latter city he attended the lectures of Franck, Prochaska, and Beer. When 22 years of age he established himself in practice at Edinburgh. During his stay there he devoted himself to pathology, and published papers "On the Morbid Anatomy of the Eye," "On Fungus Hæmatodes," and several papers in the *Edinburgh Medical and Surgical Journal*, and an article on Surgery in the "Encyclopædia Britannica." He also laid the foundation of the present museum of the Royal College of Surgeons of Edinburgh. In the year 1809 Mr. Wardrop came to London, was admitted a Member of the College of Surgeons, and immediately started into practice. For some years he practised extensively amongst the poor, chiefly at his own house; and in 1826, in conjunction with Mr. W. W. Sleigh, the father of Mr. Serjeant Sleigh, he founded a Hospital in Nutford-place, Edgware-road, under the title of the "West London Hospital of Surgery." This was not only a charitable institution, but was open gratuitously to all members of the Profession, and on one day of the week a *concours* was held. At this gathering operations of importance were performed, and a discussion or conversation took place respecting them. From fifty to eighty visitors usually attended each meeting, including almost every scientific foreigner then in town. The Hospital was carried on at great expense, which chiefly fell on Mr. Wardrop himself, who at the expiration of eight years was reluctantly compelled to give it up.

In 1826, Mr. Wardrop, in conjunction with Mr. Lawrence, gave a course of lectures on Surgery at the Aldersgate-street School. After Mr. Lawrence's transference to St. Bartholomew's School, Mr. Wardrop for a few seasons gave these lectures alone. Mr. Wardrop took an active part in the discussions which took place about this time (1826-27) on the state of the Profession, and supported Mr. Lawrence at the meetings held at the Freemasons' Tavern, when the subject of Medical reform was causing so much excitement in the Profession. Mr. Wardrop never recanted the opinions he expressed at this time, and maintained the same views to the last. He contributed many leading articles to one of the Medical journals of the day, and, there is no doubt, injured himself in practice by going in opposition to the leading members of the Profession. He was regarded as a pariah by men who could do much either to benefit or ruin him. He never apostatised, however, and his conduct in 1826-27, we believe, kept him out of any official connexion with the colleges, and gave "the future colour to his life," which was not one of success—not of that success, at least, which he had a right to expect. Mr. Wardrop, about 1835, joined the Hunterian School of Medicine, and gave there a course of lectures on Surgery. It is worth stating, *en passant*, that about the same time his "rival," Robert Liston, was giving a course of Clinical Surgery at University College. He was insisting on the necessity of losing as little blood as possible in amputations of the thigh, whilst Wardrop was urging on the very contrary doctrine. This, we believe, was his last appearance as a lecturer. He was appointed Surgeon-Extraordinary to the Prince Regent, and attended George IV. when he visited Scotland in 1823. When Sir A. Cooper was appointed Serjeant-Surgeon in 1828, Mr. Wardrop was made "Surgeon to the King." He was offered a baronetcy, but this he declined.

We have reason to know that circumstances connected with the last illness of George IV. gave origin to one of the most interesting series of letters which have ever been published. Mr. Wardrop had been strongly under the impression that he was kept away from the King in his last illness by the influence of Sir H. Halford, and indirectly by that of Sir B. Brodie. He had, since his declarations on Medical reform, been on anything but friendly terms with the President of the College of Physicians, and he always considered Sir B. Brodie as unfriendly to him. What specific cause he had beyond that referred to above we do not know; but at all events he took a singular mode of revenging himself on his real or, as we think, supposed enemies. He published in one of the Medical journals a series of papers entitled "Intercepted Letters." These purported to be letters which had been intercepted in their passage by post. The three principal writers were H. H. (Sir H. Halford), B. B. (Sir B. Brodie), and W. Mac. (Dr. Mac-Michael), then Librarian of the College of Physicians; but there were other writers and recipients. These epistles purported to contain confidential details of passing affairs, advice to a young Physician and Surgeon, etc., etc. One of the best of the letters is headed "The Best Medical Advice," and gives a humorous and witty account of a gentleman who came to London for advice. He goes to all the noted "specialists" of the day, each of whom diagnoses his complaint according to a "foregone conclusion." Amongst the letters was one, however, purporting to give an account of B. B.'s first appearance at Court, the writer being H. H., and the receiver W. McM. After stating that B. B. was well known to be highly emotional, and that the result was an action on the bowels, the writer goes on to state that in the ante-room of the palace he missed B. B., but, guessing the cause, waited patiently for his return. B. B. soon appeared, and the door of the reception-room was thrown open—"the names had been actually announced"—when, turning round, H. H. was for a moment overcome, but had the presence of

mind to back out of the throne-room. "Good God, dear McM., B. B. had the cover of the water-closet, instead of his hat, under his arm."

Such is a specimen of the style of these letters. Of course it was well known that Mr. Brodie was no joker, and, what is more, was not pleased with a joke from any one else; but the sting lay in the "emotional" reference, for a cooler or more unemotional man scarcely ever existed.

The secret of the authorship of the "Intercepted Letters" was not kept so sacred as that of the celebrated letters of "Junius." It was generally known in "well informed" quarters that the witty and unscrupulous author was James Wardrop. This drew upon him the enmity of the party then in power, whether as belonging to the rulers of the Colleges or as the consultants of the Profession. The consequence was that Wardrop had very little consulting practice except with a few of his own countrymen settled in London or with some of the more ardent reformers amongst the Surgeons in general practice. But he maintained a good position as the family Medical adviser of many of the old Scotch nobility, to whom he was known and called by the "familiar" name of "Jemmy" Wardrop. But he never thoroughly recovered his banishment from Court. It soured his temper, and made him for a time with "his hand," as it were, "against every man." We may say here that there is not the slightest ground for believing that Sir H. Halford or Sir B. Brodie had anything to do with Mr. Wardrop's "dismissal," and this Mr. Wardrop himself had been convinced of long before his death. Practitioners of the present day may justly wonder at the licence of the press some thirty-five years ago. Letters like those to which we have referred would not be tolerated at the present day. Their gross personality, their unscrupulous perversion of facts, and their general tone of abuse would be quite out of place now. But in those times party and political feeling in the Profession ran high; the position of the Surgeon in general practice was "inferior" in every sense of the word. For instance, to such lengths was this carried, that ordinary Members of the College of Surgeons were admitted to their own College only through a miserable back door in Portugal-street; the *via sacra*—the portico in Lincoln's-inn-fields—being reserved for the members of Council only! The "Intercepted Letters," then, had great popularity, but their author was "excommunicated" *quoad* the "heads of the Profession."

Mr. Wardrop contributed very little to the journal referred to after the termination of the publication of the "Letters;" but this was owing to a cause quite independent of Mr. Wardrop's change of principles, which he never changed. At this time Robert Liston was appointed Professor of Clinical Surgery at University College, and became connected with the publication alluded to. His lectures were reported and his operations lauded. This was more than Wardrop could endure, and he ceased all connexion with the editor of the weekly print with whom he had been so long associated, and to whom he had rendered such important and unpaid services. It is a noteworthy fact that during the first years of Liston's residence in London he regarded "Jemmy" as a very formidable rival, and at one time said to the writer of this sketch, "Jemmy Wardrop blocks me out of practice amongst the Scotch nobility." We believe that Mr. Wardrop's practice gradually declined about fifteen years since. Up to that time he might be seen at the West-end in a dark-brown neat little brougham, drawn by a horse, if not thoroughbred, of the best breed. For some years he had been an invalid, and, though generally cheerful and chatty with the friends who came to see him, very seldom or never left the house. He died at the advanced age of 87.

In estimating Mr. Wardrop's claims to our respect or admiration, it is impossible to overlook the causes of his failure to attain the highest posts in the Profession. These causes operated on his whole career. He was vain, self-opinionated, and scurrilous. Never was there a man of whom it might be more justly said "that he would rather lose his friend than jest." He was fond of scandal, and condescended to collect and retail the pettiest scraps of scandal gossip. He seemed to know the private history of every member of the Profession who had attained to any position. He was inimitable at telling a story or an anecdote; but his language was often so coarse and broad that he occasionally shocked those who were in his company for the first time. The writer well recollects being present, thirty years since, at a small conversational party, at which Mr. Wardrop was the "lion." On walking home, a gentleman, who had been amused, delighted, and astonished at his wit and humour, remarked, "What a reprobate Wardrop is!" But he was by no means an ill-natured man in some respects—indeed, many acts of kindness and generosity which he performed are known to the writer. His opinion could always be obtained without a fee at any time by a needy patient. But he hated to be imposed upon; he disliked shams. He was in the habit of telling with much glee how he "served out" a "gratuitous" patient who had imposed upon his benevolence. During the time he was in the habit of giving advice in the morning to the poor, he was one day called out early to see a patient in St. James's-square. On returning to his house, he observed an old gentleman very shabbily dressed alighting from a carriage with a coronet on the panels. He immediately recognised one of his "gratuitous" patients. He waited unobserved until the "old fellow" had turned the corner of Charles-street. He then ascertained that his patient was the Earl of ———. In due course, and in his turn, the Earl was ushered into the presence of Wardrop, who rose from his seat and received the shabby nobleman with the greatest courtesy, and addressed him by his proper name. The detected impostor was thunderstruck, and anxious to beat a hasty retreat. But this was not to be allowed. Wardrop upbraided him with his meanness and duplicity, and eventually made him pay a guinea for every visit he had made. The sum thus received was considerable. He never saw the "nobleman" afterwards. What a commentary on indiscriminate "gratuitous" advice! The conversational powers of Wardrop were very great. He was full of anecdote, was witty, humorous, and amusing. He used the plain vernacular in talking; to him "a spade was a spade," and he called it such. It was this peculiar gift—for it was a gift — that made him so great a favourite with George IV. But he had other claims to that monarch's personal regard. He was not a courtier; he could and did speak more plainly to him than any of his other Medical attendants; and, perhaps above all, he was one of the best judges of horse-flesh in the kingdom. Mr. Wardrop was a collector of articles of vertu, and had at one time a collection of very valuable pictures; these were mostly parted with, we believe, some years since. He had an open hand for cases deserving of charity; but he was no indiscriminate dispenser of alms. If he was not entitled to to be called a "man of genius," he was original, suggestive, and rapid in thought; but he was crotchety, obstinate, and slow to acknowledge an error. He was not so profound as some of his contemporaries, but he was more brilliant.

Mr. Wardrop's claims to distinction as a Surgeon rest less upon his operative skill than the accuracy of his diagnosis and the number and value of his published works. He was never celebrated for the use of the knife, though even in this respect he was not inferior to many of his contemporaries, but he had a sound judgment, and knew when an operation should be performed. As a lecturer, he was somewhat tame and discursive, and, like his great countryman, Liston, was not a good "teacher." Mr. Wardrop published several separate works, the best known being his "Morbid Anatomy of the Eye," and "On Diseases of the Heart." The first, at the time of its appearance, was regarded with great favour, and it deserved to be so, but it has been superseded by more modern works. The volume on "Diseases of the Heart" was the last work he published—it appeared when he was about sixty years of age. It is not regarded as an authority, but is chiefly remarkable for some physiological views peculiar to the author. He read several important papers before the Royal Society, and contributed ten most valuable articles to the *Transactions* of the Medical and Chirurgical Society. In the politics of the Profession Mr. Wardrop was a consistent liberal, and in days of danger and difficulty rendered good service to progress, both by his tongue and his pen. He retired, however, many years since almost altogether from society—that is, Professional society. It is a fact perhaps worth mentioning that the writer of this sketch during the last thirty-five years never saw Mr. Wardrop in any Medical assembly whatever. He was in most respects a disappointed man, but he kept up his wit and humour and cheerfulness to the last.

In person Mr. Wardrop was tall and thin, almost of the build of Don Quixote; he walked quickly, and dressed quite in the old-fashioned way. In winter he wore a spencer, and, when the weather was unusually cold, stuck a little bit of an apology for a cape on his shoulders. In repose his features had a half melancholy, half grotesque expression, but they were not deficient in intellectual power. Their grotesqueness was added to by the fact that one of his eyes, which were somewhat large, was a "wall" eye. When animated in conversation, however, he might pass for "a good-looking fellow."

We know of the existence of no portrait of Mr. Wardrop that is a faithful resemblance of him. The one in "Pettigrew's Portrait Gallery" is probably the best, but is far from being good.

J. F. C.

NEW INVENTIONS.

TENTS FOR HOSPITAL PURPOSES.

A CAMP and sick tent, marquee, or pavilion, of novel construction, was brought out in Berlin a few days previous to the departure from that capital of the Prussian troops for the Austrian campaign in the summer of 1866. The inventor, Mr. Stockmann, has obtained H.M. letters patent for the same, and is exhibiting a model of it at this moment in London. This tent was tested before M.H. the King of Prussia and the Prussian general staff, and was found to afford complete shelter, perfect ventilation, and a solidity which the severest storms in the mountainous regions of Moravia and Bohemia were unable in any degree to affect. One tent, of a capacity of forty feet by twenty, has commodiously lodged twenty wounded soldiers in beds, with about eighteen inches of space between each bed, or fifty wounded soldiers lying on mattresses, or, in urgent cases, even more sound men for a night's rest and shelter, affording also two private compartments, each six feet by twenty, separated by double curtains. By the help of twenty men drilled to the work, the tent has been put up completely in the short time of fifteen minutes, and taken down again and packed in ten minutes, occupying in this state about thirty cubic feet of space, and weighing about ten cwt., a weight capable of being drawn by a single horse. The materials of the said tent consist of iron, canvas, and hemp cords. The wounded Prussian and Austrian soldiers preferred remaining in these tents, up to the month of November, in Northern Germany, rather than go into any Hospitals, stone or wood buildings, and in no previous war had the wounded ever been treated with such general success.

We learn that Stockmann's tents can be set up at the rate of £3 per bed, and we cannot doubt but that the managers of any of the existing palatial Hospitals which has space for the purpose will find it advantageous, during the summer months, to remove patients with stumps and other suppurating wounds. Such a removal may save the patients and prevent them from infecting others. The accumulated opinions of all writers on puerperal and hospital diseases—Robert Ferguson and Sir James Y. Simpson especially—ought to procure for the hut or tent-system a fair trial. We understand that Mr. Van Abbott, of Princes-street, Cavendish-square, the zealous and indefatigable purveyor of novelties for the diet of invalids, is the London agent for Stockmann's tents, and is willing to furnish full information.

NEW BOOKS, WITH SHORT CRITIQUES.

On Pyæmia, or Suppurative Fever: being the Astley Cooper Prize Essay for 1868. By P. M. Braidwood, M.D., L.R.C.S. Edin., late President of the Royal Medical Society of Edinburgh. London: J. Churchill and Sons. Pp. 287.

*** No more attractive, certainly no more interesting, subject could have been selected as the subject for the Astley Cooper prize than that of pyæmia, and Dr. Braidwood's work is one of great value. Nor is less credit due to the publishers of this volume, who have spared no expense to make it worthy of its author and its subject, insomuch that the chromo-lithographs with which it is illustrated are really among the best we have seen. So much has been written on the subject of pyæmia, so many discordant views are afloat as to its origin and nature, that a work containing an account of these cannot fail, were it on that account alone, to secure public favour. The carefully observed cases given by Dr. Braidwood give a value of their own to the volume.

A Practical Treatise on Perimetritis and Parametritis. By J. Matthews Duncan, Clinical Lecturer on the Diseases of Women in the Royal Infirmary. Edinburgh: A. and C. Black. Pp. 249.

*** As Dr. M. Duncan well remarks, the subject of this contribution to gynæcology is surpassed in importance by none of the diseases of women. Dr. Duncan does not want to thrust his own views on every one—indeed, he confesses that the grounds for a perfectly unassailable opinion are as yet wanting. Still he desires to report progress, and to add his contribution to the current knowledge of the subject. The most important chapters of this valuable work are those which deal with the seat and nature of the allied diseases, with adhesive perimetritis, encysted serous perimetritis, perimetric abscess, parametric phlegmon, and parametric abscess. An appendix treats of pelvic areolar inflammation and sloughing.

The Theory of Ocular Defects and of Spectacles. Translated from the German of Dr. Hermann Scheffler by R. Brudenell Carter, F.R.C.S. (Exam.), Consulting Surgeon to the Gloucestershire Eye Institution. London: Longmans. Pp. 240.

*** There can be but one opinion as to the great value of this work, especially as improved by Mr. Carter. But the most valuable works are not always the most popular, and we fear that the abundance of the exact and mathematical data given both by Dr. Scheffler and Mr. Carter will interfere with its general utility. The practical rules as to spectacles added by Mr. Carter will be more generally appreciated and become more widely useful.

A Theoretical and Practical Treatise on Midwifery, including the Diseases of Pregnancy and Parturition. By T. Cazeaux, Adjunct Professor in the Faculty of Medicine, Paris. Revised and annotated by S. Tarnier, also Adjunct Professor. Fifth American Edition, by W. R. Bullock, M.D. Philadelphia: Lindsay and Blakiston. Pp. 1124.

*** This work, although not so well known in this country as perhaps it deserves, is used extensively in France, having been adopted by the Superior Council of Public Instruction, and has also been widely circulated in America. Since the death of Cazeaux, its revision has been intrusted to Professor Tarnier, who has, in some parts, remodelled it. Cazeaux had already done so with regard to the views of Naegele, P. Dubois, and Stoltz, which have been generally adopted. The present edition includes the researches of M. Sappey on the ovaries, and those of Robin and Helie, of Nantes, on the uterus. The views of Depaul and Pajot have also received full prominence. Some of the most important chapters deal with the alterations to which the placenta is subject, and the death of the child during intra-uterine life—questions which have not hitherto attracted their full degree of attention. Chapters on obstetric therapeutics have also been added. The last portion includes the hygiene of the child from birth to the period of weaning. It may be added that the book is fully illustrated.

Guy's Hospital Reports. Edited by C. Hilton Fagge, M.D., and Arthur E. Durham. Third Series, Vol. XIV. London: John Churchill and Sons. Pp. 524.

*** We always look forward with pleasure to the publication of the *Guy's Hospital Reports*, for we are sure to find in them something new and interesting. Our augury on this occasion is as usual fully justified, for the *Reports* contain some most valuable material. The remarks by Dr. Wilks on the nature and causes of disease, by Dr. Moxon on thrombosis, by Dr. Hicks on transfusion, by Mr. Hinton on incision of the tympanum, are all of value and of interest. Dr. Taylor's communications to these Reports have given them a peculiar and distinctive character, for they contain some of the best essays on Medical jurisprudence published in our language. Dr. Taylor this time writes on wounds of the throat. Dr. Hicks and Mr. Bryant write a good deal on diseased conditions of the ovaries. Dr. Fagge on splenic tumours and intestinal obstructions. Mr. Poland writes on rupture of the ureter and erectile tumours of the foot, whilst Mr. Cooper Forster deals with acupressure and torsion of vessels, and with colloid of the large intestine. Dr. Owen Rees gives some valuable hints on the early indications of nephritic irritation. Mr. Birkett continues his important contributions to the history of morbid growths, dealing in this volume with bony and cartilaginous formations. Other communications of almost equal value make up altogether a volume of reports of more than usual excellence.

Revista Medico-quirurgica, publicacion quincenial de la Asociacion Medica Bonaeriense. Año 5.

Medico-Chirurgical Review, fortnightly publication by the Medical Association of Buenos Ayres. Pp. 272. 5th year, 1868.

*** This is a journal of sixteen pages, large octavo, issued fortnightly. The meteorological details are very ample and highly interesting. Of the Hospital admittances we remark that the mass of them are of foreigners of all countries, but mostly European. In page 265 are very interesting details on the preparations and therapeutic use of the eucalyptus globulus, with cases of intermittent fever cured by it. It is a plant which certainly deserves much attention. The leaves are the part used. The dose of the extract is two grains, of the eucalyptina half a grain. The alcoholic tincture and essence of eucalyptus serve for external as well as internal use in neuralgia and muscular rheumatism; but it is chiefly against the tertians and the fearful agues of the southern continent that the efficacy of this medicine is paramount. We might draw useful lessons for humanity from a study of the wars which have been carried on in the Western hemisphere during the present generation, if we made treasure of present materials; but when disease does not strike home, we in England also are subject to the apathy which, according to the testimony of these pages, has characterised the behaviour of the inhabitants on the great Plate River. The fearful visitation of cholera in these States, which reached its highest point during the campaign in Paraguay, seems to have warranted the censure of the best informed in the Medical world there in residence. When the army was in El Rosario and San Nicolas, two Medical officers were despatched from Buenos Ayres to report upon it; both of them caught the cholera, and one of them dying, before the report could be made, already was the city invaded by it, while in the very worst of conditions to withstand the shock of such a pestilence. What measures were then adopted in haste were ill-judged, and some of them even ridiculous. The disease once more on the decline, and the public mind at rest, when the army is besieging Humaita, it falls upon it all at once with the most sudden degree of violence. Troops, Brazilian and Argentine, have to struggle at the same moment against the cholera and the enemy holding fast within their lines; their fate for a time seems to have been a sad one, and for the enemy doubtless no less. The deep moist trenches are considered to have contributed to the disorder, just as fresh-stirred earth in ordinary times disposes to ague. There is yet more food for instruction in these distant, but to us welcome, publications.

*** The St. Louis Medical and Surgical Journal of September 10, 1868, which has just reached us, contains some very good material in the form of reviews and extracts from foreign journals. There are also original communications of much interest by Dr. Grissom, of St. Louis, on a case of rupture of the womb, a case of wound of the brain by Professor Hodgen, a case of double-headed monster by Dr. Boisliniere, etc.

IODINE AND ACONITE IN PERIODONTITIS.—Professor Abbott writes:—The best remedy, and the one that works the most conveniently for periodontitis, I have ever used, is a mixture of equal parts of officinal tincture of iodine and tincture of aconite root applied to the gum around the roots of the tooth with a camel's-hair brush, or a portion of cotton-wool at the end of a stick. I have been using it for a year, and have not found it fail. I apply it, in the early stages of the inflammation, once in the twenty-four hours, and in very severe cases twice.—*Boston Journal*, January 7.—(*Quære:* What dose of aconite is administered?)

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a general meeting of the Fellows held on Wednesday, February 17, the following gentlemen, having undergone the necessary examination, and satisfied the College of their proficiency in the science and practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

Board, Edmund Comer, Royal Infirmary, Bristol.
Fawsitt, Thomas, Oldham.
Grace, Henry, Kingswood-hill, Bristol.
Minter, Edward Withers, 25, Bernard-street, Russell-square.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members of the College, having undergone the necessary examinations, were admitted Licentiates in Midwifery at a meeting of the Board on the 17th inst.:—

Angove, Edward Scudamore, Camborne, Cornwall, diploma of Membership dated May 21, 1867.
Bird, William Valentine, M.D. Aber., and L.S.A., Bootle, Lancashire, February 23, 1859.
Bösenberg, Andreas George Hendrik, M.B. Edin., Westbourne-grove-terrace (not a Member).
Hoar, Edward Charles, Maidstone, January 20, 1869.
Lack, Thomas Lambert, L.S.A., Chichester, January 20, 1869.
Leahy, John, L.R.C.P. Edin., Trafalgar-square, Peckham, July 24, 1868.
Pottle, Edgar George, L.R.C.P. and L.S.A., Bath-street, City-road, July 25, 1867.

It is stated that two candidates failed to acquit themselves to the satisfaction of the Board.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, February 11, 1869:—

Barlow, Charles, Neckells Park-road, Birmingham.
Brumwell, George William, Kendal.
Kennedy, John Blydesteyn, Stratford, Essex.
Kunde, Hermann, Cambridge-terrace, Islington.
Roberts, John Dungey, Mulvra, St. Austell.

The following gentlemen also, on the same day, passed their First Examination:—

Baker, Henry Francis, St. Bartholomew's Hospital.
Buchanan, Walter, Guy's Hospital.
Harrison, N. A. R., Guy's Hospital.
Murdoch, David Beatson, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CASE, HENRY, M.R.C.S. Eng. and L.S.A. Lond. (late Senior House-Surgeon to the Middlesex Hospital).—House-Surgeon to the West Herts Infirmary, Hemel Hempsted. *vice* — Moore, resigned.

POLLARD, E. W., M.R.C.S.E., L.S.A., etc.—Divisional Surgeon of B Division of Police, Brompton, *vice* Christian, resigned.

RICHARDS, Dr. WILLIAM ALSEPT (formerly House-Physician of King's College Hospital).—House-Surgeon to the Royal Hants County Hospital.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—The following appointment has been made: Septimus Terry, Assistant-Surgeon to the *Midge*.

85TH FOOT.—Staff Assistant-Surgeon Charles Frederick Richards, M.B., to be Assistant-Surgeon, *vice* George M'Iver Campbell, M.B., deceased.

103RD FOOT.—Staff Assistant-Surgeon Joseph Eustace Fishbourne, to be Assistant-Surgeon, *vice* William Wakefield, M.D., appointed to the Staff.

MEDICAL DEPARTMENT.—Assistant-Surgeon William Wakefield, M.D., from the 103rd Foot, to be Staff Assistant-Surgeon, *vice* Charles Frederick Richards, M.B., appointed to the 85th Foot.

BIRTHS.

GAINE.—On February 12, at 8, Edgar-buildings, Bath, the wife of Charles Gaine, Esq., M.R.C.S., of a son.

HUBBARD.—On February 12, at Ladbroke-gardens, Notting-hill, W., the wife of Henry W. Hubbard, L.R.C.P.L., of a daughter.

JAMES.—On February 8, at 87, Clarendon-road, Notting-hill, the wife of Richard James, M.R.C.S., of a daughter.

STAFF.—At Bridge House, Wadebridge, Cornwall, the wife of George T. A. Staff, Surgeon, of a son.

STEPHENS.—On February 10, at Gothic Lodge, Twickenham, the wife of Dr. Stephens, of a son.

WORTHINGTON.—On February 11, at No. 1, Heene-terrace, West Worthing, the wife of Dr. Worthington, of a son.

MARRIAGES.

DENTON—LAW.—On February 4, at St. Margaret's Church, Leicester, George William, youngest son of Joseph Denton, Surgeon, to Ellen Tirzah, youngest daughter of the late John Law, of the London-road, Leicester.

EASTES—FRIEND.—On February 9, at Hambledon, Hants, George Eastes, F.R.C.S., of Albion-place, Hyde-park-square, eldest son of Silvester Eastes, Esq., Folkestone, to Fanny Elizabeth, eldest daughter of William Friend, Esq., Barngreen, Hambledon. No cards.

REECE—NEWMAN.—On February 9, at Bathwick Church, Bath, Major J. D. Reece, 2nd West India Regiment, to Cecilia Anne, eldest daughter of George Newman, Esq., M.D., of 17, Queen's-square, Bath.

SHARMAN—CHAVASSE.—On February 8, at St. Mary's, Kingswinford, Staffordshire, Malim Sharman, Surgeon, Birmingham, to Hannah Matilda, daughter of the late Samuel Chavasse, Esq., Kingswinford.

DEATHS.

ARNOLD, GEORGE RICHARD, Esq., M.R.C.S., at 17, Hardwicke-place, Commercial-road East, on February 13, in his 45th year.

BARLOW, Rev. EDWARD WILLIAM, D.D., only son of the late Dr. Barlow, M.D., formerly of New Sydney-place, Bath, at his residence, Clevelandville, Bath, of heart disease, on February 13, aged 57.

BOROUGH, EDWARD, M.R.C.S., L.R.C.P., son of Randall Borough, Esq., Resident Medical Officer Leeds Fever Hospital, Querin-house, County Clare, on February 16, aged 25.

DAVIS, FRANCIS GORDON, Assoc. Inst. C.E., formerly of the Royal School of Mines, the younger son of Henry Davis, M.D., of Putney, at Leghorn, on February 11.

EPPS, JOHN, Esq., M.D., at 89, Great Russell-street, on February 12, aged 64.

JACOB, JOHN, Esq., M.R.C.S., etc., at 393, City-road, Islington, on February 13, aged 56.

MACFARLAN, ALEXANDER JOHNSTONE, M.D., at Edinburgh, on February 13.

OSBORNE, SAMUEL, M.D., F.R.C.S., at 19, Manor-terrace, Brixton, after twelve hours' illness, on February 10, in his 55th year.

SUTTON, FREDERICK JOHN, M.R.C.S., second son of the late Henry Stephen Sutton, Esq., of Ilminster, on February 4, aged 31.

WARDROP, JAMES, Esq., Surgeon to his late Majesty George IV., at Charles-street, St. James's-square, on February 13, in his 87th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BRADFORD INFIRMARY AND DISPENSARY.—Physician; must be a graduate in Medicine of one of the Universities of the United Kingdom, or a Fellow or Member of one of the Colleges of Physicians, and be registered under the Medical Act. Diplomas and Testimonials to Mr. Chas. Woodcock, Secretary, Sun-bridge, Bradford, on or before April 15. Election on May 5.

BRADFORD INFIRMARY AND DISPENSARY.—Resident Medical Officer; must have both Medical and Surgical qualifications, and be registered, and more than 25 years of age. Diplomas and testimonials to Mr. Chas. Woodcock, Secretary, Sun-bridge, Bradford, Yorkshire, on or before March 1. The successful candidate will be required to enter upon his duties on May 1.

BURY DISPENSARY.—Resident Medical Officer; must be registered. Applications and testimonials to Rev. E. J. Smith, St. John's Vicarage, Bury, Lancashire. The gentleman elected will be required to enter upon his duties on April 1.

CARMARTHENSHIRE INFIRMARY.—Physician; must be M.R.C.P. Applications and testimonials to Mr. H. Howells, 58, King-street, Carmarthen, on or before March 24, election on April 9.

CLINICAL HOSPITAL AND DISPENSARY FOR CHILDREN, CHEETHAM-HILL-ROAD, MANCHESTER.—House-Surgeon; applications, with testimonials, to the Chairman of the Medical Board on or before February 26.

GENERAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN, BRIDGE-STREET, MANCHESTER.—Resident Medical Officer; must be duly qualified and be registered. Applications and testimonials to the Secretary at the institution, on or before the 25th inst.

HOLBEACH UNION.—Medical Officer. Testimonials and applications to E. G. Ayliffe, Esq., Holbeach, on or before March 12, from whom further information may be obtained. Election on March 15.

MELTON MOWBRAY UNION.—Medical Officer; must have the qualifications required by the Poor-law Board. Applications and certificates of qualification to F. J. Oldham, Esq., Melton Mowbray, on or before February 24. Election on February 25.

PARISH OF BIRMINGHAM.—Resident Workhouse Medical officer; must possess the double qualification required by the Poor-law Board, and be duly registered in the Medical Register. Applications and testimonials "to the Guardians of the Poor of Birmingham," on or before February 22. Election on February 24.

PORTLAND TOWN FREE DISPENSARY.—Resident Medical Officer; must be M.R.C.S. Testimonials and applications to the Secretary, 7, York-terrace, St. John's-wood, N.W., before the end of this month.

SHEFFIELD GENERAL INFIRMARY.—Assistant to the House-Surgeon; must be M.R.C.S., or a Licentiate of the Faculty of Physicians and Surgeons of Glasgow, and also L.S.A., or L.R.C.P.L., and be on the Medical Register. Applications and testimonials to the Medical Staff of the Infirmary, care of the Secretary, on or before March 2. Election on March 5.

SUNDERLAND INFIRMARY.—House-Surgeon; must possess both Medical and Surgical qualifications, and be registered. Testimonials and diplomas to the Secretary, on or before May 1. Election on May 10.

SWAFFHAM UNION.—Medical Officer for the district comprising the parishes of East and West Bradenham. Candidates must be duly qualified according to the general orders of the Poor-law Board. Diplomas and testimonials to Robt. Sewell, Esq., Swaffham, on or before March 6. The duties will commence on March 26.

UNIVERSITY COLLEGE HOSPITAL.—Physician or Surgeon to the Skin Infirmary. Applications to John Robson, Esq., Secretary, at the College, on or before February 22, from whom further information may be obtained.

UNIVERSITY COLLEGE.—Professorship of Hygiene. Applications to John Robson, Esq., Secretary at the College, on or before February 22, from whom further information may be obtained.

Wallasey Dispensary.—House-Surgeon; must possess both Medical and Surgical qualifications. Testimonials to Mr. G. Holmes, 9, Somerville, Seacombe, Birkenhead, on or before March 10.

Wallingford Union.—Medical Officer; must be duly qualified. Applications to John Carthew, Esq., Wallingford, on or before February 22. Election on March 2.

Welwyn Union, Herts.—Medical Officer; must be duly qualified according to the General Orders of the Poor-law Board. Applications and testimonials to the Clerk on or before February 18, and to attend personally at the Board-room on March 4 if notice is received to that effect.

West Ham, Stratford, and South Essex Dispensary.—House-Surgeon and Dispenser; must have a legal qualification, and be unmarried. Applications and testimonials to Mr. T. G. Tonge, Secretary, Dispensary House, Stratford, E., on or before February 27.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Birmingham Parish.—Dr. Robinson has resigned the Workhouse; salary £350 per annum.

Croydon Union.—Mr. Warren has resigned the Fifth District; area 4366; population 10,835; salary £100 per annum.

Malmesbury Union.—The Second District is vacant; area 20,757; population 3714; salary £50 per annum. Also the Workhouse; salary £20 per annum.

South Molton.—Mr. J. A. Tidbould has resigned the Seventh District; area 9910; population 1802; salary £31 10s. per annum. Also the Eighth District; area 10,638; population 1636; salary £20 per annum.

APPOINTMENTS.

Chorley Union.—James M. Rigby, M.R.C.S.E., L.S.A., to the Fifth District. Edward Dawson, L.F.P. and S. Glas., L.S.A., to the Sixth District.

Exeter Incorporation.—John Woodman, M.R.C.S.E., L.S.A., to the Workhouse.

Louth Union.—Charles J. Myers, M.R.C.S.E., L.S.A., to the Somercotes District.

University Intelligence, Oxford.—On Saturday, April 17, at Merton College, there will be an election to a Natural Science Postmastership of the value of £80 per annum, tenable during residence for five years. This Postmastership is open to candidates of any age, but members of the University must not have exceeded six terms of University standing. The subjects of the examination will be (1) chemistry, (2) physics, (3) physiology; and an opportunity will be given of showing a knowledge of practical work in each subject. The Postmastership will be awarded for excellence in one of these subjects, or for general excellence, but a special knowledge of one subject will be required. Two exhibitions, value £25 per annum for three years, will also be given, should there be candidates of sufficient merit. Candidates are required to call on the Warden to enter their names on Monday, April 12. The examination will commence on Tuesday, April 13, in the College hall, at 10 a.m.

Trinity College, Dublin.—The Professorship of Zoology is vacant by the appointment of Dr. Edward P. Wright to the Chair of Botany, and will probably be filled up in June. It is worth £200 per annum.

Birkenhead Borough Hospital.—The workmen employed at the Great Western Railway Company's Locomotive Wagon and Carriage Departments at Birkenhead have subscribed half a day's wages each per annum in aid of the funds. As the works are large, and the men numerous, the subscription will realise a considerable sum.

The Shah of Persia has just bestowed the order of "the Lion and the Sun" on Dr. A. Vintras, of the French Hospital in London, for the many services he has rendered to the Persian Legation.

Fuad Pasha, the Turkish Minister, who recently died at Nice, was educated for the Medical Profession. He was appointed at the age of 20 Physician to the Turkish Admiralty, and as Medical officer accompanied Tahir Pasha, the Turkish Admiral, in the expedition to Tripoli.

The London Students' Debating Society will hold its first meeting on Wednesday evening, the 24th inst., at 7.30, in the Botanical Theatre, University College. Dr. Sibson, F.R.S., will preside, and give an introductory address. The objects of this Society are to encourage union among the London students, and to afford opportunity once a month, during nine months in the year, for debate on general subjects.

A fatality seems to attend the post of Surgeon to the City of London Orphans' School at Brixton. It is but a few weeks since Dr. Walsh, the Medical officer of these schools, died suddenly while attending the school-children. On Thursday Dr. Osborn, of Manor-terrace, Brixton, and who but a few days before had received the appointment from the Corporation of London as Medical officer, died in an equally sudden manner while examining the children.—*Guardian.*

Mr. John Noakes, Surgeon, of Newhaven, Sussex, on Wednesday went to visit a patient at Crowlink Farm, and left about 10 o'clock the same evening on horseback. It is believed that the unfortunate gentleman lost his way, the night being very dark, and having got off his horse to go to a cottage near, accidentally fell into an open well. Mr. Noakes was 65 years old.

The College Medal.—At the last meeting of the Council of the Royal College of Surgeons, the honorary medal of the College was unanimously awarded to Mr. W. Lodewyk Crowther, of Hobart Town, for his numerous and valuable donations to the museum, extending over a considerable period. The medal has only been conferred on four occasions, and Mr. Crowther will be gratified to find himself associated as one of the recipients of this distinction with such men as Professor Wilson, who received it in 1800; Mr. James Parkinson, so well known in connexion with fossil organic remains, upon whom it was conferred in 1822; Mr. Joseph Swann, so distinguished by his valuable writings on the nervous system, and now the senior member of the Council of the College, who received the medal in 1825; and, lastly, Professor Bennett, of Sydney, who obtained it in 1834 on the same grounds as Mr. Crowther on the present occasion.

Medical Charities.—The late Mr. Hugh Taylor, M.P., of Earsdon, Northumberland, has bequeathed £1000 to the Prudhoe Convalescent Hospital, £500 to the Northumberland and Durham Infirmary, and £100 to the North Shields Hospital. Miss Ann Wilson, of Brightfield, Sheffield, has bequeathed £50 each to the Sheffield General Hospital and the Sheffield Public Dispensary. Mr. John Carew, of Exeter, has bequeathed £400 to the Devon and Exeter Hospital, and £250 to the Dispensary. Mr. Felix Alford Cooper Webb, of Wednesbury, Staffordshire, leaves £100 to the Wolverhampton Hospital, in addition to other charities not strictly Medical, and directs the residue of his property to be divided in equal shares to the General Hospital at Kensington, the Wolverhampton Hospital, the Hospital for Diseases of the Skin, Blackfriars, and Mrs. Gladstone's Sanatorium, Whitechapel.

Poor-law Medical Service.—*Greenwich.*—In consequence of pressure from Dr. Seaton, lists of cases in which certificates of vaccination had not been received were sent in by the registrars. The lists took up some thirty pages, and showed a total of 750 cases for two of the Union parishes. A committee was appointed to inquire into the subject of electing a vaccination inspector. *Poplar.*—Dr. Farquharson was appointed by the guardians to take charge for a time of Dr. Gale's district, at a salary of three guineas a week. Dr. Gale is suffering from rheumatic fever. *Paddington.*—The guardians have appointed Dr. Hardwicke, the Medical Officer of Health, to be the officer to carry out the Vaccination Act. *Marylebone.*—The relieving officers were temporarily appointed to make inquiries under the Vaccination Act, contrary to the recommendation of the Out Relief Committee and the opinion of the Poor-law Board, who hold that the relieving officers have not the time.

List of the candidates of H.M. British Medical service who were successful at the competitive examinations at Chelsea in August, 1868, and at Netley in February, 1869, after having passed through a course at the Army Medical School:—

Order of merit.	Names.	Studied at	No. of marks.
1.	Chatterton, J.	Cork	5465
2.	Stokes, A. H.	Dublin	4863
3.	Triphook, G. R.	Do.	4708
4.	Saunderson, W. H.	Do.	4553
5.	Scanlan, J.	Glasgow	4533
6.	Crean, J. J.	Dublin	4461
7.	Corry, G.	Do.	4128
8.	Davy, F. A.	Do.	3918
9.	Adye-Curran, F. G.	Do.	3888
10.	Maunsell, H. E.	Do.	3788
11.	Carroll, T. E.	Do.	3783
12.	Duke, A. W.	Do.	3766
13.	Bradford, R. M.	London	3763
14.	Stannard, H.	Dublin	3621
15.	Thornley, J. G.	Do.	3620
16.	Maxwell, E. C.	London	3525
17.	Webb, J. H.	Do.	3520
18.	Bennett, R. D.	Dublin	3463
19.	Faris, T.	Do.	3448
20.	Sharpe, W.	Do.	2998
21.	White, H. B.	Do.	2913

The annual meeting of the Hunterian Society for the election of officers took place on Wednesday, the 10th inst., when the following list, proposed by the Council, was unanimously adopted:—*President:* Mr. Hutchinson. *Vice-Presidents:* Dr. Fotherby, Dr. Braxton Hicks, Mr. Corner, and Mr. Allingham. *Treasurer:* Dr. Cooke. *Librarian:* Dr. Fowler. *For the Oration of* 1870: Mr. Bryant. *Secretaries:* Dr. Phillips and Mr. J. E. Adams. *Council:* Mr. J. Arthur, Mr. Gordon Brown, Mr. T. Brown, Mr. Brownfield, Dr. Burchell, Mr. Clapton, Dr. Daldy, Mr. Jackson, Dr. Kingsford, Mr. Maunder, Dr. Peacock, and Dr. Williamson. The oration was delivered on the same evening by Dr. Fotherby; and on Friday a large number of the members and their friends dined together at the London Tavern, celebrating the jubilee of the Society, Mr. Hutchinson, the President Elect, in the chair.

Testimonial to Mr. William Wallford.—On Wednesday evening, the 10th inst., the parish officers and a number of other inhabitants of St. Botolph, Aldersgate, assembled at the schools, in Aldersgate-street, for the purpose of presenting a testimonial to Mr. William Wallford, M.R.C.S., as a recognition of the efficient manner in which he discharged the duties of churchwarden, and of his kindness to the poor as a guardian of the parish and otherwise. The chair was taken by the Rev. W. C. F. Webber. The testimonial consisted of a very beautiful and valuable tea and coffee service in silver. The inscription was as follows:—"Presented to W. Wallford, Esq., by the parishioners of St. Botolph, Aldersgate, in the City of London, in general vestry assembled, as a mark of their high appreciation of his worth in the discharge of his duties as churchwarden. 1868."

Death of Professor Grisolle.—This able clinical Professor died on his birthday, February 10, in the 58th year of his age. To science and practice, in fact, he had been long dead, having suffered from a stroke of apoplexy three years since. *Chef de clinique* of Chomel and an ardent follower of Louis, he was educated in the best practical school, and became himself one of the most accomplished clinical teachers who have ever held chairs in the Faculté. His career through the various *concours* was uniformly and promptly successful, and at the time of his attack he was in the enjoyment of a large private and consultation practice. His monograph on pneumonia has become classical, and his *Traité de Pathologie Interne* has gone through ten editions without exhausting the demand.

Trusses for Inguinal Hernia.—M. Huguier, referring to a report on a new truss at the Académie de Médecine, observed that inguinal hernias are far more difficult of retention by means of a truss than femoral. The cause of the difficulty in inguinal hernia especially depends upon the more or less marked development of the spine of the pubes, which is very prominent in some subjects and scarcely observable in others. The inguinal hernia passes over the pubic spine, and in order to retain it after reduction the pad is obliged to compress, and to some extent to crush, the portion of the integument covering this spine, giving rise to such severe pain as to compel the patient to leave off the truss. M. Huguier has been enabled to remedy this inconvenience by having a notch made at the edge of the pad, which, thus admitting the spine of the pubes into its concavity, leaves it free and uncompressed, without preventing compression being effectually exerted on the portion of the abdomen which gives issue to the hernia.—*Union Méd.* Feb. 1.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Berryman.—Received with thanks.

Dominica.—Received with thanks.

T.—The *erratum* shall be taken care of.

Queen's Hotel, Aberystwith.—We are glad to learn that this well-ordered and hospitable building was not swept away by the late gales.

Birmingham Friends are thanked. *Aris's Gazette* of February 13 contains an admirable article on the late Mr. Hodgson.

Bookworm.—A very fine copy of Aretæus is to be found in the Medical Society of London.

J. W. (Bolton) will find the article in the last volume of the *Medical Times and Gazette.*

Dr. Edwards Crisp.—We are fully aware that our correspondent has reason for complaint; but as we entered fully into the matter at the time, we now think that bygones had better be bygones. Dr. Crisp's character and attainments stand too high to be affected in the slightest degree by any such decision as that alluded to.

A Stranger.—If a stranger in London, being a Medical man, but not knowing any member of a given Medical society, present himself at any of the meetings, and send in his card to the Secretary, we have not the smallest doubt but that he would be readily admitted. The evenings of meeting are regularly announced in our diary for the week.

A Country Surgeon.—Much is to be said in favour of carrying about ready-prepared medicines in the new boxes made for the purpose, and something against it. In its favour must be mentioned the saving of time and trouble, and in cases of emergency its great importance to the welfare of the patient. But against this plan it may be urged that the patient might place less confidence in medicine so furnished than when it was prepared and sent in the old-fashioned way. One case in point. A Surgeon in one of the midland counties was in the habit of carrying about with him, in times when diarrhœa was prevalent, an astringent mixture, which he administered as occasion required. A gentleman came to reside in the neighbourhood, and sent for the Surgeon in question, who repaired to the newcomer bottle in pocket. The interview closed with the bottle being left for its contents to be swallowed by the patient. The Doctor retires; the patient throws the physic into the fire, and sends for another Practitioner, remarking that he "did not care to be prescribed for before his ailment was known."

Memorial from the Medical Practitioners of Birmingham to the Poor-law Board.

We, the Physicians and Surgeons of the public institutions and general Practitioners of Birmingham, seeing that the Board of Guardians of the parish of Birmingham have resolved to reduce the number of the parochial Medical officers from eight to five, respectfully request you at once to make such public inquiry on oath as will prevent such an injustice to the poor of this parish. Taking into consideration the fact that the number of inhabitants of the parish is upwards of 220,000, we are of opinion the number of Medical officers is not at present at all too many to properly perform the work incident to so large a population. We therefore respectfully request you will take such steps as will place the parochial Medical relief on a permanent and satisfactory basis. We are induced to adopt this course from the fact that two years ago the late Board of Guardians, after a long and patient inquiry, found that the number of Medical officers (then six) was inadequate for the duties required of them, and we fear that any diminution in the numbers of the present staff would be attended with calamity to the poor. We are, &c.

Bell Fletcher, M.D., Waterloo-street, Honorary Senior Physician, Birmingham General Hospital.
W. F. Wade, M.B., 16, Temple-row, Honorary Physician, Birmingham General Hospital.
Samuel Berry, F.R.C.S., Professor of Midwifery.
B. W. Foster, M.D., 4, Old-square, Physician, Birmingham General Hospital.
James Vose Solomon, Honorary Surgeon, Eye Hospital, Birmingham.
Sampson Gamgee, F.R.S. Edin., Surgeon, Queen's Hospital.
Furneaux Jordan, Surgeon, Queen's Hospital.
M. H. Clayton, M.R.C.S.
T. W. Williams.
T. H. Bartleet, M.B., Honorary Surgeon, Birmingham General Hospital.
Charles J. Bracey, M.B., Honorary Surgeon, Children's Hospital.
George Elkington, M.B., 112, Islington.
Arthur Bracey, Honorary Surgeon, Birmingham Eye Hospital.
Thomas Taylor, F.R.C.S., Bennett's Hill.
James Hickinbotham, L.R.C.P., Nechells.
Charles Warden, M.D., Honorary Surgeon, Lying-in Hospital.
Percy Leslie, M.D., M.R.C.S., Bristol-road.
Thomas Swain, M.R.C.S., L.A.C.
Arthur Oakes, M.R.C.S., etc., Old-square.
Dr. Owen, M.R.C.S.
Richard Thomason, M.R.C.S., 45, Whittall-street.
Henry Denne, L.R.C.P. Lond., Birmingham.
Charles Townsend, Honorary Surgeon, Birmingham Eye Hospital.
Alfred Hill, M.D., Professor of Chemistry, Queen's College.
Charles Bracey, M.R.C.S., 43, Bristol-street.
S. T. Badger, M.R.C.S. and L.A.C.
Alexander Mackay, Great Brook-street.
Edwin Griffiths, M.D., Grove House, Vauxhall-road.
Charles Denny, M.R.C.S., 109, Ashted-row.
John Warnock, L.R.C.S.I., Bloomsbury.
John St. S. Wilders, Honorary Surgeon, Queen's Hospital.
T. P. Heslop, M.D., Honorary Physician, Queen's Hospital.
R. Middlemore, F.R.S., Consulting Surgeon, Eye Hospital, Birmingham.
George Hawkesford, late District Medical Officer.
Thomas Thompson, M.R.C.S., Bristol-road.
Frederick Ellis, M.R.C.S., Bristol-road.

Medical Education and Medical Charges.

To the Editor of the Medical Times and Gazette.

Sir,—A great deal is being said and done with regard to the improvement of Medical education at the present day, and numerous are the schemes that may be, and have been, brought forward for that purpose; but, at the same time, is it not necessary to keep in view the fact that when this most desirable object is attained and the future Medical man has become as proficient as is possible, or as is considered necessary, there should be a like improvement in the scale of remuneration he may receive from the patients that may put themselves under his care, to recompense him for the immense amount of money, trouble, and anxiety that he has gone through? I myself, although a young beginner in the Medical Profession, have, nevertheless, been long enough in it to find out and observe that it is not by the amount of knowledge a man may possess, but by the scale of his charges, that he succeeds or otherwise when entering into private practice. Wherever a man may go, he will always find that there is some brother Professional not far distant who will get all the practice in the neighbourhood from the simple fact that the inhabitants say Mr. A. is so much more reasonable in his charges than Mr. B.; and never mind how many honours Mr. B. may have carried off while at college, or however greatly he may have distinguished himself when a student, Mr. A., although

perhaps the passing his examinations was a sheer piece of good fortune, will be the man that will succeed from a pecuniary point of view.

The public, taken as a body, are surprisingly ignorant with regard to the relative worth of the different degrees and diplomas that are offered to the student. They style all "Doctors;" whether they be M.D.'s of London, or merely Licentiates of the Apothecaries' Company, it matters little to them; and how annoying it must be for a man who has worked hard and well, and obtained every degree and honour that is possible, nevertheless to find that a simple L.S.A., or perhaps a man with no diploma at all, is succeeding far better in practice than himself by reason of the fact before stated—viz., "difference in the scale of his charges." I have no doubt many would consider my view of the matter a very mercenary one, but it is of no use disguising the fact that, however noble and unselfish the Medical Profession may be, yet many, if not nearly all its members, enter it with the view of making a living by it; therefore I consider, when it is thought desirable to increase what is even now a large outlay of money, to give a man a good sound Medical education, some scheme should also be set on foot whereby that man can rest assured that, by diligence and attendance to his Professional duties, he will in time recoup himself for the large outlay imposed upon him at the outset of his Medical career. There should be a scale of uniform charges to which every Medical Practitioner would be bound to adhere, and so not be subjected, as he now is, to the almost certainty, if he wishes to keep up the dignity and honour of his Profession, of having the ground cut from under him by a man who will do the same amount of work in a very inferior manner, but for half the remuneration.

I am, &c.

A Medical Practitioner in a Northern Suburb.

COMMUNICATIONS have been received from—

Mr. Thomas Hales; A Medical Practitioner in a Northern Suburb; Dr. McVicar; Mr. Laurence; A Stranger; Dr. Edwards Crisp; Mr. Wallford; T. O. D.; A General Practitioner; Dr. Pitman; Dr. Phillips; Mr. Frederick May; Mr. Adams; Mr. Balcombe; Mr. Seejeant; Mr. J. H. Watney; Dr. Rogers; Mr. R. B. Carter; Dr. Buckle; Mr. Gaskoin; Dr. R. Douglas Powell; Dr. Day; Dr. Chapman; Mr. J. Chatto; Dr. Gervis; Dr. John Whitmore; Mr. R. R. Good; Mr. R. Cooper Todd; Dr. B. W. Richardson.

BOOKS RECEIVED—

Pringle on Vaccination—Bulletin de Thérapeutique—Nomenclature of Diseases—Cameron's Lectures on Health—Rosebrugh on Chloroform, and a New Method of administering it—Pharmacopœia of the Royal Hospital for Diseases of the Chest—Kidd on Oxide of Nitrogen—Anglada sur les Maladies Eteintes et les Maladies Nouvelles—Causeries Scientifiques—Anger sur l'Anatomie Chirurgicale—Report of Industrial Employment Association—Civiale sur les Calculs Urinaires—Peunetier sur l'Origine de la Vie—Angus Smith on Disinfectants—Cullerier's Atlas of Venereal Diseases—Brandt's Nouvelle Méthode Gymnastique et Magnétique—Flux on the Law to regulate the Sale of Poisons within Great Britain—De la Saignée, Effets Physiologiques et Indications Thérapeutiques, par Dr. F. Bricheteau.

NEWSPAPERS RECEIVED—

The Express—Gazette des Hôpitaux—Sheffield Telegraph—Gazette Hebdomadaire – West Sussex Gazette—l'Union Médicale—La Tribune Médicale—Birmingham Gazette—Manchester Examiner—Daily Telegraph.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, February 13, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending Feb. 13.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Feb. 13.	Temperature of Air Fahr. Highest, during the Week.	Temperature of Air Fahr. Lowest during the Week.	Temperature of Air Fahr. Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London Metropolis	3170754	40·7	2242	1462	1426	56·2	31·7	47·5	0·97	98
Bristol City	169423	36·1	127	76	*93	57·0	32·4	47·1	2·13	215
Birmingham Boro'	360846	46·1	253	175	152	56·7	33·0	47·1	1·34	135
Liverpool (Boro")	509052	99·7	386	295	265	57·7	36·8	46·6	0·34	24
Manchester City	370892	82·7	282	210	*225					
Salford Borough	118350	23·1	82	60	52	56·5	31·7	46·0	1·40	141
Sheffield Borough	239752	10·5	169	126	112	57·0	32·0	45·9	0·62	63
Bradford Borough	138522	21·0	103	71	53	...	...	...	...	...
Leeds Borough	253110	11·7	224	129	116	59·6	36·0	48·5	1·19	119
Hull Borough	126682	35·6	68	59	66	57·9	27·0	44·8	0·31	31
Newstl-on-Tyne, do.	130503	24·5	68	69	85	57·0	31·0	42·6	0·47	47
Edinburgh City	178902	40·2	129	86	80	53·7	32·0	42·5	1·00	101
Glasgow City	458937	90·6	334	208	336					
Dublin City and some suburbs)	320762	32·9	142	158	164	56·9	33·5	46·4	0·77	78
Total of 14 large Towns	6546587	35·5	4617	3244	3225 Week ending Feb. 6.	59·0	27·0	45·9	0·96	97
Vienna (City)	1843 560000				379	Week ending Feb. 6.		38·5		

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·752 in. The barometrical reading increased from 29·13 in. on Friday, February 12, to 30·24 in. at the end of the week.

The general direction of the wind was W.S.W. and S.W.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 13, 1869.

BIRTHS.

Births of Boys, 1152; Girls, 1097; Total, 2249.
Average of 10 corresponding weeks, 1858-67, 2148·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	724	702	1426
Average of the ten years 1858-67	729·1	709·1	1438·2
Average corrected to increased population	...	...	1582
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	2	3	6	2	9	6	2	...
North	618210	...	10	14	3	18	15	3	...
Central	378058	...	2	5	1	12	2	2	...
East	571158	...	.	23	...	13	15	1	...
South	773175	4	10	8	3	20	17	..	...
Total	2804989	6	25	56	9	72	55	8	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·752 in.
Mean temperature	47·5
Highest point of thermometer	56·2
Lowest point of thermometer	31·7
Mean dew-point temperature	43·4
General direction of wind	W.S.W.&S.W.
Whole amount of rain in the week	0·97

APPOINTMENTS FOR THE WEEK.

February 20. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Metropolitan Association of Medical Officers of Health, 7½ p.m. Meeting.

Royal Institution, 3 p.m. Prof. Odling, "Hydrogen and its Analogues."

22. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London. 8 p.m.: Casual Communications. 8½ p.m.: Dr. Day of Stafford, "On Cases of Injury to the Brain."

Royal College of Surgeons of England, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

23. *Tuesday.*

Operations at Guy's, 1½ p.m.: Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Ethnological Society, 8 p.m. "On Ceremonies connected with Childbirth in Australia and New Zealand"—communicated by Dr. Hooker, F.R.S. Don Alonzo Steffens, "On some Ethnological Remains found in the Pearl Islands of the Bay of Panama."

Royal College of Surgeons of England, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

Royal Institution, 3 p.m. Rev. F. W. Farrar, "On Comparative Philology."

Royal Medical and Chirurgical Society, 8½ p.m. Mr. Furneaux Jordan, "Severe Wound of the Knee-joint treated by Counter-irrigation of the Thigh and Leg." Mr. J. Birkett, "On a Dislocation of the Head of the Femur complicated with its Fracture."

24. *Wednesday.*

Operations at University College Hospital, 2 p.m.: St. Mary's, 1½ p.m.: Middlesex, 1 p.m.: London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.: St. Thomas's 1½ p.m.: Ophthalmic Hospital, Southwark, 2 p.m.: Samaritan Hospital, 2.30 p.m.

Hunterian Society Meeting of Council, 7½ p.m. 8 p.m. Mr. Maunder, "On the Theory and the Method of the Cure of Surgical Aneurism." Dr. Daldy, "On Death in Scarlet Fever from Coagula in the Right Side of the Heart."

Royal College of Physicians, 5 p.m. Gulstonian Lectures—"On certain Points in the Study and Classification of Diseases of the Nervous System," by Dr. J. Hughlings-Jackson.

Royal College of Surgeons of England, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

25. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Royal Institution, 3 p.m. Dr. John Harley, "On Respiration."

26. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Royal College of Physicians, 5 p.m. Gulstonian Lectures—"On certain Points in the Study and Classification of Diseases of the Nervous System," by Dr. J. Hughlings-Jackson.

Royal College of Surgeons of England, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

Royal Institution, 8 p.m. Dr. John Bridges, "On Civilisation and Public Health."

NEW MUSTARD PLASTER.

RIGOLLOT'S MUSTARD LEAVES

Combine Cleanliness, Efficiency, and Convenience.

They are as portable as a Card-case.
They have been adopted by the Administration of the Paris Hospitals, and by the Imperial Navy of France.

See THE LANCET, Feb. 22nd, 1868:—

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CHEMISTS IN ORDINARY TO THE QUEEN AND THE PRINCE OF WALES.

Mr. Squire introduced into Medicine (*Vide* "Lancet," March 4th, 1839)

SOLUTION OF BIMECONATE OF MORPHIA,

Which has been employed by all branches of the Medical Profession.

Dr. Roots thus writes of it:—"I have taken it myself daily now for very nearly four years, and during that period I have frequently prescribed it in my private practice. The result of my observations on its effects on myself and others amounts to this—namely, that it disturbs the head less, that it distresses the stomach less, and that it constipates the bowels less, than any other preparation of Opium. I have taken every other preparation of Opium, but from none of them have I obtained the same degree of quiet rest that I have enjoyed from this Bimeconate of Morphia."

ASTRINGENT RED GUM LOZENGES,
Taken for Relaxed Throat.
In Bottles 2s. each.

MURIATE OF AMMONIA LOZENGES,
Taken by persons suffering from Bronchitis.
In Bottles 2s. each.

Each bottle has the Seal SQUIRE, OXFORD-ST. to insure that it is genuine.

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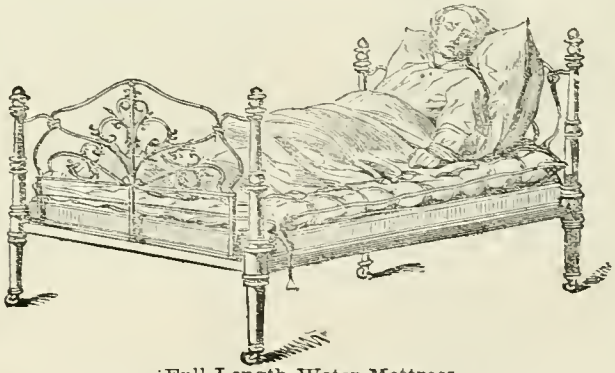

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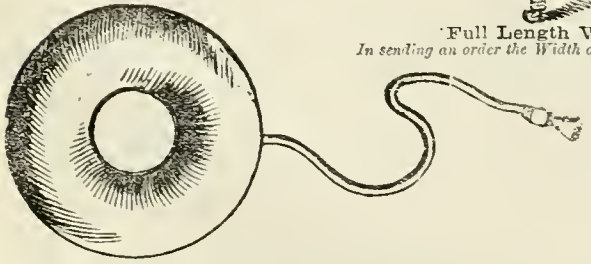

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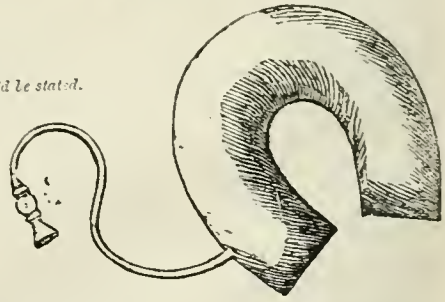

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ELASTIC BAGS, for applying dry cold or dry heat, maintaining their elasticity under all temperatures, from zero to 212° Fahr.
WATERPROOF SHEETS, INDIA-RUBBER URINALS, ENEMAS, &c.

ORIGINAL LECTURES.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON

THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,

Fellow of the Royal College of Physicians, Physician to King's College Hospital, and Professor of Physiology and of Morbid Anatomy in King's College, London.

LECTURE V.

CONTRACTILE TISSUES CONTINUED—STRIPED OR VOLUNTARY MUSCLE—SARCOLEMMA—RUPTURE OF CONTRACTILE TISSUE WITHIN—GERMINAL MATTER OF MUSCLE—FORMATION OF CONTRACTILE MATERIAL—"PROTOPLASM"—YOUNG, MATURE, AND OLD MUSCULAR FIBRE—JUNCTION OF MUSCLE AND TENDON—FIBROUS AND FATTY DEGENERATION OF MUSCLE.

OF NERVE TISSUE—GERMINAL MATTER AND FORMED MATERIAL OF NERVE—NO ENDS TO NERVE FIBRES—ULTIMATE NETWORKS—DIFFERENT KINDS OF NERVE FIBRES—NERVE CENTRES—ACTION OF NERVE FIBRES AND NERVE CELLS.

THE fibres of voluntary or striped muscle differ from those of the involuntary muscular tissue, considered in the last lecture, in many particulars. They exhibit transverse as well as longitudinal markings, and easily cleave or are split up in these directions. The fibres vary very much in size and general arrangement in different animals, and in different muscles of the same animal. The elementary fibres of one muscle may be less than $\frac{1}{5000}$th of an inch in width, while those of other muscles attain a diameter of as much as the $\frac{1}{10}$th of an inch.

The elementary fibres of insect muscle exhibit the general characters of this beautiful texture very distinctly, and specimens may be prepared without difficulty. In this lecture, however, I shall not attempt to describe minutely the ultimate structure of muscle, but restrict myself as far as possible to the consideration of the mode of formation and growth of the tissue, and especially the arrangement and function of the masses of germinal matter.

Striped or voluntary muscle may consist of wide or narrow fibres arranged perfectly parallel to one another, or the muscle may consist of two or more layers, the constituent fibres of which cross one another at right angles. In some cases the fibres are very irregularly arranged, and cross in various directions. Striped muscular tissue also exists in the form of conical fibres which gradually taper towards one extremity into a tendon. The fibre in some cases divides and subdivides almost like the branches of a tree, in which case it is termed branching muscle. This is found in the frog's tongue. Lastly, striped muscular tissue may be arranged so as to form a network, a beautiful example of which exists in the auricle of the frog's heart.

A good general idea of the structure of an elementary fibre of striped muscle will be formed if a specimen from the large water-beetle, *Dytiscus marginalis*, be carefully examined. Here the transverse markings are seen upon a considerable scale, and the elementary fibre is very large (preparation 77). In one fibre in the centre of the field the contractile tissue has ruptured within the sarcolemma, and it has cleaved transversely in several places. Two of Bowman's disks are detached from the rest of the contractile tissue, and lie free in the tube of the sarcolemma. The masses of germinal matter concerned in their formation are seen in the centre of the disks. The contractile tissue, with the delicate closed tube of sarcolemma forming its outer limit, constitutes an elementary fibre or fasciculus of striped or voluntary muscle. The contractile material which occupies the tube of the sarcolemma may be split up in two directions—*longitudinally* into *fibrillæ*, and *transversely* into *disks*—as was first demonstrated by Bowman.

In specimen 83* from the frog the contractile tissue is fractured transversely. Shortly before death the spasm of the muscular tissue was so violent as to cause its rupture, and portions of the broken and contracted sarcous matter may be seen within the sarcolemma of every fibre of the muscle. A corresponding result is often seen in the muscles of persons who have died of tetanus.

Sarcolemma.—The sarcolemma of muscle appears as a transparent tube composed of very delicate membrane, which is thick in old and fully formed muscles, but very thin in young muscular fibres, while during development, and in the case of some forms of adult muscular tissue (heart, tongue), no sarcolemma can be detected. Upon its outer surface the sarcolemma is connected with the delicate intermuscular connective tissue; and capillary vessels and nerve fibres, and in insects the tracheæ are adherent to it, and in some cases are almost embedded in its substance. The greater number of the masses of germinal matter on the surface of the sarcolemma of the muscles of vertebrata are those of the numerous nerves and capillary vessels distributed to the elementary fibre. These are extremely numerous upon the sarcolemma of the elementary muscular fibres of small rodents, as the mouse, but they are seen in connexion with the sarcolemma of almost all muscles. These masses of germinal matter, which I have proved belong to capillary vessels and nerves distributed to this tissue, have been generally regarded as "connective tissue corpuscles," and the same erroneous conclusion has been arrived at concerning the masses of germinal matter belonging to vessels and nerves distributed to many other tissues, and essential to their formation, growth, and action.

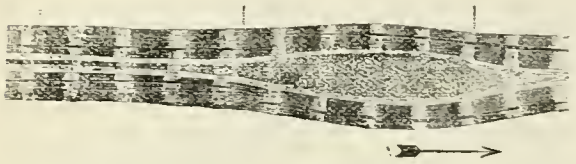
Development of Muscular Tissue.—At an early period of development the masses of germinal matter which take part in the development of striped muscle divide and subdivide so as to form rows. The delicate formed material which is produced upon the outer surface of these gradually acquires consistence and exhibits contractility. At first there are indications of faint longitudinal striations, but transverse markings become visible as soon as the tube of contractile tissue thus produced acquires the thickness of about the $\frac{1}{3000}$th or $\frac{1}{1000}$th of an inch. A beautiful specimen of developing muscular fibre, in which all these points are clearly demonstrated, is seen in prep. 79, from the calf at an early period of development. These elementary fibres, however, only serve a temporary purpose, and gradually give place to elementary fibres of a different structure. The fully formed muscular fibres of some insects exhibit precisely the characters of the embryonic fibres of the higher vertebrata. Some of the muscular fibres of the adult frog and hyla have masses of germinal matter in the centre of the elementary fibre, as just described; so also have the muscular fibres of the heart of the human subject. The fibre increases in diameter by the formation of new contractile tissue within, which is formed upon the surface of the germinal matter, and the contractile tissue which had been produced previously is pushed outwards. Many muscular fibres—as, for instance, those of the delicate muscles of the eye of the smallest animals—exist at an early period as spindle-shaped bodies, which taper at either extremity into the tendon. The large mass of germinal matter is in the centre, and is surrounded by formed material, which gradually accumulates upon its surface and at its two extremities. Thus the fibre increases in thickness and length.

In the connective tissue of the nose of the nearly full-grown mole (prep. 80) the development of muscular fibre may be well studied, for in this situation are numerous bundles of very narrow, but distinctly transversely striated, muscular fibres, which taper at either extremity into tendons of great length which pass into the connective tissue.

In most of the permanent elementary muscular fibres of the higher vertebrate animals the masses of germinal matter are seen at intervals embedded in the contractile tissue, and disposed in much the same manner as the masses of germinal matter (nuclei) of tendon. In exceedingly fine fibres, an oval mass of germinal matter is often present upon one side only. In fibres of about the $\frac{1}{6000}$th of an inch in diameter, and apparently composed of only a very few fibrillæ, I have seen the oval mass of germinal matter situated a short distance from the side of the contractile tissue, with which it was connected by a small quantity of exceedingly delicate granular matter, exhibiting here and there indications of transverse markings continuous with the transverse striæ of the muscle. This delicate material was no doubt contractile sarcous matter imperfectly formed, which was gradually becoming condensed and assuming the characters and properties of the adjacent contractile tissue with which it was continuous; and I was led to conclude that, during the formation of the muscle, the oval mass of germinal matter moved parallel with the fibre, giving rise to the new tissue as it passed along. Many appearances afterwards observed confirmed this view. In the ordinary

muscular fibres, as those of the frog, which are well adapted for observation, the oval nuclei in different parts of the fibre move upwards or downwards between several fibrillæ, and thus form new muscular tissue in every part of the substance of these large elementary fibres. (See fig. 1.)

Fig. 1.



The larger size and greater number of the masses of germinal matter in proportion to the amount of tissue in young muscular fibres, as compared with fully developed ones, is well seen in specimen 75, in which two elementary muscular fibres—one from a pig at birth, and the other from a pig three months old—have been mounted together for comparison. Such a specimen will, I think, convince any one that the masses of germinal matter are concerned in the production of the contractile material of muscle. By the accurate comparison of carefully prepared specimens of this kind, we are even able to form a notion of the rate of growth, and to prove that muscular tissue is not formed very quickly, or its elements removed and replaced within a short period of time. It is not improbable that in the higher vertebrata the very same elementary fibres continue in action for years. The idea that the contractile material is removed and replaced by new tissue within a few days or weeks is untenable, and could only have been suggested by those who had not taken the pains to acquaint themselves with well-known facts, or who had determined to ignore the results of anatomical observation altogether.

From what I have already stated, you will have inferred that the position of the masses of germinal matter varies very much in different kinds of striped muscle. In some forms we find a row of nearly spherical masses in the very centre of the elementary fasciculus of contractile tissue; in others an oval mass is seen

Fig. 2.

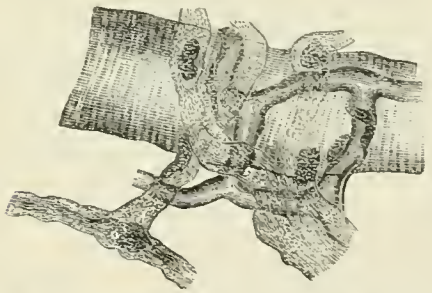


Fig. 2.—Muscular fibre of muscle, mouse, showing capillary, nerve fibres, and masses of germinal matter belonging to these tissues. × 700.

at the side of a very long narrow fibre consisting of very few fibrillæ; and in many of the muscular fibres of the system of vertebrata we find numerous oval masses situated at short distances, and alternating with one another throughout the whole extent of the tissue within the sarcolemma. This variation in position, and the difference observed in the relative proportion of germinal matter and contractile tissue in muscles which act in the same manner, lead us to infer that the germinal matter is not immediately concerned in muscular contraction.

The living or germinal matter is concerned in the formation of the original contractile tissue, and in the production of new tissue to take the place of that which is slowly removed, or to be added to that which exists in cases in which the muscle has to perform increased work. The living matter also determines currents of fluids towards it, and thus the contractile tissue is permeated in every part by fresh portions of fluid which transudes through the vascular walls from the blood.

It is very important to consider the exact relation of the germinal matter to the contractile material of muscle. From young growing muscle taken quite fresh and carefully prepared with the carmine fluid and mounted in glycerine, germinal matter may be frequently detached with a portion of the sarcous tissue still adhering to it. If such a specimen be examined with a high power, it will be found that the germinal matter passes into this soft material, and that this last is continuous with the contractile tissue of the muscle. The soft delicate tissue which intervenes consists of imperfectly developed formed material. This, like all the contractile tissue already formed, was once in the state of germinal matter. As in other cases, while the formation of tissue is proceeding, we are able to point out the *living growing moving germinal matter, the imperfectly developed formed material, and the fully formed tissue.*

Fig. 3.

Fig. 3.—Very fine muscular fibre, showing relation of germinal matter to contractile tissue; *a*, *b*, germinal matter of muscle; *d*, nerve fibre (frog). × 1800.

The proportion of germinal matter to the formed material in fully formed muscular tissue is considerably less than in many other textures—a fact which is conclusive in favour of the view that this is not a rapidly changing tissue. Many years ago I taught, contrary to the doctrine then in high favour, that muscular contraction was not due to the disintegration and oxidation of the tissue itself; and also showed that the view advanced from the chemical side, that muscular tissue was removed and replaced within a very short period of time, was untenable. Those who supported this strange doctrine did not attempt to show *how* so large a quantity of a highly elaborate tissue was removed and replaced. Had they inquired, they would soon have been convinced that no means existed by which the necessary amount of tissue could be replaced or developed within the time allowed. Further observation has, however, satisfied chemists that the conclusion was erroneous, and now a very different doctrine prevails, which, however, if not equally untenable, is almost as improbable as that which it replaces.

"*Protoplasm.*" — The contractile tissue of muscle has been considered to be a form of "protoplasm," and muscular contraction has been attributed to "*contractility*," or the "*contractile property*," supposed to be potentially resident in the original albumen or protein matter of which muscle is composed, just as the fluid property of water is to be referred to the properties of its constituent gases. But it is to be feared that many intelligent persons who examine muscle contracting, and the living matter of an amœba, a white blood-corpuscle or a pus-corpuscle undergoing its varied and very remarkable movements, may not feel quite convinced that movements in many respects so very different are really due to one and the same property, or inclined to class them under the same head of movements dependent upon "contractility;" while it seems to me probable that at least a few people might not feel quite satisfied that a clear and sufficient explanation of either class of movements was afforded by referring them to the "contractile property." Very recently Professor Huxley has not only applied the term "protoplasm" to passive non-living matter and to active living moving growing matter, but to dead and roasted matter, so that he includes under the head of protoplasm not only matter which

manifests contractility but matter (as roast mutton) which exhibits no property of the kind. He considers it unnecessary to make any distinction between (*a*) the *tissue* which has been formed, (*b*) the *living matter* by which it has been formed, and (*c*) the *nutrient pabulum* at the expense of which the living matter grows. All these are "protoplasm." Living amœba is protoplasm. Contracting muscle is protoplasm. Roast muscle is protoplasm—not three different kinds of protoplasm, but protoplasm the "physical basis of life."

If there is any difference between living amœba, contracting muscle, and roast muscle, it is but a difference of degree, not of kind, for do we not find that four gases and a trace of inorganic salts form the physical basis of all? Have not amœba life, and sheep life, and muscular contractility the same physical basis—protoplasm—of the albumen or protein class? Thus our restlessness in trying to learn more than we think we know concerning the nature of life, is appeased, and our innate longing to ascertain the real nature of things completely satisfied; provided only that, manfully repressing any of those absurd doubts which will sometimes force themselves before the mind even in the very presence of authority—we determine to accept in its unity, simplicity, and purity, the doctrine that the life of amœba, muscle, sheep, man, and everything living, has one and the same physical basis; and that this physical basis is protoplasm, which protoplasm, whether living or dead, solid or liquid, roast or boiled, is albumen or protein, derived by direct descent from the primeval protoplasm or bathybius, and composed of the four simple gases to which its properties, as the physical basis of life, are due.

ORIGINAL COMMUNICATIONS.

ON THE

EFFECT OF UTERO-GESTATION UPON THE TREATMENT AND PROGRESS OF CONSTITUTIONAL SYPHILIS.

By JOHN D. HILL, F.R.C.S.,
Surgeon to the Royal Free Hospital.

During the last few years I have studied a class of cases in which pregnancy and constitutional syphilis have been associated, and I am led to the conclusion that this physiological condition arrests or suspends the action of such constitutional and local remedies as may be employed in the treatment of this disease, and especially those having a specific action. When, however, the uterus becomes relieved of its contents by abortion, premature or natural labour, those patients in whom specific treatment has been adopted recover spontaneously, whilst those in whom simple treatment has been employed improve only to a certain extent. Now, here I may remark, as an interesting fact, that when pregnant women become affected with constitutional syphilis they rarely pass through the full period of gestation, and from my observations on the practice of the venereal ward of the Royal Free Hospital during the last nine years I find that the majority of patients have aborted at the fourth month, and the remainder have been prematurely delivered between the sixth and seventh months, whether the treatment has been simple or specific. But although the spontaneous post-partum recovery in cases after the administration of specifics during gestation, on the one hand, and the improvement occurring after delivery in those cases where the treatment had been simple, on the other, may be partly due to certain physiological changes in the processes of nutrition and absorption, yet it must be confessed, where the local affection has been situated in the region of the genitals, that the removal of all mechanical interference with the circulation in the arteries, veins, and absorbents, may also have assisted in the process of repair.

Without, however, attempting to explain in what manner pregnancy suspends the action of specific agents, or what influence it may have upon several vital processes in delaying the elimination of the syphilitic virus, it will be sufficient for the present purpose to lay before the Profession those facts which, through the courtesy of my colleagues (Messrs. Wakley, De Méric, and Marsden), I am enabled to bring forward.

Some of the following cases I had the opportunity of noting during my House-Surgeoney; others have occurred in my own practice at the Hospital:—

Case 1.—Sophia L., aged 19 years, was admitted into the Hospital under the care of Mr. Wakley, August 2, 1861. About three months ago she contracted a chancre at the fourchette, which, although now healed over, remains indurated. She is three months advanced in pregnancy, and affected with constitutional syphilis in the form of a tubercular eruption about the forehead, arms, abdomen, and lower extremities, mucous tubercles in the axillæ and genitals, psoriasis at the angles of the mouth and in the palms, and ulceration of the tongue, soft palate, and tonsils, but she chiefly suffers from a mass of confluent mucous tubercles which cover the labia majora and contiguous parts. These are ulcerated on the surface, smeared over with pus, and with the surrounding skin painful, red, and infiltrated.

Treatment and Progress.—The bowels having been well relieved after a dose of castor oil, she was desired to maintain the recumbent position. A simple nourishing diet was prescribed, and the genitals were poulticed with linseed meal every four hours until August 4. By that time the inflammation had subsided. Black wash was then substituted for poultices during the nine ensuing days, and the same lotion was applied to the axillæ and mouth.

August 13.— There is little or no improvement in the general symptoms. Prescribed gr. iij. of hyd. c. creta thrice a day, full diet, and ʒiv. of wine.

16th.—Gums tender. Grey powder reduced to one dose daily; yellow wash substituted for black.

18th.—Gums more tender; mercury discontinued. Prescribed potassii iodidi gr. iij., inf. calumb. ʒj. t.d. This treatment was pursued for the next three weeks, the iodide being gradually increased to gr. viij. doses.

September 8.—To this date her progress has been most unsatisfactory; therefore all specific treatment is suspended. A simple mixture of bark and ammonia is prescribed, and a weak nitric acid lotion to the mucous tubercles.

13th.—No improvement.

15th.—After four hours' suffering, was this morning delivered of a four months' fœtus. Treatment suspended.

20th.—Mucous tubercles considerably reduced in size; eruptions fading.

26th.—Mucous tubercles now healed over, and nearly on a level with surrounding skin. In all respects greatly improved.

30th.—Well enough to leave the Hospital. Chancre induration absorbed; eruptions have disappeared; throat well, and nothing remains but a brownish-red stain to mark situation of mucous tubercles. Discharged. To attend as an occasional out-patient.

October 20.—Is apparently in good health.

December 30.—Continues well.

Case 2.—Eliza Y., aged 18 years, was admitted June 18, 1862, under the care of Mr. De Mérie. Four months previously she noticed a chancre on the clitoris, the cicatrix of which is tightly drawn over an indurated base which is about the size of a threepenny piece. She is four months advanced in pregnancy, and now suffering from a mass of mucous tubercles of the genitals and surrounding parts. These are elevated above the level of the skin, red, painful, infiltrated, confluent, and ulcerated on the surface, the free purulent discharge from them having apparently excoriated the contiguous skin. The pain and irritation have deprived her of rest for many nights, and thus weakened her general health. She has also loss of hair, sore throat, mucous tubercles of the palate, coppery eruptions of the skin, lepra generally, and psoriasis at the flexures of the joints, palms of the hands, axillæ, verge of the anus and angles of the mouth, and traces of iritis. She has been attending as an out-patient, but very irregularly. Black wash has been applied locally, and she has taken twelve pills of mercury and opium. Her gums are tender, and the mercurial odour is well marked.

Treatment and Progress.—The bowels having been acted upon by a dose of house medicine, she was desired to maintain the recumbent posture. Poultices of linseed meal were applied to the inflamed parts during the four ensuing days, and she was placed on a nourishing diet.

July 12.—Genitals less inflamed. Mucous tubercles prominent, and secreting a whitish discharge.

13th.—After five hours' suffering, was this morning delivered of a four months' fœtus. Treatment suspended.

16th.—Mucous tubercles not half their original size, and healed over.

20th.—Much improved. Coppery eruptions fading and losing their scaly character. Chancre induration absorbed.

28th.—Mucous tubercles have entirely disappeared, leaving a brownish-red stain showing their original situation. General health improved. Discharged.

August 15.—Attended the Hospital to-day. Has but faint traces of the disease left.

November 30.—Continues well.

Case 3.—Jane F., aged 17, was admitted into the Hospital under the care of Mr. Wakley, May 16, 1863, with the following symptoms of syphilis—viz., cutaneous eruptions (lepra, psoriasis, and lichen), mucous tubercles of the genitals and anal regions, palmar and labial psoriasis, sore throat, loss of hair, and iritis of the right eye. Between two and three months previously she contracted a sore on the right labium, which slowly healed under the influence of black wash and blue pill. This treatment was followed up with iodide of potassium in full doses, but without any effect upon the induration beneath the cicatrix. She is probably about three months advanced in pregnancy, and generally in a bad state of health, having been badly fed and very intemperate in her habits, but she chiefly suffers from the mucous tubercles of the genitals, which form an enormous outgrowth, larger than an ordinary-sized fist. These vary in size, and are so incorporated as to obscure the invaded structures. They are ulcerated on the surface, bathed in pus, and infiltrated, and with the surrounding skin red, painful, and swollen. The iris is surrounded by a pink zone of vessels. It is irregular in shape and obscured by a mass of brownish-white lymph, which blocks up the greater part of the pupil. Intolerance of light and pain in the temple are complained of, and the sight is very imperfect.

Treatment and Progress.—The recumbent position having been ordered, the patient was placed upon good diet and ʒvj. of wine daily. Linseed-meal poultices were applied to the genitals, a blister to the temple, belladonna extract to the brow, and gr. iij. doses of grey powder were administered every four hours. This treatment was continued until the gums became affected.

May 21.—General condition is unsatisfactory. Lymph in anterior chamber of the eye absorbed. Pupil slightly irregular; sight misty. Mucous tubercles have lost their inflammatory character, but otherwise are not much reduced. Gums tender. Grey powder to be discontinued.

27th.—Gums still tender. Prescribed a mixture. Lotion and gargle of chlorate of potash.

June 2.—No improvement. Treatment suspended.

6th.—After eight hours' suffering, was this morning delivered of a four months' fœtus.

13th.—Improved in every respect. Eruptions fading; mucous tubercles reduced in size.

23rd.—Mucous tubercles healed over and nearly on a level with the surrounding skin. Eruptions are losing their scaly character and becoming reddish-brown in colour.

29th.—General health much improved. Discharged.

July 15.—Cutaneous stains almost obliterated.

September 22.—Is now in good health, and has no further symptoms.

December 30.—Continues well.

Case 4.—Emma P., aged 14, was admitted into the Hospital, under the care of Mr. A. Marsden, July 15, 1863, having been an out-patient for some eight or nine weeks. Her symptoms are a facsimile of the last case, but in addition she has plantar psoriasis, iritis of the left eye, and an ecthymatous eruption all over the body, and she is four months advanced in pregnancy. Mercury has been freely exhibited during her out-door attendance, and her gums are very sore. Prescribed simple poulticing to the genitals, and a mixture of bark and ammonia thrice a day.

July 18.—Little or no improvement has taken place. Towards evening symptoms of abortion came on.

19th.—Was this morning delivered of a four months' fœtus. All treatment suspended.

22nd.—Greatly improved. Fibrine in anterior chambers of both eyes has become absorbed. Mucous tubercles have lost their prominency, and their secreting surface is nearly covered with a fine blue film of new skin.

26th.—Eruptions are fading, and ecthymatous pustules are drying up into small conical scabs.

30th.—Is well enough to attend as an out-patient. A dark red stain shows the former position of the mucous tubercles.

August 20.—Has now lost all symptoms except the plantar psoriasis.

November 5.—Has no traces of the disease left beyond stains and cicatrices.

The cases which have been described fairly prove that pregnancy sometimes suspends the action of mercury and iodide of potassium in patients affected with constitutional syphilis. I might record further instances to strengthen my conclusions, but it would be a mere repetition of facts in every sense identical with those which I have here related. I will now direct attention to those cases in which no specific treatment had been employed during gestation.

Case 1.—Marian B., aged 18, was admitted into the Hospital, under the care of Mr. A. Marsden, May 23, 1864. Three months ago, she first observed a chancre at the fourchette, which gradually healed, but leaving induration. She is about six months advanced in pregnancy, and has the following symptoms of syphilis, viz.:—Sore throat; loss of hair; psoriasis labialis et palmaris; lepra generally, and lichen of the upper and lower extremities; mucous tubercles of the genitals and at the verge of the anus: these form a large outgrowth, which is inflamed and very painful.

Treatment and Progress.—Prescribed: Rest in bed; poultices of linseed meal (sprinkled with powdered opium) to the genitals; ½ gr. of solid opium to be taken every fourth hour; full diet and wine ʒ iv. daily.

May 30.—Inflammation in mucous tubercles has subsided; otherwise not improved.

June 4.—After ten hours' suffering was delivered of a still-born seven-months child. Treatment suspended.

10th.—Improved in general health; mucous tubercles paler, less prominent, and not painful.

20th.—No apparent change since last report. Prescribed Potassii iodidi gr. iij., liq. hyd. bichlor. ʒj., inf. calumbæ ʒj., thrice a day. Lotio nigra (gr. x. ad ʒj.) to the ulcerated surface.

30th.—Gums slightly touched: mucous tubercles reduced in size. To continue medicine twice a day.

July 15.—Eruptions fading: mucous tubercles nearly on a level with surrounding skin, and healed over; gums very sore; complains of pain in the tibiæ: medicine to be discontinued. Prescribed potass. iodid. gr. iv., decoct. cinchon. ʒj., tinct. cinch. co. ʒj., thrice a day, and the following lotion:—Tinct. iodin. co. ʒj., tinct. opii ʒij., aqua ad ʒxx.

31st.—In every respect improved; mucous tubercles have disappeared; has an inflamed node on the right tibia, just below the tubercle. Prescribed hot poppy fomentations.

August 10.—Rupia has appeared in various parts of the body. Prescribed glycerin. ʒj., syrup. ferri iodidi ʒij., three times a day, in the place of mist. pot. iodidi.

25th.—Improved.

September 3.—Complains of soreness of the mouth and tongue, which evidently arises from mucous tubercles scattered over the soft palate, tongue, and inner surface of cheek. Prescribed a gargle of bichloride of mercury (gr. ¼ ad ʒj.) To continue medicine.

10th.—Appetite failing. Prescribed mist. ferri c. quinâ in place of the last mixture.

20th.—Is much better.

23rd.—Discharged.

November 3.—Is quite well.

December 28.—Continues in good health, and scarcely any traces of the disease are left.

Case 2.—Elizabeth L., a married woman, aged 22 years, was admitted an out-patient, under the care of Mr. Hill, December 6, 1866. About twelve weeks previously she noticed a small sore on the left labium, which healed under simple dressing, and during the last six or seven weeks a mass of mucous tubercles has been gradually forming over the genitals. This first appeared in the form of a small tubercle on the right labium, which inoculated the corresponding part of the left. The irritating discharge from their surfaces produced excoriation, and wherever excoriation occurred there tubercles were developed. Now this conglomeration of tubercles is inflamed, painful, and infiltrated, and represents a tumour nearly as large as a fist, which obscures the structures composing the genitals. She is between three and four months advanced in pregnancy, and generally in a bad state of health; a crop of ecthymatous pustules are scattered about the extremities, interspersed with scales of rupia; on the forehead, face, and lips she has tubercle and psoriasis, and ulceration of the palate and tonsils.

Treatment and Progress.—She is instructed to maintain the recumbent posture, to take a nourishing diet and six ounces of wine daily, and two tablespoonfuls of the mist. ferri citrat. c. quinâ three times a day.

December 13.—Her sister, who brought the out-patient's letter, stated that, after six hours' suffering, she had miscarried.

24th.—Attended the Hospital to-day, although in a weak state of health. The eruptions are less marked, and the inflammation at the genitals has subsided. Prescribed liq. hyd. bichlor. ʒj., potass. iodidi gr. iij., decoct. cinch. co. ʒj., three times a day, and strong black wash to be applied to the mucous tubercles.

31st.—Gums tender; all symptoms improved; mucous

tubercles reduced to half their size since last week. One tablespoonful of the medicine to be taken twice a day.

January 9.—Gums still sore: mercurial odour perceptible; mucous tubercles healed over and on a level with surrounding skin; medicine to be discontinued.

February 16.—Is now apparently well.

March 21.—Continues in good health.

Case 3.—Annie S., aged 18, was admitted into the Hospital under the care of Mr. Hill, July 5, 1867, with the following symptoms of constitutional syphilis—viz., cutaneous eruptions (lepra and psoriasis), ulcerated throat, and a mass of mucous tubercles extending from the mons veneris to the anus. These are ulcerated on the surface, red, painful, and infiltrated. Three months ago she contracted a sore at the fourchette, which healed after the application of black wash, and she is now six months advanced in pregnancy.

Prescribed.—Absolute rest in bed, linseed meal poultices to the genitals, and a mixture of bark and ammonia to be taken three times a day, with full diet, and four ounces of wine daily.

July 15.—No improvement has taken place, therefore all treatment is now suspended.

17th.—After twelve hours' suffering was this morning delivered of a seven months' child (stillborn).

20th. — Improved; mucous tubercles, although not much reduced, are less painful, and have lost their inflammatory character. Ordered black wash.

24th.—Prescribed unguent. hydrarg. fort. to be rubbed in night and morning.

26th.—Gums tender. Ointment to be discontinued.

27th.—Mucous tubercles healed over; eruption fading; throat well. Discharged.

August 15.—The eruptions are scarcely visible.

September 30.—Is well.

December 1.—Continues in good health.

Case 4.—Sarah S., aged 19 years, was admitted into the Hospital, under the care of Mr. Wakley, on October 26, 1863, with symptoms of constitutional syphilis in every respect similar to the last case, but she was six months advanced in pregnancy, and the chancre induration was well marked.

Treatment and Progress.—The same treatment was adopted as in the preceding case.

October 30.—Inflammation in mucous tubercles is abated.

November 3.—After fourteen hours' suffering she was prematurely delivered of a seven months' child (stillborn).

8th.—Is generally improved.

14th.—No change since last report. Blue ointment to be well rubbed in at the axillæ and thighs three times a day.

17th—Gums affected; chancre induration nearly absorbed; mucous tubercles healed over; eruptions are losing their scaly nature; inunction to be discontinued.

20th.—Gums slightly tender; chancre induration quite absorbed; tubercles gone, and all other symptoms greatly improved. Prescribed one ounce of iodide of potassium mixture thrice a day.

30th.—Excepting the cutaneous stains, she is all but well.

December 18.—Has now lost all signs of the disease.

February 2.—Continues in good health.

Without occupying further space in the detail of similar examples, I would simply conclude by remarking that the last four cases serve to illustrate the fact that pregnancy sometimes aggravates especially the genital affections of constitutional syphilis, and unless specific treatment have been employed during gestation, these patients improve only to a certain extent after delivery.

The value of mercury as a curative agent in constitutional syphilis is certainly strengthened by the assertion that all these patients have been under observation for a period of time varying from one to seven years, and although several of them have contracted venereal sores, yet in no instance has there been a return of constitutional symptoms. The fœtuses presented no features of pathological interest.

A CHILD, 1 year old, was brought to the Hospital with umbilical and inguinal hernia. The natives had nearly resorted to acupuncture, to evacuate the humours that were there supposed to be collected. Acupuncture has now become the panacea for all diseases. Sloughing of the entire leg is sometimes seen as a result of this treatment. Although ignorant of the anatomy of the body and the position of the viscera, they never hesitate to thrust 6 inches of steel into the abdomen to cure the heartburn or gastralgia, into the shoulder to cure rheumatism, and into the arm to cure cholera.—*The Sixth Annual Report of the Peking Hospital, by Dr. Dudgeon.*

SYPHILITIC HEMIPLEGIA FROM DEPOSIT IN THE NERVE TISSUE AND PLUGGING OF THE ARTERIES.

By LAWSON TAIT.

THE following extracts from my note-book are of interest, as supporting the observations of Hutchinson, Wilks, Bristowe, Moxon, and others on the effects of syphilis on the viscera, but more immediately in connexion with the many and interesting communications by Dr. Hughlings-Jackson on the injuries produced by that disease on the nervous system. The case is of additional interest, as the patient was a Medical man, and the disease was induced by inoculation of the index finger.

W. —— had suffered for rather more than two years from symptoms which pointed to disease at the posterior base of the left hemisphere, and the disease was, in my opinion, of a syphilitic character. During the progress of his case he was several times seen by Dr. Clifford Allbutt, who has kindly favoured me with the following notes:—"He consulted me on December 15, 1866. I find in my notes that he had, for several years, been subject to transient attacks of dizziness, attended with double vision. Three years ago he had such an attack with right ptosis, which passed off completely. Five days ago he had an attack of dizziness, not causing him to fall or lose consciousness. It soon passed off, when it was found that his face was slightly drawn to the left side, and again right ptosis. Marked 'pins and needles' in right hand and foot, and, though he could walk, perhaps, six miles, yet was aware of some uncertainty of gait. Memory not affected, though he thinks that he has occasionally missed the right word in speaking. On examination there is right ptosis, but some power of elevation yet remains; pupils equal; divergence about 16°; sensation determined by compasses better on the left side of the face than on the right; corner of mouth a little drawn, and wrinkles flattened on the right side; talks quite clearly, correctly, and rationally; tongue straight; heart sounds distant and faint, no murmur; urine not examined. My opinion then given stands thus:—'I fear there is slow change near the left corpus striatum, probably towards the crus and base of the brain, and not upwards towards the hemisphere. Perhaps there is disease of a branch of the middle cerebral artery, or perhaps some meningeal thickening.' (I was not then told of the syphilitic history.) I made an ophthalmoscopic examination, I remember, but I find no notes of it. I saw him again on July 15, 1867, when he was much improved. In February, 1868, I again saw him with Mr. Teale and yourself. He had some returns of his former symptoms. I then made a careful examination of the optic nerves. I found them decidedly whiter than normal and less vascular. I did not say much about it to him, but I regarded the state as one which I had often seen in disease of the cerebral arteries with tendency to degeneration of cerebral tissue. This I find noted in my book."

The history of the syphilis is, that about twelve years previously he was inoculated on the index finger, and suffered from recurrent roseoloid eruption, which always yielded to the iodide of potassium.

On August 6, 1868, he was attacked in the afternoon by paralysis of the right arm; it rapidly progressed, and affected the leg of the same side. During the night the tongue became affected so that speech became indistinct, and in a few hours was altogether lost. On the morning of the 7th he was quite unable to protrude his tongue. He did not lose consciousness, but readily recognised those about him until the evening of the 15th. On the 16th he became comatose, and died on the evening of the 17th.

Thirty-seven hours after death I examined the body. The calvarium was thin, and the membranes and exterior surface of the brain normal. The brain was carefully removed and dissected, the following appearances being noticed:—The basilar artery was studded by a few small yellowish spots which, on microscopic examination, showed the usual fatty change of the middle coat. The superior cerebellar and posterior cerebral arteries were observed to be plugged up, so that the whole circle was removed for more careful examination. Every part of the cerebrum and cerebellum was observed to be perfectly normal except the lower and outer part of the posterior lobe of the left cerebral hemisphere. Here, scattered throughout the white and grey substance alike, were small circumscribed masses varying in size from that of a millet-seed to that of half a horse-bean, of a yellowish-grey colour, and of

a consistency firmer, if anything, than the surrounding brain substance; the latter was scarcely so firm as that at the corresponding site in the right hemisphere, but there was not such a marked difference as to constitute a softening, and it was, of course, to be accounted for by the interruption to the arterial supply. The colour of the deposited masses was more of a yellow tint where they infringed on the grey substance; when in the white substance, they had a greyer appearance. They had no resemblance whatever to yellow softening. Scattered through the white substance of the affected region were a few persistent red points (on section), such as are seen in limited red softening. They were due to the embolus of the artery. In the optic thalamus were one or two of the masses described, and the structure of this ganglion was not so firm as to be normal. No apoplectic clot of the smallest size could be found, although such a lesion was expected and carefully looked for. The left retina was examined, and found to be perfectly normal; other organs normal. Examination of the circle of Willis showed that its branches were free from the condition affecting the middle coat of the basilar artery. On the lining membrane of the basilar artery, not in any relation to the atheromatous spots, were seen one or two of the semi-gelatinous patches described by Hasse and Bezot. One was loose at its edges, easily torn off, and demonstrably of a laminated structure, as noticed by Rokitansky. They had also the further peculiarity of being stained by hæmatoidin—a condition said by Rokitansky to be rare. On laying open the superior cerebellar artery, it was observed to be plugged up for about an eighth of an inch by a firm clot, the nature of which was not readily discernible; the rest of the artery, as far as it had been cut, was filled by coagulated blood. The appearance of the plug in the posterior cerebral artery was much more interesting, because it was evidently constituted by one of the semi-gelatinous patches curled up and embedded in recent clot. Whether this patch had been carried thither from a distance or was in its original site of growth was a point of much interest, and to be settled only by careful examination under a low power with good daylight. To do this, I had to defer the examination for a day, and put the parts in a mixture of glycerine and spirit. When I had an opportunity of continuing the investigation, I found that the appearances had so much altered that I could not with confidence declare the exact condition, although I am inclined to believe that the plug was carried to the spot where it was found. It is unfortunate that my attention was not drawn to the existence of these patches at the time of the general examination, as a further investigation of the vessels might have led to interesting results.

Microscopic examination of the masses deposited in the hemispheres did not reveal anything save a general haziness of the brain constituents. No corpora amylacea or compound granular corpuscles were observed. The iodine test gave no reaction.

ON THE EXCRETION OF UREA IN EXANTHEMATOUS TYPHUS, IN ITS RELATION TO THE FEVER.

By Professor S. ROSENSTEIN, of Groningen.

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(*Concluded from page* 90.)

It would be a great mistake from the foregoing facts to draw the conclusion that the excretion of urea is diminished in the fever. Quite on the contrary, the commencement of the disease shows that at this time the excretion of urea is remarkably increased, both in this instance and in all febrile diseases. Very soon, however, and in anæmic, badly nourished individuals early (the fifth or sixth day), in well-fed persons late (the fourteenth or fifteenth day), and in those who always make use of some food, even though it were only little, as appears distinctly in Case 5, the same laws prevail in the fever for the metamorphosis of albumen as Voit had indicated in fasting animals. Just as in their case, we see also in exanthematous typhus, in which in most instances an actual starvation takes place, the amount of urea diminish from day to day, until with the renewed ingestion of food it again increases. And just as in Voit's fasting animals the increased ingestion of water in fluids in the fasting state causes increased excretion of urea, we see the same in our patients; though in the latter it appears evident that exacerbation of the fever, even in this state, manifests itself by relative increase of the amount of urea. Thus, therefore, it is comprehensible why we further see the amount of urea diminish, in spite of the violent fever—why, in a very anæmic individual of 16, this occurs so early as on the sixth day; in a strong (65 kilogrammes) person of 26, not until the thirteenth or fourteenth day; and in a third, who constantly used some, though it were but little food, as in Case 5, the whole relation is much less evident. But if we look for a parallel between fever and excretion of urea, we shall, of course, not find it, as appears very distinctly from the accurate statements in Huppert's work (*Archiv der Heilkunde*, von Wagner, 1866). We, moreover, must not require such a direct parallel for short periods, nor is it definitely found in our observations, or in those of others, because (in addition to this, that we must not lose sight of the simultaneous combustion of the carbohydrates) the formation of urea does not keep pace with its excretion, for the quantities of water excreted in the same time differ very much, and the absolute amounts of urea are also closely connected therewith. But for greater periods also we can expect increase of the amount of urea only in the commencement of the febrile affection; as in its further course, in spite of the fever, a sufficient supply of material for metamorphosis is wanting, just as in a fasting person. The magnitude of the absolute amount of urea excreted in the commencement of the fever depends likewise chiefly on the previous state of nutrition, on the "stock albumen" of the individual. It is evident that in febrile affections of longer duration this relation becomes more complicated, and that we can observe it in the simplest form where the feverish condition lasts only a short time. In this case, too, it will appear that in the whole course of the fever more urea is excreted than in the apyrexial period, and this has been known since the investigations of Traube and Jochman; yet no direct parallel between the height of the fever and the amount of urea is said to appear from it, and the magnitude of the absolute quantity of urea at the time of the fever must also depend upon the previous state of nutrition. The following case of quartan intermittent fever shows this most distinctly:—

H. Eggens, aged 23, weighing 56 kilogrammes, 3 ounces. The patient, whose organs otherwise present nothing abnormal, and who, with the exception of the ague, from which, under the quartan type, he has suffered for some time, is in good health, was admitted in the cold stage, and was put to bed at about half-past eleven. The urine then passed was not analysed, but from that time the temperature and urine were examined every hour. The patient has daily hitherto had his usual slender food, but on the morning of his admission—February 24—he had eaten nothing, nor the whole day until eight in the evening. Up to this time matters were as follows:—

February 24:—

Hour.	Temperature.	Quantity of Urine.	Sp. grav.	Percentage of NaCl.	Percentage of Urea.	Percentage of PO^5.	Total quantity of NaCl.	Total quantity of Urea.	Total quantity of PO^5.	
11.15 a.m.	104°	...	...	...	..	..	..	...	...	
11.30 a.m.	105·62	...	...	...	..	..	..	...	...	
12 noon	106·52	330	1·016	1·45	0·98	0·018	4·70	3·23	0·059	During this time the patient drinks 600 c.c. of water.
1 p.m.	105·44	200	1·017	1·64	1·00	0·012	3·28	2·00	0·024	
2 ,,	104·36	170	1·019	1·68	1·27	0·010	2·85	2·15	0·017	
3 ,,	103·64	115	1·018	1·08	1·54	0·008	1·24	1·77	0·010	
4 ,,	101·84	250	1·005	0·24	0·50	0·010	0·60	1·25	0·025	
5 ,,	101·84	195	1·005	0·16	0·43	0·025	0·31	0·95	0·048	
6 ,,	101·3	295	..	0·20	0·60	0·031	0·79	2·37	0·122	
7 ,,	100·04	110	1·014	0·56	1·00	0·091	0·61	1·10	0·100	
8 ,,	98·96	90	1·015	0·60	1·29	0·130	0·54	1·16	0·117	
In the nine hours of the fever		1855					11·92	15·98	0·522	

Consequently the patient has during this period excreted per hour 202·7 c.c. urine, containing NaCl 1·65, urea 1·77, PO^5 0·058.

After the cessation of the fever, from 8 in the evening to the following afternoon (3 o'clock, February 25), the patient consumed 1 lb. of meat, soup, milk, and white bread. During this time (nineteen hours) he passed, the temperature of his body being 99·14° F., 440 c.c. of urine of specific gravity 1·025, and containing—

NaCl.	Urea.	PO^5.	NaCl.	Urea.	PO^5.
0·84 per cent.	2·9 per cent.	0·225 per cent.	3·69	12·76	0·96

In the following five hours, from 3 o'clock in the afternoon

to 8 in the evening, temperature 99·32°, urine 725, sp. gr. 1·015; percentage of NaCl 0·52, urea 1·95, PO^5 0·05. Total quantity NaCl 3·77, urea 14·43, PO^5 0·362.

Therefore, in the apyrexial period of February 25, there were excreted in twenty-four hours, under the use of 1 lb. of meat, 1165 c.c. of urine, containing 7·46 NaCl., 27·19 urea, 1·32 PO^5; consequently per hour 48·9 c.c. of urine, containing 0·310 NaCl, 1·13 urea, 0·055 PO^5.

In the following apyrexial twenty-four hours of February 26, with the use of 1 lb. of meat, soup, etc., 1390 c.c. of urine were passed, containing 10·01 NaCl, 25·39 urea, 0·914 PO^5; therefore per hour 58 c.c. urine, containing 0·428 NaCl, 1·05 urea, 0·038 PO^5.

In the following period, from 8 o'clock in the evening of February 26 to 8 o'clock in the morning of February 27 (fever day), there were excreted 490 c.c of urine, of specific gravity 1·024. Percentage of NaCl 1·32, urea 3·17, PO_5 0·095. Total quantity 6·46 NaCl, 15·53 urea, 0·46 PO_5.

The 27th of February was the fever day, and presented the following relations, the patient making use of nothing :—

Hour.	Temperature.	Urine.	Sp. grav.	Percentage of			Total amount of			
				NaCl.	Urea.	PO^5.	NaCl.	Urea.	PO^5.	
7.15	99°86									
8	100·04	110	1·021	1·36	3·38	0·07	1·49	3·71	0·147	Patient drank 1400 c.c. of water.
9	100·9	40		1·44	3·55		1·44	3·55		
10	102·56	60								
11	105·08	95	1·023	1·76	2·54		1·67	2·41		
11.30	105·62									
12	105·9	105	1·021	2·00	2·10	0·03	2·10	2·20	0·084	
12.30	106·3									
1	105·8	80	1·023	1·66	2·75		1·32	2·00		Patient begins to perspire.
1.30	105·44									
2	104·9	70	1·028	1·48	3·45		1·03	2·41		
2.30	103·82									
3	102·74	60		0·64	3·35	0·02	0·38	2·01	0·074	
3.30	102·02									
4	101·8	240	1·008	0·20	1·00		0·48	2·40		
4.30	100·9									
5	100·4	220	1·006	0·16	0·85		0·35	1·80		
5.30	100·04									
6	99·68	260	1·007	0·16	0·90	0·035	0·41	2·34	0·216	
6.30	98·96									
7	98·96	240	1·006	0·83	0·81		0·28	1·99		
Therefore in these 12 hours		1580					10·95	26·82	0·521	
And per hour		131·6					·91	2·235	0·043	

A single glance at the quantities excreted both in and without the pyrexial period is sufficient to show that the fever has an actual influence on the excretion of urea. The influence of the previous feeding, of the accumulated stock of albumen, on the amount of the urea, is distinctly apparent in the second attack of fever, where after full diet 2·24 grammes of urea were found in the urine, passed at the rate of 131·6 c.c. per hour; while in the first attack, after low diet, only 1·75 gramme was excreted in 202·7 c.c. voided per hour. The influence of previous diet, as well as of that used during the feverish state, explains those cases on record in which, during the apyrexia, more urea was excreted than during the access of fever, as was already correctly supposed by Huppert with respect to Griesinger's observations. I cannot discover any influence of the fever, independently of the diet, on the excretion of PO^5. On the other hand it is evident, with reference to the quantity of urine, that its increase beyond that of the apyrexial period is dependent on the increased quantity of drink, as in the second access of fever, in which more was drunk, more urine also was excreted. However it must not be lost sight of, that the quantity of perspiration also is different, so that precisely on this account in intermittent fever any regularity is scarcely to be expected.

The occurrence of albumen, mostly in connexion with morphological elements, I have seen in my observations, on the whole, six times. Two of these cases were fatal; of the four others the albumen disappeared in two together with the fever, in the other two during convalescence. In the fatal cases the kidneys presented the well-known change of granular infiltration of the epithelial cells, without its having reached the stage of fatty degeneration and without its having been communicated to the interstitial tissue, so that these deviations belong to the simplest sort of purely parenchymatous affections, and cannot be looked upon as the cause of death. The intensity of the albuminuria is very inconstant, and we cannot from it draw any conclusion as to the severity of the case. A very large amount of albumen occurs too in cases which terminate favourably, and *vice versâ*. No doubt the albuminuria is always an undesirable complication, which increases the danger, but its influence on the result of the disease is very much exaggerated by English writers. Nor can I, therefore, agree with Murchison's views upon this point, when he looks upon most nervous disturbances as uræmic phenomena, although he himself states that the albuminuria depends only on congestive conditions of the kidneys. I have already, on another occasion, protested, on the ground of observations made, against the opinion that the delirium proceeded from the insufficient excretion of urine, and I must now add that I have not seen raving occur earlier in cases of remarkable albuminuria than in those which ran their course without albuminuria, nor have I found it more violent in such cases than in slight albuminuria. I must consequently wholly deny the connexion between these symptoms, without, of course, wishing to assert that in this disease uræmic conditions may not actually be developed, of which Murchison himself has quoted examples. Moreover, albuminuria and diminished secretion of urine are not always combined; I have in two cases seen albumen occur with copious excretion of urine, and in one instance it was very important that the patient had already suffered from diffuse nephritis before he got typhus from contagion. In this case the typhus ran a favourable course without the occurrence of any uræmic phenomenon. A case in which I observed the most intense albuminuria, and which terminated fatally, ran its course without delirium, and proves, at all events, how independent of each other these two symptoms may be, even when the case is not looked upon as typhus. It occurred, in fact, during an epidemic of measles; nor could I, during the patient's life, say with perfect certainty whether I had to do with measles or with exanthematous typhus. The case was as follows :—

Case 7.—Vrouw Pofferman, aged 39, came under treatment on the ninth day of her illness, and presented the following phenomena :—Patient in good condition; mucous membrane of the conjunctiva strongly hyperæmic; on the skin of the upper and lower extremities a speckled exanthema, already fading, presenting a great resemblance to measles; the cuticle slightly desquamating; the fauces red; the tongue coated white in the middle; extensive bronchial catarrh of the posterior part of the lungs; in the evening temperature 103·82° F.; pulse 96; respiration 24; sensorium free.

10th, morning.—Temperature 101·48°; pulse 84; respiration 20; slept well; thin evacuation (with an ascaris); exanthema fading; much cough, with mucous sputa. Evening: Temperature 103·64; pulse 88; respiration 24.

11th, morning.—Temperature 102·92°; pulse 112; respiration 28; slept a little during the night; much cough, with copious muco-purulent round sputa; objectively only the signs of bronchial catarrh; urine 665 c.c., specific gravity 1·017, albuminous; sensorium free.

12th, morning.—Temperature 103·64°; pulse 108; respiration 32. Little sleep; coughed much; exanthema completely faded; bowels once moved; urine 680 c.c., specific gravity 1·012, very highly albuminous, and containing many cylinders. Evening: Temperature 102·74°; pulse 116; respiration 40; the distress continues (sinapisms, seneka); no dulness on percussion.

13th, morning.—Temperature 101·56°; pulse 96; respiration 36; phenomena still the same; in addition there is in the pharynx a slightly diphtheritic coating on the arcus glosso-palatinus (touching with chlorate of potash); urine 750 c.c., specific gravity 1·013, highly albuminous; one thin motion. Evening: Temperature 99·68°; pulse 96; respiration 36.

14th, morning.—Temperature 97·88°; pulse 120; respiration, 40; great dyspnœa; very small pulse, at the same time perfect consciousness; commencing cyanosis; the diphtheria increases. Urine highly albuminous, 500 c.c., sp. gr. 1·042, containing cylinders, no blood corpuscles. Evening: Temperature 98·24°; pulse 104; respiration 40; extremities cold; dyspnœa increased.

Died on the morning of the 15th. It must be admitted that the course of the fever, its faintly remitting character, the sinking of the temperature precisely from the tenth or eleventh day, and the state of the tongue and skin, were in favour of exanthematous typhus; the other complications, too, might belong to the same. The reason that I still, nevertheless, diagnosed measles was the nature of the prevailing epidemic.

The autopsy exhibited, with reference to the lungs, extensive bronchitis, without infiltration; the larynx and trachea were free, only the arcus glosso-staphylini were covered with a diphtheritic coating. In the heart, which otherwise exhibited no deviations, the right auricle was remarkably dilated, and was enormously filled with coagulated masses. In the longitudinal

sulcus, too, of the dura mater was coagulated blood. The spleen was thirteen centimetres long, eight centimetres high; its capsule was puckered, its consistence tolerably firm; it was not very full of blood. The kidneys were eleven centimetres long, six in breadth, one and a half in thickness; their surface was smooth; the capsule was easily removed; they were moderately charged with blood. On microscopical examination the nuclei in the epithelium of the tubuli uriniferi appeared for the most part sound; only in parts were they highly granular. No change of the interstitial tissue. In the intestinal canal there was nothing abnormal.

These results tell, both as they relate to the condition of the spleen and to the extensive coagulations of blood, against typhus. The whole case, however, shows that, under certain circumstances, it may be extremely difficult to distinguish the two diseases from one another, even when we take advantage of the, for the most part, so characteristic course of this disease as a diagnostic test. All other symptoms and complications of the exanthematous typhus, as injection of the conjunctiva, eruption, state of the mucous membrane of the tongue, enlargement of the spleen, tremor of the tongue, general muscular debility, bronchial catarrh, hypostases, parotitis, bedsores, etc., which phenomena have been very faithfully described even by the earliest writers on this disease, I here pass by in silence, as I have little to add to what is already known, and will only, on account of their great practical importance, say a few words on the influence of cold baths.

While I formerly, according to ancient custom, in typhus gave the patients acids internally, I have for the last year, since I became acquainted with the results and investigations of Brand and Jürgensen on ileo-typhus, completely laid aside internal treatment (except small doses of sal ammoniac in violent bronchitic affections), and have exclusively employed cold baths, causing them to be taken at from 66·2° to 62° Fahr., the patients remaining in them for ten minutes, or at most for a quarter of an hour. A bodily temperature of 104° Fahr. was almost always considered as the indication for a bath, which in the course of the day was repeated as often as the temperature reached the height just mentioned. The immediate effect of such a bath, in which I scarcely ever had to contend with symptoms of collapse, was, without exception, a diminution of temperature, though in a very variable degree. In some cases falls even of 9° or more were observed in this short time, in others they amounted to only from 1·8° to 2·7°. This difference, the temperature of the bath being equal, does not depend precisely on the absolute height of the bodily temperature before the bath, nor on the duration of the patient's stay in the bath. Equally variable is the duration of the remissions which are in this manner artificially produced. In some instances the temperature did not again attain its former height until after the lapse of twenty-four hours, while in others, after only two hours, it reached a point even higher than the former one. Usually, however, the duration of the remissions was from five to six hours. I have, moreover, satisfied myself that the absolute height of the temperature before the bath cannot be taken as a measure of the duration of the remissions to be expected, and that the former probably affords a less correct index of the violence of the fever than the latter. All these questions require still further investigation, on which account I shall not at present do more than open the subject. The result of this method may now, however, be looked upon as fixed, and the plan as extremely advisable in practice. The treatment of exanthematous typhus with cold baths is not adapted to shorten the duration of the disease (scarcely in any case have I seen it produce the defervescence, and with it the end of the process), yet it moderates the course of the disease, and is better calculated than any other measure to insure its favourable termination. Since I have treated my patients with fresh air and cold baths, I have had no fatal case. Constant ventilation, through open windows, is certainly also the best prophylactic for those around, as, according to my observations, no case of contagion has appeared, since that period, among the Medical men, the students, or the attendants. I must further add that I do not look upon a violent bronchial catarrh as contra-indicating the administration of the baths; for, after having repeatedly employed them, I have not met with any aggravation of the catarrhal symptoms, and I therefore consider this apprehension to be unfounded.

A WIDOW, named Scott, has died at Leeds from the effects of an arsenic plaster recommended by a quack, who, however, escaped a verdict of manslaughter at the inquest.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

CASES OF LEAD-POISONING.

(Under the care of Dr. CLARK and Dr. LANGDON DOWN.)

WE are indebted to Dr. Woodman for the following report of three interesting cases of a very unusual form of disease induced by chronic lead-poisoning:—

"L'intoxication saturnine ne détermine pas des troubles psychiques moins considérables que l'intoxication alcoolique. . . . Les aspects du désordre intellectuel sont variables. Le fond délirant se rapproche beaucoup de celui de la folie alcoolique. *Les frayeurs, les visions terrifiantes* abondent dans l'encéphalopathie saturnine. Le délire saturnin est caractérisé par les rapides alternatives de rémission et de recrudescence. *C'est surtout la nuit que sévit le délire furieux.* L'aberration dans le jour est plus paisible."—*Laurent.*

The accuracy of these statements is well shown by the following cases occurring in the London Hospital:—

Case 1.—Sarah W., aged 20, was admitted into London Hospital, July 24, 1868, under the care of Dr. Langdon Down. She had been married eighteen months, and had worked in a white-lead factory for twelve months. Four months before admission she had miscarried (three months pregnant), and was admitted at that time for colic and constipation. She had a blue line, well marked, on her gums, above and below. She was fairly nourished, although anæmic: belly retracted; systolic bruit, best heard at base of heart and upwards; urine normal, except that it contained lead. The use of castor oil and opium and small doses of potassii iodidum soon relieved the abdominal condition. Her manner was rather frightened and nervous; she had slight muscular tremors, and some of the nurses, etc., thought her "rather silly," although her answers to questions were quite intelligent. Still no special nervous symptoms were developed until the night of August 4. On this occasion, without any external cause of excitement, and very unexpectedly, before she had slept at all, she jumped out of bed and declared that she could not sleep there, as there were black things in the bed, etc. Her cries and expressions of terror roused the whole ward, and Dr. Woodman, the Resident Medical Officer, was called to see her. Her whole manner and aspect betokened extreme terror. She was allowed to take another bed, but the delusions persisted. As long as Dr. Woodman sat by her bedside he could compose and restrain her without much difficulty, although she persisted in the delusions. The nurses, however, could not quiet her at all, although she only struggled and offered no personal violence. Hypodermic injection of morphia (gr. $\frac{1}{3}$) procured sleep, and during the daytime there were no delusions. At night they recurred again, although in a milder form, and again the hypodermic morphia injection gave relief. For three or four nights the delusions returned. Dr. Down increased the dose of iodide of potassium, and she was discharged cured a few days after. The lead line had disappeared, and with it all the delusions, and the anæmia was much less marked. It should have been mentioned above that menstruation was normal.

Case 2.—Mary Ann H., aged 19, under the care of Dr. Clark. Single; catamenia irregular, absent two months. Had worked in a white-lead factory for about a month only. She had colic, constipation, and jaundice, with a well-marked lead line on her gums. She was admitted on August 15, 1868. Had also delirium of dread, coming on only at night, less marked than the last case, but still very decided. Treatment similar, with the addition of sulphur baths. Discharged cured on September 7, 1868.

Case 3.—Annie F., aged 18, single; admitted September 23, 1868, under Dr. Clark's care. She had worked for some months in a white-lead factory. Was menstruating when admitted. Had colic, constipation, and jaundice, with well-marked blue line on her gums. Well nourished; no physical signs of thoracic disease; rather anæmic. Aperients, with opium and iodide of potassium, soon relieved the former symptoms, but Dr. Woodman soon heard from the night nurse and other patients that she could not bear to be left alone at night for a minute, and that she talked like "people with delirious trimmings!" On further examination it was found that, like

the first patient and the second, she had spectral delusions, fancying she saw blackbeetles, rats, mice, and negroes. Hypodermic injections of morphia and continued use of iodide of potassium cured her in sixteen days.

All three cases occurred in very temperate persons.

WESTMINSTER HOSPITAL.

LARGE LUMBAR AND SUBSEQUENTLY PELVIC ABSCESS SUCCESSFULLY TREATED WITH CARBOLIC ACID.

(Under the care of Mr. BARNARD HOLT.,
Reported by Mr. HAYNES.)

ELIZABETH C., aged 18, an unhealthy girl who had acted in the capacity of housemaid, was admitted into the Westminster Hospital under Mr. Holt's care May 29, 1868, suffering from a large lumbar abscess of the left side. She stated that on December 11, 1867, she had fallen downstairs and injured her back, and that in a fortnight afterwards she noticed a swelling on the left side, which was so painful as to prevent her continuing her employment. She was admitted into St. George's Hospital, where, by rest and appropriate treatment, the swelling subsided, and in three months she left the Hospital. She could not, however, return to her employment, and the swelling speedily recurred: the pain was now very severe, and extended down the inner side of the thigh to the knee: her general health was much impaired, and her nights sleepless. At the time of her admission a large abscess existed at the right side of the spine; this was opened, and a considerable quantity of pus was evacuated, the sac of the abscess being afterwards syringed out with a lotion containing ʒjss. of carbolic acid to ʒv. of water. Lister's dressing being applied to the wound. Cod-liver oil and iodide of iron were prescribed to be taken twice daily. The sac of the abscess under this treatment speedily granulated, but a sinus was left which required division, being afterwards dressed upon Lister's plan. At the end of seven weeks the abscess entirely healed: but another formed dipping down deep into the pelvis, and subsequently a third which pointed in the groin. One was opened, and the other burst. The same plan of treatment was adopted, simply substituting oil for water, the strength being one part carbolic acid to six of oil; this was daily introduced into the deep wounds, the carbolic paste being retained over the other dressing. This treatment was entirely successful. The patient progressed in the most favourable manner, and, with the exception of a sharp attack of erysipelas, had no further inconvenience; the wounds speedily healed, and she left the Hospital perfectly well in December. During the whole time she was in the Hospital a liberal diet with wine was ordered.

Mr. Holt remarked this was only one out of a number of somewhat similar cases that had been treated upon the plan advocated by Mr. Lister. He certainly concurred in the propriety of giving the carbolic acid a full and fair trial, and he felt confident, from the success that had attended its application in a tolerably large number of cases, that if the directions given by Mr. Lister are faithfully adhered to, cases which have hitherto proved excessively tedious or almost incurable may be remedied within a very moderate time.

RADCLIFFE INFIRMARY, OXFORD.

ACUTE CEREBRAL SYMPTOMS SUPERVENING IN CHRONIC DISEASE OF THE INTERNAL EAR—DEATH—AUTOPSY—RECENT MENINGITIS—ENCYSTED ABSCESS OF CEREBELLUM.

(Under the care of Dr. GRAY.)

FREDERICK B., age 15, was admitted into the Radcliffe Infirmary, under Dr. Gray's care, on August 12, 1868.

State on Admission.—Very emaciated and weak. Intelligence rather dulled. Eyes apt to assume a fixed vacant stare; pupils large, rather sluggish, but equal; no squinting. Purulent discharge from meatus of right ear, and a large hole in its membrana tympani. Skin dry and harsh, but not hot. Tongue clean, rather dry at tip. Bowels open. Abdomen soft and retracted. Pulse 72, regular, weak. Heart and lungs seem normal. No paralysis of any part. The only complaint is of constant vertical headache, and of occasional sickness after food.

History.—From infancy up to four years ago subject to frequent pain and discharge in the right ear, which then ceased to recur. In the autumn of 1866 he was in the Infirmary, under Dr. Gray's care, for a mild attack of typhoid fever. Headache and slight delirium were such prominent and persistent symptoms during the fever that, but for the coexistence of a few decided rosespots and powdery stools, his symptoms might well have been attributed solely to cerebral mischief. With these exceptions, he is said to have had fair, though weakly health, up to about a month before admission, when he began to lose flesh and to complain of headache and occasional vomiting. A fortnight ago, after a fall on his head, severe pain again attacked his right ear, and was followed in two or three days by free purulent discharge from the meatus, but with only slight and temporary relief to the headache. This, with occasional vomiting and great loss of flesh, has continued up to the present. Never had fits. Always considered of weak intellect.

Progress and Result.—For a week or ten days after admission the headache and vomiting abated considerably, then returned more violently than before. On September 13 he had an attack of epileptiform convulsions, which recurred on the 21st, and afterwards once a day up to the 25th, when, after two severe attacks, he died exhausted. His chief suffering all along was from the headache, which often came on in such violent paroxysms as to make him scream. Its seat latterly was always the same—viz., across the forehead. During the paroxysms the pulse, which usually ranged from 75 to 80, was, on two occasions, observed to fall to 50, remaining regular throughout. The discharge from the ear ceased after the 21st. Towards the last he had retraction of the head from tonic spasm of the muscles at back of neck, but no paralysis of any part.

Treatment.—During the temporary amendment, and for a few days afterwards, iodide of potassium and cod-liver oil; when convulsions began, free purging and a blister to the back of his neck; latterly, ice constantly applied to the forehead. A nourishing, but unstimulating, diet was given throughout.

Autopsy.—Brain: Flattening of the superficial lobes; scanty exudation of lymph at base, chiefly about optic commissure and Sylvian fissures; great distension of both ventricles with clear serum; softening of both optic thalami; no appearance of miliary tubercles. The greater part of the right lobe of the cerebellum was occupied by an abscess encysted in a pretty tough fibrous sac, and containing thick creamy pus. No relation beyond that of close proximity between this abscess and the disease of the bone presently to be described. Examination of the Os Petrosum (sections were made with a fine saw): A large hole was seen in the membrana tympani; the cavity of tympanum was filled with soft cheesy concretion, in the midst of which was found what was supposed to be the remains of the malleus, but no trace of the incus or stapes. The inner part of os petrosum, comprising the semicircular canals, internal auditory meatus, and cochlea, quite healthy; necrosis (without disintegration) involving the whole thickness of its central portion between tympanum and cerebellum, but apparently stopping short of the mastoid process. The dura mater over the dead bone was somewhat softened and loosened from its attachment, but without any break in its continuity; a spot or two of purulent lymph was found between it and the bone at one place; no tubercle in either lung; abdomen not examined.

Remarks.—The sequence of events in this case seems to have been as follows:—(1) Old disease of the internal ear at length becoming quiescent; (2) depending upon this, but latent and of uncertain date, a cerebellar abscess; (3) from irritation subsequently originating in one or other or both of these foci, meningeal mischief at first slight, then (4) by a fall on the head aggravated and hastened to a fatal end. The possible latency of cerebral abscess is well illustrated in this case. How long the abscess had existed in this boy it is impossible to determine, but from the firmness of its sac it must have been of long standing, and yet the boy had all along been able to follow a light outdoor occupation.

TSIU, 37 years of age, a shopkeeper, at the spring term, received, as retribution for demanding payment of just debts, a severe wound on the right shoulder. It was intended to murder him, but by a sudden jerk, the heavy axe descended upon the shoulder joint, laying it completely open. The arm hung by a small attachment of muscle in the axilla. Amputation would have been the usual course, but from the Chinaman's dislike to part with any portion of his body, the head excepted, the arm was replaced, and a suture with suitable bandages and pads to support the arms *in situ*. The patient remained six weeks in the Hospital, and left with the wound healed, and no collection of matter in the joint, and free of pain. The appearance of the shoulder was that of a dislocation of the humerus downwards and inwards into the armpit. It remains to be seen what use he may be able to make of it.—*The Sixth Annual Report of the Peking Hospital, by Dr. Dudgeon.*

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Medical Times and Gazette.

SATURDAY, FEBRUARY 27, 1869.

DR. GUY ON INDISCRIMINATE ALMSGIVING AS A SOURCE OF DISEASE AND CRIME.

Dr. Guy continues to wage war indefatigably against the meaner and slatternly vices of society, and has brought one form of vice—indiscriminate almsgiving—before the last meeting of the Metropolitan Medical Officers of Health. By indiscriminate almsgiving, or, as some call it, "promiscuous charity," he means the giving of money, food, or clothing to any man, woman, or child of whom we know nothing but that he or she is ragged, barefoot, and dirty, or seems to be halt, lame, or blind; with or without broom in hand, or trivial article for sale; in the thoroughfare, at the street crossing, at the door of the country house, on the tramp, or in the squalid lodging. "Under the head of those who offer trivial articles for sale might be classed with justice the majority of street musicians, as well as the vendors of matches, flowers, combs, and the like. The giving to all such persons is *indiscriminate almsgiving;* just as the direct request, the assumption of an attitude or expression fitted to excite commiseration, or the offer of a trifling article for sale with an urgent request to purchase as a charity, are all of them acts of mendicancy." Thus defined, indiscriminate almsgiving is a fruitful source of disease and crime. Mendicants are habitually grossly gluttonous and drunken; like noisome vermin, their haunts are dark, filthy, and squalid; light, cleanliness, and decency scare them. As for their children, they die miserably for the most part; but if some sickly, stunted weeds survive, they are hawked about to excite pity. Nay, says Dr. Guy, "to bring home to the indiscriminate almsgiver the consequences to which his vicious practices may lead, I quote a case from the *Gentleman's Magazine* (1771, vol. xli. p. 232) to the following effect:—'A woman was whipped through Fleet-street to Temple-bar for decoying children from their parents, and then putting out their eyes, in order to beg with them.'" Tramps and vagrants are the breeders and propagators of typhus and small-pox.

"The tramp," says Dr. Guy, "finds encouragement and support wherever he goes—doles in the highway; doles at the house-door; doles especially at the hands of ladies and the clergy; doles, alas! at the hands of the poor. And he, too, as the reports of the local registrars—especially when fever prevails, as it did in the years immediately following the Irish famine—abundantly prove, first becomes infected himself, and then scatters the seeds of disease along his path."

That any beggar will steal if he can may be taken as an axiom, nor is there any doubt but that they constitute a large and most dangerous class, ready for any riot or revolution, clamouring for national workshops, as in France in 1848 and Spain now, and rendering possible under an imbecile government such a disgrace as the destruction of the Hyde-park palings. Tramps are the ready catspaws and tools of more experienced burglars. As for any gratitude or any good moral feeling resulting from indiscriminate almsgiving, nothing can be more just or more contemptuous than the estimate which the beggar forms of the giver, to whom they apply the sobriquet of "*soft Tommy*," and call his gift a "*tumbling*." In some parts of England the tramp and his patron are alike called *dozey*, whilst the name *back-door cant* is applied to the provincial *area sneak*. Alms given to these wretches is so much diverted from the really industrious poor, the widow, fatherless, and sickly.

"Are the evils," says Dr. Guy, "entailed upon us by indiscriminate almsgiving of such extent and importance as to justify me in bringing this subject under your notice? Now, I am not prepared with such figures as would enable me to answer this question with precision, but I find in an address made by Mr. J. F. Stanford, a Master of Arts, a barrister, and a Fellow of the Royal Society, to the Marylebone Vestry in 1847 (more than twenty years ago), certain figures which I think I could justify, and which, at all events, I venture for the present to commend to your serious attention. After citing an estimate by Mr. Martin, who in 1802 calculated the number of beggars then in London at 16,000, stating the number of commitments for begging in 1837 at 4000, for vagrancy at 18,000 per annum, and the number of juvenile vagrants and beggars under 16 years of age taken up for petty larcenies and offences at between 3000 and 4000, and adding begging-letter cases investigated during three years by the Mendicity Society at nearly 17,000, and destitute persons using night asylums or refuges at from 6000 to 7000, Mr. Stanford reiterates his own deliberate estimate for London of 50,000 mendicants, and repeats his own calculation of the money given to them, taken at the ludicrously low figure of 1s. a day, as no less than £900,000 a year. This was in 1847—twenty years ago. If the mendicants have kept pace with increase of population, and their gains have not fallen off, an aggregate of 75,000 beggars, absorbing some such sum as a million and a quarter per annum, may be reasonably assumed at the present date. If to any one now present the money calculation should appear excessive, let him reflect that a population of 3,000,000 persons of all ages, supposed to contribute to any purpose at the rate of a farthing per head per diem, would yield an annual sum much exceeding a million sterling. On the other hand, in order that 75,000 persons at all ages may receive one with another a shilling a day (the low estimate of Mr. Stanford), an aggregate sum would have to be provided of £1,368,750.

All this waste is the result of

"That incarnation of selfish folly—indiscriminate almsgiving. All past experience proves that the battle is not to be fought with false and foolish compliments to this mean, disloyal, and pernicious vice, as I have not hesitated to call it, but by open uncompromising denunciation. If to any one now present I seem to be using the language of exaggeration, I entreat him to try and realise—to bring, as it were, into one view—to paint, so to speak, on one canvass the actual state of the great city in which we live. To me it seems as if we were the willing slaves of the lord of misrule: our indiscriminate almsgivers sowing broadcast the seeds of temptation; our local authorities quietly looking on while a beggar or a thief stations himself, broom in hand, at every crossing; our magistrates, under the compulsion of laws which, in their inequality and inconsistency, have a strong smack of Bedlam, conferring on base and brutal criminals, whose thefts exceed the value of a few shillings, the happy accidents and misplaced dignity of a trial by jury; our wealthiest citizens liberally supporting ragged schools, while their neighbours, if not they themselves, are taking good care that they shall never lack scholars; district visitors full of the strange conceit that the only business that requires neither special education nor common sense is the visitation of the poor, and whose work among them too often justifies the bitter complaint of the honest working man—for decent poverty a tract, for gin-drinking, gluttonous, squalid destitution, a blanket or a hundredweight of coals;—the clergy wielding the great power of the pulpit, as if in profoundest ignorance of the difference between honest poverty and

criminal destitution, and too often among the worst offenders against the law that forbids and punishes begging; and this rotten structure of imbecility and crime tottering under the crowning folly of the State which turns every workhouse into an hotel for all who find it convenient to spend in the public-house, in the theatre, in the haunts of the lowest dissipation, the money they collect with such strange facility from the people, for whom they display, in their own familiar and expressive language, so withering and dangerous a contempt."

We cannot conclude without recommending Dr. Guy's publications on this important social question to the notice of our readers. The tract "Who are the Poor?" is especially worthy of being circulated widely.(a)

We must take an early opportunity of considering the question how far Medical men are accomplices in the vice of indiscriminate almsgiving, especially as regards "advice gratis" and the out-patient system of Hospitals.

HYDROGENIUM—A NEW METAL.

Professor Graham, Master of the Mint, has just read before the Royal Society (January 7, 1869) a very remarkable memoir "On the Relation of Hydrogen to Palladium," in which he brings forward strong evidence in favour of the metallic nature of hydrogen. The view is by no means original, but no such strong evidence in its favour has ever previously been adduced.

A piece of palladium wire of given length was kept in a straight horizontal position by a string passing over a pulley and having a sufficient weight attached to it to keep the wire straight without occasioning an undue strain. The wire was then connected with the hydrogen pole of a Bunsen's battery, and for an hour and a half hydrogen was then carried to its surface, by which time the wire was saturated with the hydrogen. The wire, which was originally 609 millimetres (or nearly 24 inches), was now found to be nearly 619 millimetres long, showing an increase in length of 9·8 millimetres (or nearly four-tenths of an inch.) The increase in linear dimensions is thus from 100 to 101·6, and in cubic capacity it was found to be from 100 to 105. Heat rapidly removes the hydrogen from the charged wire, which is then found not only shorter than it was at the beginning of the experiment, but as much below the original length as it had previously risen above it. From this and similar evidence adduced from seven other experiments of a like nature, three of which he gives in full detail, he sees evidence that the palladium and the hydrogen form a true alloy, 100 parts of which is composed of 95·32 of palladium and 4·68 of hydrogen, which nearly corresponds to one equivalent of hydrogen for one of palladium. In accordance with this view he finds that the combination displays a tenacity one-fifth less than that of palladium—a reduced conducting power for electricity amounting to one-fourth, and an altered conductivity of heat.

Professor Graham gives the name *hydrogenium* to the assumed highly volatile metal of which he regards hydrogen gas as the vapour. The chemical properties of hydrogenium differ from those of ordinary hydrogen. The palladium alloy, which contains hydrogenium, precipitates mercury and calomel from a solution of chloride of mercury (corrosive sublimate) without any disengagement of hydrogen—that is, hydrogenium decomposes chloride of mercury, while hydrogen does not. Moreover, hydrogenium unites with chlorine and iodine in the dark, reduces per-salts of iron and some other metals into proto-salts, and has considerable deoxidising powers, and, in short, seems to be the active form of hydrogen, as ozone is of oxygen.

"The general conclusions," says Professor Graham, "which appear to flow from this inquiry are that in palladium fully charged with hydrogen, there exists a compound of palladium and hydrogen which may approach to equal equivalents; that both substances are solid, metallic, and of a white aspect; that the alloy contains about twenty volumes of palladium united with one volume of hydrogenium; and that the density of the latter is about 2, a little higher than magnesium (which is 1·743), to which hydrogenium may be supposed to bear some analogy; that hydrogenium has a certain amount of tenacity, and possesses the electrical conductivity of a metal; and, finally, that hydrogenium takes its place amongst magnetic metals."

(a) 1. The Plague of Beggars: a Dissuasive from Indiscriminate Almsgiving. Third edition. Price 1d.—2. Defoe's giving Alms no Charity, and Employing the Poor a Grievance to the Nation. Price 1d.—3. The Evils of England, Social and Economical: being a series of short essays on beggars and thieves, charities and their abuses, paupers and poor laws, etc., but especially on the vice of indiscriminate Almsgiving. Price 1s.—4. Who are the Poor? A cheap tract for circulation. Price 2s. per hundred.

THE WEEK.

TOPICS OF THE DAY.

A repetition of an attack of illness from which Prince Leopold had formerly suffered, was serious enough to prevent the Queen's return to town to receive the Houses of Parliament. The attack is understood to have been of a hæmorrhagic character. The Prince is now better.

The question of the success and character of the present treatment of the insane has been brought before the general public in an article published in the *Times* of February 19. We think the article yields evidence of having been the work of the writer who, a week or two back, criticised in the same paper the Hospital and Dispensary system of London. The recent, like the previous article, contains many grains of truth, but these are embedded in a much larger proportion of chaff. When the writer complains that Hospitals for the insane are not utilised as they might be for Medical education, that Medical students are not expected to study insanity, and are not examined as to their knowledge of it, and that mad-doctoring is made far too much a specialty, he is only asserting wholesome truths with which we heartily agree, and thank him for having told them so ably and so boldly. But when he asserts that cure is not so much the primary idea in the present treatment of the insane in asylums as retreat and security, we do not think that he gives a fair colour to the matter. Allowing all that he says of insanity being simply a functional or organic disease of the material organism, and that the delusions of an exhausted brain should be thought about as belonging to the same order of phenomena as the dyspepsia of an exhausted stomach, it may be fairly answered that the modern treatment of insanity is an embodiment of the principle that to give *rest* to the diseased organ is the great physiological mode of cure. Philosophical Medicine, indeed, no longer deals in "cures," although the treatment of disease is its primary object. We think it, therefore, unfair to charge the asylum system with being primarily a system of restraint and seclusion. As carried out in all public asylums, and we believe in all respectable private ones, it is primarily an application on a large scale of the most philosophical system of treatment in functional disorders of the brain. We are sure that however in the public mind the word asylum conveys merely an idea of retreat and restraint, these are not objects uppermost in the minds of Medical men who undertake the treatment of insanity, and we think the writer has done this section of the Profession but scant justice. He represents them as mere routinists working in a prescribed groove; to many of them he thinks madness must appear the normal condition of mankind, and he asserts that their special recommendations for their posts are often those rather of the superintendent, the organiser, the economist, than those of the Physician. "Their duty to heal the sick is well nigh forgotten or disregarded." We believe that a worse libel on a scientific, disinterested, and zealous body of Physicians is not to be found in the writings of these "ingenious romancists" whose "horrible stories of unjustifiable incarceration and inhuman torture" are referred to by the author.

The new President of the Poor-law Board has obtained leave to introduce a Bill to provide uniformity of assessment of rateable property in the metropolis. He proposes to attain this object through what we cannot help thinking the somewhat cumbrous machinery of Assessment Committees in each union, who are to send delegates to a Central Assessment

*

Board, who are to have the function of deciding upon "a common basis of action in regard to valuation, subject to regulations laid down in the Bill." Attached to this central board is to be a paid assessor, who is to act as judge in appeals from one union against another. This personage fills undoubtedly the most important place in the scheme, and seems to be the one in whom responsibility would centre. At this early stage, however, it is premature to discuss minutely the features of a proposal which, however, we are glad to see is not so sweeping a measure as the more clamorous advocates of change have called for.

The subject of localisation of faculty in particular parts of the brain was again discussed at the Medical Society of London on Monday night in the debate on a very able paper read by Dr. Day, of Stafford, "On Injuries of the Brain and their Consequences." Dr. Day has passed most previous writers in pronouncing against the localisation hypothesis, and certainly he adduced cases and facts which, in our present knowledge, are utterly irreconcilable with that hypothesis. He brought forward, for instance, the history of a man who for a long time carried the breech of a gun, a piece of iron weighing two ounces, in the brain, but who showed no indications of loss of any special faculty. Dr. Boyd adduced other examples in support of Dr. Day's view of the possibility of disorganisation of portions of brain without symptoms; while Dr. Thudichum, point-blank, disputed the proposition. These extreme differences of opinion show how much we require a sounder physical knowledge of the brain and its functions.

Dr. James Ellis, the Resident Medical Superintendent of St. Luke's Hospital, has appealed to the public on the subject of his dismissal by the Governors of that Institution. He endorses the charges recently made against the management of St. Luke's, and states that his representations as to the condition of the Hospital and his recommendations, which, however, "have not been generally supported by the Physicians," have brought him into great disfavour with the governing body. He acknowledges, however, that the "nominal" cause of his dismissal is that he has broken Rule 46 of the Hospital, which enacts that "the Superintendent shall devote the whole of his time to the service of the Hospital." It was proved against him that in September last he absented himself to visit a patient at Berkhampstead. All, therefore, we think, that can be said by Dr. Ellis's friends is that it is pity he should have jeopardised his position in the charity which he desired to reform by breaking its rules. It is not in the nature of Hospital committees to give quarter to officers who are continually reminding them of their shortcomings.

The petition against the return of Mr. Moncrieff for the Universities of Glasgow and Aberdeen was withdrawn some weeks ago. It is still, therefore, undecided whether the payment of the registration fees of electors by a religioso-political society in favour of a candidate comes within the meaning of bribery.

Enthetic disease must be fearfully rife in Jersey if the Constable of St. Helier's is to be believed. In a debate in the Jersey States on Friday last, this gentleman said, in effect that syphilis was making such inroads on the population that the Jersey or Norman race threatened soon to die out. We have not heard that the Medical Practitioners of the island take so gloomy a view.

MR. JOHN CLAY AND THE POOR-LAW GUARDIANS OF BIRMINGHAM.

We are glad to be able to state that the Poor-law arrangements at Birmingham, against which all the Medical Profession in that town are remonstrating, are made not only without, but decidedly against, the advice of Mr. John Clay. This gentleman, as one of the guardians, drew up an elaborate document on the subject of parochial Medical reform, and advocated strongly the following points:—The establishment of a central dispensary with a dispenser, the finding of drugs by the parish, the appointment of five Medical officers with a salary of £200 a year each, and the division of the vaccination amongst them. This scheme, however, was not adopted by the Board, but was resolved into the more economical one of the reduction of the Medical staff from eight to five, with an increase in their salaries of £80 a year, but also with additional work and at a saving to the parish of £200 a year. But Mr. Clay is not responsible for this singular conduct on the part of the guardians. He strove his best to improve the status of the Medical officers, but he failed to carry out his plans. Our readers will find in another column an additional list of signatures to the memorial of the Medical men of Birmingham to the Poor-law Board against the proposed reduction of the number of Poor-law Medical officers in that town.

REDUCTIONS IN THE ARMY MEDICAL DEPARTMENT.

It is probable, in consequence of the withdrawal of troops from the colonies, that two Deputy Inspectors-General of Hospitals will be placed on temporary half-pay.

MARRIED SOLDIERS.

The *Pall-mall Gazette* of the 24th inst. contains an account of an effort about to be made, under the sanction of the military authorities, but at the expense of private individuals, to organise a system of relief for the wives and families of soldiers at the head-quarters of the Royal Artillery at Woolwich, in the hope that, if successful there, the system may be introduced generally throughout the army. The objects to be attained are given at some length, the most important being in the case of soldiers married "with leave," but separated from their wives by the exigencies of service, to provide employment or relief for the families at home, or, when practicable, to send them to their husbands. For those married "without leave" similar efforts are to be made to employ or relieve the families at home. The *Pall-mall Gazette* states some of the difficulties to be encountered, and is on the whole favourable to the scheme as an effort of private charity, but finally inclines to the conclusions which we have ourselves already frequently stated, that no men have a right to contract marriages for the results of which they have not a reasonable prospect of being themselves able to provide, and that the true way out of the many and almost insurmountable difficulties attending the question of soldiers' families is to abolish them altogether by short-service enlistment and having no married soldiers.

THE ADMIRALTY AND THE SINECURE GOVERNORSHIP OF GREENWICH HOSPITAL.

Dr. F. J. Brown has published a pungent letter to the Medical officers of the Royal Navy on the wrongs of the Naval Medical Service, and the wrongs of the sick and infirm seamen and marines effected by the establishment of a sinecure Governorship of Greenwich Hospital.(a) The sting of the document is in the appendix—a concise and unanswerable summary of facts, which we reproduce:—

"*Events relating to Greenwich Hospital.*

"*July* 5, 1865. *Liberal Government.*—'An Act to provide for the better government of Greenwich Hospital, and the more beneficial application of the revenues thereof.' Clause 15 is *permissive*, and relates to the appointment of a sinecure 'visitor and governor.'

"*September* 9, 1865, *Liberal Government.*—An Order in Council providing that—'An extra pension of fivepence a day, at the discretion of the Lords Commissioners of the Admiralty, be granted to seamen and marines now in receipt of pensions, over 55 years of age, and who shall have been in receipt of the same for five years and upwards; and an extra pension of ninepence a day to those over 70 years of age, who shall have been in receipt of the same for ten years and upwards.' Also providing for an establishment of two Inspectors-General of Hospitals,

(a) The Conduct of the Admiralty in reference to the Revenues of Greenwich Hospital, more especially as relates to the Establishment of a Sinecure Governorship. By Frederick James Brown, M.D. Lond. and Ed., F.R.C.S., etc., etc.

two Depnty Inspectors-General of Hospitals, one Surgeon and Medical Storekeeper. N.B.—The Admiralty did not appoint a second Inspector-General and a second Depnty Inspector-General, although furnished with power to do so.

"*September* 30, 1865, *Liberal Government.*—Abolition of office of the single Inspector-General that was employed at the Hospital.

"*February* 16, 1866, *Liberal Government.*—An Order in Council reducing the Medical staff to one Inspector-General of Hospitals, one Deputy Inspector-General of Hospitals, one Staff Surgeon and Medical Storekeeper.

"*February* 16, 1866, *Liberal Government.*—An Order in Council establishing Greenwich Hospital pensions for officers, including ten of £150 each to flag officers. N.B.—No pensions for Inspectors-General.

"*December*, 1866, *Conservative Government.*—Appointment of an Inspector-General to the office rendered vacant by the Liberal Government.

"*March* 30, 1868, *Conservative Government.*—Removal of the Inspector-General in consequence of the clamour of the Opposition.

"*February* 5, 1869, *Liberal Government.*—An Order in Council for the establishment of a sinecure 'Visitor and Governor,' with a salary of £1200 to that officer if of the rank of admiral, and of £1000 if of the rank of vice-admiral.

"The 'Visitor and Governor' is prohibited by the Act from interference with the ordinary government of the Hospital and of the Schools; therefore the title is a misnomer as respects 'Governor.' It remains to be seen whether the Admiralty will, 'from time to time, assign to him as Visitor such duties as seem fit.' Whatever such duties may be (if ever any be assigned), they must not interfere with 'the ordinary government of the Hospital or Schools thereof.'"

HOMŒOPATHY IN BIRMINGHAM.

It would seem that there is in Birmingham a homœopathic Hospital of a mixed character—that is to say, it is partly charitable, partly self-supporting. Nevertheless, it does not seem to be an absolutely thriving institution, and its officers would fain ally themselves with another and more prosperous one. The charity which has thus been selected is the Queen's Hospital, Birmingham, where the Medical officers of the homœopathic charity think that a couple of wards might with great advantage be given up to them, that they might there treat patients in accordance with what they are pleased to term homœopathic principles. We have no doubt but that the Medical officers of the Queen's Hospital feel highly honoured by this selection, especially as they would thus be called upon to vacate a certain portion of premises even now too contracted for their wants. But the barefacedness of the homœopathic gentlemen is not homœopathic (to use the word in one of its senses), although their modesty would seem to be so, for they think that not only have they a claim on the old building, but also on the one not yet erected, and which has been so enthusiastically taken in hand by Mr. Sampson Gamgee; a part of this also, they think, ought to be given up to them, in consideration of which they are, it seems, prepared to hand over the magnificent sum of £500, the available funds of the homœopathic institution. It would seem that the same gentlemen have an eye also on the General Infirmary. If, however, the whole of the homœopathic funds be given to the Queen's Hospital, we do not see what can be offered for the room they thus demand in the Infirmary, except it be the exalted honour of having homœopathic gentlemen on the staff of that well-known and illustrious institution. We are sorry to see that Mr. Sampson Gamgee's name was repeatedly referred to at the meeting of the homœopaths as likely to aid their cause, and that he has not seen fit, on the occasion of a speech he was called upon to make two days later, to repudiate every connexion with the homœopathic heresy. Surely Mr. Gamgee does not believe in such a thing as homœopathic Surgery. We are told in the report of the Homœopathic Hospital that "some of the most important and difficult operations in Surgery" were performed within its walls last year. Surely there must be a mistake in this, for an operation performed on homœopathic principles is altogether beyond our comprehension. We further notice that Mr. Flint, their former House-Surgeon, has proceeded to a northern University to complete his studies. Is there a homœopathic University also?

PROFESSOR HALFORD'S TREATMENT OF SNAKEBITE.

Misfortunes, it is said, seldom come single: but it is a rare thing in the chapter of accidents to hear of one person being bitten by two venomous snakes on two successive days, and recovering from both injuries. A girl, named Isabella Mellross, aged 14, had, when drawing water from a hole, been bitten on the extremity of the last phalanx of the little finger of the right hand by a carpet snake, which had coiled itself round the cord of the ascending bucket. Dr. Barnett, who was sent for, found that the mother had excised the bitten part, and put a ligature round the finger immediately, and given about two ounces of gin. The girl was being walked about between two others. Countenance swollen and dusky, conjunctiva much injected, cornea glassy, pulse small and slow, breathing also slow—a complete state of stupor, from which with difficulty he could only partially rouse her and obtain an incoherent muttering reply to a question; if the support was withdrawn, she sank on to the floor. Dr. Barnett injected fifteen drops of solut. ammon. into the median vein of the injured arm, also gave one drachm of sp. ammon. co., and washed the wound with solut. ammon. In a few minutes she became violently excited, laughing, crying, singing, biting, and throwing herself about so much as to require two persons to restrain her. The patient took five doses of brandy (three drachms) and ammonia during the afternoon, and by seven the excitement had subsided, consciousness was restored, and she was pretty well. The very next afternoon the same girl found a snake basking in the garden; she watched the brute and called for her mother to come and kill it, which was done; but whilst she was stepping back out of the way, two snakes issued from a bush, and one of them bit the girl on the hand. Excision, ligature, gin, and ammonia were administered by the mother, and fifteen drops of liq. ammoniæ were injected into a vein at the elbow by Dr. Barnett. No symptoms of snake-poisoning occurred, however, although the patient suffered severely from the shock and fright. The cases are published in the *Melbourne Argus*. We would remind our readers of the possible share, as suggested by Dr. Weir Mitchell, which the large doses of alcohol may have had in generating the symptoms. We may also refer to the letter from Mr. Arthur Baillie in another column on the effect of ipecacuanha emetics in snakebites.

FROM ABROAD.—RESULTS OF TRANSFUSION—RUSSIAN VACCINATION PRIZE QUESTION—FIBRO-CYSTIC TUMOURS OF THE UTERUS—INFLUENCE OF DISEASED TEETH ON VISION.

Prof. Landois, of the University of Greifswald, who has interested himself much in the subject of transfusion, after giving a critical account of the most recent publications on the subject, thus sums up, in a recent number of the *Wien. Med. Woch.*, the results that have hitherto been obtained:—1. Transfusion has been performed 99 times in cases of hæmorrhage, in 11 of which cases no successful result was even possible. Of the remaining 88 cases, 65 were attended with success, 20 were unsuccessful, and in 3 the result was doubtful. 2. It has been performed 12 times in cases of acute poisoning, one of these being hopeless. In 3 the results were favourable, and in 8 unfavourable. 3. For various forms of disease attended with exhaustion, it has been resorted to 43 times, the most unfavourable prognosis having been frequently delivered. In these the results were favourable in 12, unfavourable in 21, and doubtful in 9, while in one case it was a mere desperate experiment. Prof. Landois observes that these statistics speak very satisfactorily for transfusion, and that the results would be far more favourable if this almost harmless operation were not usually driven off to the last minute.

From the time when Catherine II. submitted herself and the heir to the throne, in 1768, to variolous inoculation, to be superseded in twenty years by Jenner's discovery, Russia has always shown herself laudably active in the encouragement of the means for the suppression of the small-pox. The Medical Council of that country has, to this end, just induced the Government to offer a prize of 3000 roubles (about £450) for the best work on vaccination, competition for which is invited from all countries. The general object of the prize is stated to be to indicate "the best means of preventing the return of epidemics of small-pox and the mortality to which they give rise, giving at the same time a review of the different modes of preventive inoculation, and a critical examination of their efficacy." The Medical Council has published also a more detailed programme as a guide to candidates:—1. Detail the history of the principal epidemics of variola as well as that of vaccination, indicating the most important sanitary measures to be taken in different states and institutions relative to this question. This exposition should give evidence of rational, experimental, and independent criticism, and not consist in a mere compilation of the facts contained in special treatises on variola. 2. Is it demonstrated that vaccination offers a certain preventive means against the contagion of variola? and is there any ground for the opinion entertained by some Physicians that the introduction of vaccination has favoured the propagation of other epidemic diseases? 3. Does vaccination protect for always or for only a more or less long period, and what are the causes of any difference in the degree of immunity observed? A critical analysis of the mortality among vaccinated individuals to be furnished. 4. Give a description of the normal course and local phenomena of vaccination, as well as of its anomalies; also experimental proofs of the preventive force of the infection of the economy by the vaccine, the morphology of the vaccine lymph, and other investigations of its contagious principle. 5. Can the germs of diseases be introduced by vaccination into the economy, and if so, which are they? 6. Give a critical account of all the methods of preventive inoculation before and after Jenner to our own times, not omitting "equination" and "ovination." It is desirable that the conclusions arrived at should be based upon the author's own experiments. 7. What are the best means of collecting and preserving the lymph, and the circumstances which preserve it unaltered and efficacious? What are the most certain means of transporting it unchanged to long distances? Give the technical and hygienic procedures of vaccination. 8. What are the most suitable measures for the propagation and generalising of vaccination? 9. What proofs are there of the utility of compulsory vaccination and revaccination? 10. State the question of vaccine establishments as the means of obtaining good lymph and propagating vaccination.

The candidates must deliver in their productions by Jan. 1, 1871, and the prize will be awarded in the following October. In the case of no one work being considered as entirely worthy of the prize, this will be divided between the two competitors who seem to have best realised the principal points of the programme. All works, whether manuscript or printed, are admitted to compete.

M. Kœberlé, of Strasburg, communicated to the Académie de Médecine a case of fibro-cystic tumour of the uterus weighing 14½ kilogrammes, which he removed in August, 1868. The case, he said, was especially remarkable on account of the exactitude of the diagnosis and the exceptional difficulty of the operation, notwithstanding which complete recovery took place. Fibro-cystic tumours of the uterus, he remarks, have been rarely observed, and their diagnosis has been to the present time regarded as impossible. There are but fourteen on record, two of which were only recognised after death, and had not given rise to surgical interference. M. Kœberlé's case is, in fact, the only one in which the diagnosis has been determined prior to an operation. The others were mistaken for ovarian disease. The cases, then, upon which operations have been performed are twelve in number. In four instances the operation was left unfinished, and three of the patients died, one in whom only a simple exploratory incision had been made recovering. In eight cases the operation was completed, and four of these recovered, including the case now recorded, and four terminated fatally. M. Kœberlé adds that his ovariotomy operations now amount to eighty-seven, and that the later results have continued improving since his former paper at the Academy, so that the last eleven cases have only been attended by one death.

At the same meeting of the Academy, M. Delestre, a Surgeon-dentist in large practice in Paris, drew attention to the "disturbances of vision consecutive to diseases of the teeth, and the operations performed on them," believing that the connexion subsisting between certain cases of impaired eyesight and bad teeth is of far more frequent occurrence than is supposed, and well worthy of the attention of the Profession. These disturbances of vision, he observes, ordinarily consist in a mere weakness of sight, but may go on to its complete loss. There is generally dilatation of the pupil, without apparent organic changes. In other cases, the defective sight is brought about by disturbance in the nutrition of the eye, caused by paralysis or reflex contraction of the vaso-motor nerves. Young persons are those chiefly affected. The teeth of the upper jaw, especially the molars, are almost exclusively the causes of these disturbances, which disappear with remarkable rapidity after the teeth are extracted. It is an error, therefore, to regard the connexion between the affections of the teeth and the eye as a mere popular prejudice.

NILE-WATER SUPPLY TO ALEXANDRIA B.C. 50.

"Alexandria is almost entirely tunnelled under (*suffossa*), and has conduits reaching to the Nile, through which water is brought into the private houses, where, after a little while, it settles and clears itself. The householders and their households use this water, for what comes from the Nile direct is so thick and muddy that it causes many different diseases; but the common people are obliged to be content with it, as there is not a fountain in the city." This is a quotation from Aulus Hirtius on the Alexandrian War, in continuation of Cæsar's Commentaries. With a very little change it would apply to the water-supply of London under Victoria—save that the London householders use filters in addition to cisterns, and the "plebs et multitudo" take care to avoid the "multos variosque morbos" by substituting beer and gin for the "turbida, limosa," water of the Thames water companies.

PARLIAMENTARY.—ASSESSMENT OF RATEABLE PROPERTY—LOCAL TAXATION.

In the House of Commons on Monday, February 22,

A first reading was given to two Bills introduced by Mr. Goschen to provide for uniformity of assessment of rateable property in the metropolis, and for a common basis of value for the purposes of government and local taxation in England. Mr. Goschen explained in great detail the anomalies and inequalities of the present systems of assessment, and, as regards the metropolis, he proposed to obtain his object by establishing assessment committees in every parish not within the operation of the Assessment Act of 1862, by creating an assessment board for the whole metropolis, at which a representative from each union would have a seat; and by appointing an assessor to this Board, who would hear appeals from one union against another. The Metropolitan Board of Works, the Surveyor of Taxes, and everybody who had authority to lay a tax, would have the right of appeal against the assessment of the union committees, and by this rivalry Mr. Goschen anticipated that the assessment of each district would be kept up to its fair level. Mr. Goschen added that the Bill would contain a uniform scale of deductions. The second measure, he said, would resemble in its general provisions the Assessment Bill introduced by Mr. Hunt in 1867.

Mr. Hardy and other members approved the general scope of the Bills, and

The further discussion of them was deferred by general consent until the next stage.

On Tuesday,

Sir Massey Lopes moved for a Royal Commission to inquire into the present amount and incidence of local taxes, with a view to their readjustment.

In the course of the debate which followed, Mr. Gladstone stated that, after the settlement of the Irish Church question, the Government would consider it one of their first duties to deal with that of local taxation. On the understanding that legislation would be proposed by Government, Sir M. Lopes withdrew his motion.

THE LATE MR. WARDROP

(WITH A NOTE ON BRODIE AND HALFORD).

In the memoir of this distinguished Surgeon published last week there was an omission, which I gladly hasten to fill up. It should have been stated that he performed an operation for the cure of aneurism proposed first by Brasdor, but never carried out by him. This was placing a ligature on the distal side of the tumour. It had failed in the hands of Deschamps and Sir A. Cooper, but Mr. Wardrop performed the operation successfully in at least two cases of aneurism of the carotid and one of aneurism of the arteria innominata, in which he tied the subclavian. I have said that there was no ground for believing that either Sir H. Halford or Sir B. Brodie had anything to do with the "dismissal" of Mr. Wardrop from attendance on George IV. Who, then, was the offender? There can be no doubt, I think, that it was Sir W. Knighton. He was a Doctor of Medicine, and the private Medical attendant and secretary of the king. There is some evidence on record that Knighton was jealous of the intimate relations which existed between George IV. and Wardrop. When he could safely insult the latter, I believe he did so. This view of the case is strengthened by the following facts:—The fees due to Mr. Wardrop at the King's death amounted to 1200 guineas. The account was sent in to the executors. Knighton was one of them, and objected to the largeness of the demand. The Duke of Wellington inquired what services Wardrop had actually rendered. Knighton replied, he had been down occasionally to Windsor to see the King's horses. "If he has done the work," said the Duke, "for which he charges, he shall be paid." And he was paid every farthing. Further, Sir W. Knighton, in his last illness, sent to Mr. Wardrop a message expressive of regret at his conduct towards him. It will thus be seen that Mr. Wardrop was completely in error in supposing that Halford or Brodie had behaved unprofessionally towards him. In mentioning the names of these two eminent persons, I am forcibly reminded of the tendency Mr. Wardrop had to call nicknames. Some of them were appropriate, some of them bitter. Halford was the "eel-backed baronet." It would be difficult to find fault with this *sobriquet* as inapplicable. Halford was a thorough courtier. He "booed" as constantly as Sir Pertinax MacSycophant, and had as much "heart" as courtiers are generally supposed to have. Mr. Brodie was the "little eminent"—a name which originated in the fact that a certain newspaper of the day was in the habit of always prefixing the word "eminent" to Mr. Brodie's name, and this to the annoyance of Mr. Brodie.

Though Halford and Brodie were so intimately associated in practice, there were probably no two men so decidedly opposite in character. Halford was vain; Brodie was proud. Halford was cringing to superiors, haughty to inferiors. When Brodie was haughty it was to superiors; he was seldom or never unkind to inferiors. On the contrary, no one has a greater right than I have to bear testimony to the consideration and kindness of Brodie to the younger members of our Profession. My first interview with him was nearly forty years ago, and never shall I forget his generous conduct upon that occasion. I need not enter into particulars, but he behaved in such a manner as to entitle him to my admiration and gratitude. Subsequently I had, in my public capacity and in private practice, to meet him on many occasions, and I never had reason to change the opinion I had first formed of him. Halford was fussy, superficial, and timeserving; Brodie was reserved, profound, and independent. Halford contributed nothing to the art and science of Medicine; he was proud of his "Latinity," and delivered the Harveian Oration in a style which commended itself to the *literati*, but not to the *practitioners* of the age. He was so much of a courtier that a dead king to him was a subject of reverence, and he delivered a solemn oration at the College of Physicians on the discovery of the burial-place of the unhappy King Charles I. Brodie, on the contrary, gave his practical experience to the Profession in a series of works unequalled at the time and never perhaps to be excelled in the future. Halford's name is associated with two occurrences which leave "a blot upon his escutcheon"—one was his controversy with the late Mr. Bush, of Frome; the other, his conduct to one of his chief supporters, Mr. Lockley, whom, being his guest at the time, he left to die at Tring, in Hertfordshire, on the way to Halford's own seat in Leicestershire. Mr. Bush charged, in the pages of the old *Medical Gazette*, the President with "unprofessional conduct," and no unbiassed person can come to any other conclusion than that the President was guilty of a gross breach of Professional etiquette. The controversy was long and bitter, the President hinting that he held Mr. Bush "personally responsible" for his conduct. Mr. Bush accepted the responsibility; but there was no duel. Mr. Lockley's case is a painful one. The press, Medical and lay, animadverted upon it at the time in severe, but just, language. I never heard a whisper against the Professional or private character of Sir B. Brodie. J. F. C.

*** Our valued contributor scarcely does justice to Halford, whose wonderful sagacity as a Practitioner, with the elegance and depth of his scholarship, deserves respectful mention. Neither does he mention what would seem to be the meanest act which Halford is alleged to have perpetrated with regard to the remains of King Charles I. During some alterations in the substructure of the Chapel Royal, Windsor, a solemn examination was instituted by George IV. of the place of sepulture of the unhappy king. The burial had taken place on February 8, 1648-9, in the midst of a snow-storm, which covered the black pall with white, and seemed to his affectionate servants a symbol of his innocence. The brutal Puritans forbade the funeral rites of the church by military violence. The coffin was hastily committed to the tomb, and no man knew precisely, in the next generation, the exact site of the sepulture. It was discovered, however, that the common belief was right, and that it was in the same vault in which King Henry VIII. was buried. The idea of King George IV. standing between the coffins of Henry VIII. and Charles I., furnished Lord Byron with a subject for one of his bitterest lampoons, in which he described him as standing between "headless Charles and heartless Harry," and denounces him as acting as "Charles to his people, Harry to his wife." The coffin of King Charles was opened, his remains, easily recognisable, were discovered in their cerecloth, a hasty sketch of the face was taken, which showed that it was faithfully represented by the portraits of the time, and, at the desire of George IV., the coffin was closed again, and the whole ceremony conducted with the greatest reverence, as was well described by Halford in his "Essays and Orations." But it is said that Halford found means to detach and purloin that portion of one of the cervical vertebræ which had been cut through by the axe; that he kept it as a curiosity; used to pass it round the table after dinner for the examination of the guests; and that this slice of bone is still preserved in Sir Henry's family. If not true, we should be glad to contradict this; but the writer heard it from one of the most eminent London Physicians, lately deceased, and it is generally believed.—ED.

THE TIME OF SHAKSPEARE.—We extract from a very interesting lecture lately delivered at the London and Middlesex Archæological Society, by Mr. B. B. Orridge, the following:—"In the poet's time grocers seem to have been the druggists of the period; they probably merely provided drugs for the manipulation of the apothecary, or, in other words, there were no professional pharmaceutists, pharmacy as a science being comparatively unknown. The grocer-druggists, however, often came in contact with the Physician, and as an instance of such social intercourse, it appears that a daughter of John Sadler became the wife of Dr. Wilby, a Physician, and in Quiney's will is mentioned another member of the Profession. This will was proved in London in 1656, and in it is contained a bequest to his brother Thomas of 12*l.* a year *to be paid quarterly*, but no reference is made to Judith Quiney, the poet's daughter, who was still living."

REVIEWS.

Electro-Physiology and Therapeutics; being a Study of the Electrical and other Physical Phenomena of the Muscular and other Systems during Health and Disease, including the Phenomena of the Electrical Fishes. By Charles E. Morgan, A.B., M.D. 8vo. Pp. xvi. and 714. 1868. New York: Wood and Co.

Die Elektricitat in ihrer Anwendung auf praktische Medicin. Von Dr. Moritz Meyer. Dritte Auflage. 8vo. Pp. xx. and 423. 1868. Berlin: Hirschwald; London: Williams and Norgate.

Elektrotherapie. Von Dr. Moriz Benedikt. 8vo. Pp. xvi. and 485. 1868. Wien: Von Tendler; London: Williams and Norgate.

We shall best discharge our duty, both to the authors of these works and to the readers of this journal, by noticing their three volumes *seriatim*. Of Dr. Morgan we know nothing more than what we learn from Dr. Hammond's brief preface—namely, that he was a young American Physician who had long resided in Germany, where, as we may presume from the dedication, he studied his favourite subject under Du Bois Reymond, and that his death took place soon after the completion of his book. Why the revision of the proof-sheets was intrusted to Dr. Hammond we are not informed; but the simple fact of so eminent a physiologist and experimentalist accepting the task is a sufficient evidence of the value that he attached to Dr. Morgan's treatise, and we fully concur in Dr. Hammond's opinion "that there is nothing in the English language which at all approaches it as regards the scientific treatment of the whole subject of electricity."

By far the greater part of the volume treats of matters that pertain rather to the domain of the physicist than to that of the Physician or even the physiologist, and we shall pass over the first 170 pages with the remark that they contain almost all that is known on the subjects of magnetism, statical and dynamical electricity, Ohm's law and its applications, electro-magnetism, dia-magnetism, thermo-electricity, and the different forms of galvanometers. We now arrive at the twelfth chapter, in which the author describes "the apparatus necessary to enable us to bring the limbs, etc., of animals safely into the circuit without risking the commingling of extraneous phenomena with those under consideration." Under this head are described deriving vessels, deriving, closing, and intermediate cushions (made of white filtering paper), rheophoric tubes, boxes, and clamps (the last being an invention of Du Bois Reymond's for the purpose of conducting "a current to the spinal cord of the living frog without inflicting unnecessary injury or torture on him"), and the muscle telegraph. The edible frog (*rana esculenta*) is the best for experimental purposes when it can be obtained, as it has a singular power of surviving difficult operations; and two methods—the *dry plan* and the *wet method*—are given by which we can keep our frogs alive during winter. The reader will also find all the directions he may require (and probably a good many more) for neatly dividing the spinal column, breaking up the brain, and properly flaying the poor little victim to physiological zeal. The thirteenth chapter treats of electro-physiology, which is defined as "the science which investigates the various electrical phenomena exhibited by all organised structures whilst still in the possession of life, and by certain excretions when unputrefied or fresh." It includes notices of electric phenomena in plants, the electro-culture of vegetables (under which head we are told that "during 1854 over 1000 to 1200 experiments were made in Great Britain, under almost every possible variety of soil and climate, but *the uniform result has been disappointment and failure*"), electrical phenomena in the living human body, the electricity of the blood and of the secretions, and concludes with a short reference to electrical currents, as (1) those of electric fishes, (2) those between secretory organs having acid and alkaline reactions, and (3) those of the nerves and muscles, the concluding words being:—"The beginning of the knowledge of the 'frog-current' coincides with that of galvanism, so that the history of the one is to a great degree that of the other also." These words are, by an editorial oversight, repeated at the beginning of the fourteenth chapter, which contains a very complete history of galvanism and the frog-current. This historical sketch concludes with a notice of the conflicting views of Matteucci and Du Bois Reymond on the subject of the currents. The former says that the leg of the frog has an upward current *peculiar to* this animal, the frog-current, and (2) a new and unnamed current; and adds that "in the frog and in warm-blooded animals the surface of the muscle is positive in relation to its interior, to the nerve which ramifies in the interior of the muscles and the whole nervous system," while, according to the latter, currents in all respects similar to the so-called frog-current may be observed in any limb of any animal, whether warm- or cold-blooded; they are directed upwards in some limbs (as in those of the frog) and downwards in others. These currents are produced by the muscles, and not, as Volta supposed, from the contact of different tissues. The current of a whole limb is the resultant of the partial currents which are engendered by each muscle, and the frog-current and the similar currents observed in other animals are thus simply reduced to a *general muscular current*; moreover, the nervous system has a similar electro-motive power, to which, however, a mere passing reference is here made, as the author's object is to show that the discovery of the law of the muscular current is entirely due to Du Bois Reymond. The next three chapters treat of the *muscular current and its laws*, after which (in chapter xviii.) we come to the subject of *parelectronomy* (or the *parelectronomic state*, as Du Bois Reymond terms it), in which the muscular current is reduced in power, or actually reversed. Prolonged cold is the only agent known to produce this condition. Thus, on bringing a leg of a frog, or the entire animal, deprived of its skin, after prolonged freezing, into the circuit of the galvanometer, we find the ordinary strong upward current replaced by a far more feeble one, or even by a more or less strong downward current. In chapter xx., which is headed "Effect of Dying on the Muscular Current," several topics of interest to the physiologist are discussed, such as—(1) Why transverse sections of dead muscles present a strong acid reaction, while similar sections of fresh, living, unfatigued muscles, taken from animals killed as rapidly and painlessly as possible, are always neutral or feebly alkaline; (2) What is the source of the lactic acid on which the acidity depends? (3) The effect of electricity in rendering still living muscles acid, and the cause of the acidity of the muscles in tetanus(a); and (4) What becomes of the acid produced during tetanus?

Passing over two chapters mainly devoted to tetanus, we may consider chapters xxiii., xxiv., and xxv. as forming a special group. They treat of chronometrical experiments and their results, and the reader will find in them a good summary of Du Bois Reymond's views regarding the rapidity of muscular contraction, and of the transmission of stimulation to the motor nerves, of the time required for reflex action in the spinal cord, and for sensation and volition in the brain, the rapidity of visual impressions, of visual accommodation, of auditory impressions, etc., and an account of the myographion and its management. These subjects, however, do not fall within the scope of this article. The next ten chapters treat of the muscular and nervous currents under various conditions, and contain little that would interest any of our readers, except the very few who make animal electricity their special study. This brings us to chapter xxxvi., which treats of electrical fishes; after which the author discusses muscular contraction, the development of heat in muscle during contraction and the chemistry of the process; Du Bois Reymond's law of stimulation (with Pflüger's modifications); the Ritter-Nobili contraction-law of the motor and sensorial nerves, and electric feeling, hearing, vision, taste, and smell; the Ritter-Valli law for the dying of motor nerves (viz., that the *irritability disappears centrifugally*); the alterations of nervous irritability by various external influences; the question of the existence of a special muscular irritability, and its modification by various poisons; and the molecular and liberation hypotheses of nervous stimulation. We content ourselves with indicating to our readers the stores they will find in these pages; and regret that the vast fund of information contained in this cumbrous volume is not laid before us in a more agreeable style. As an example of its author's heavy complicated mode of expressing himself, we give his explanation of the liberation hypothesis, which he regards as much more satisfactory than the molecular hypothesis. Pflüger, the proposer of the liberation hypothesis, "starts from the principle that the nervous agent is not, like light and sound, a simple advancing undulation in which the sum of the *living forces* is not increased (it may seem lessened, owing to transformation—*e.g.*, mechanical motion may be changed into heat), but, as the avalanche-like swelling of the stimulation in its advance shows, new *tension forces* are set free by the *living forces* of the stimulus, and become in turn living forces with each onward stage, so that, the longer the nerve-piece traversed, the

(a) By tetanus we here simply mean a prolonged duration of the contraction of the muscles, such as may be induced by external violence, strychnine, electricity, &c.

greater the effect; and hence the name of the *liberation hypothesis* given to this theory." (P. 675.)

From this specimen, which is positively lucid as contrasted with many that we might have chosen, our readers will feel that in honestly going through this volume we have had a laborious task, lightened only by a sense of stern duty and by the author's assurance at the beginning of his final chapter that "the physiological studies that have so far occupied us will prove of great service in our examinations of the principles and results of electro-therapy" (p. 682). If it is imperative that every one who practises electro-therapy should previously master even one-quarter of the topics thus referred to, farewell to electricity as a healing agent. This concluding chapter is the only part of the book that treats of electro-therapy, and it contains nothing more than a sketch of the different scientific applications of electricity in its various forms to Medicine and Surgery.

The work, taken as a whole, is a "dungeon of facts," but it is not clearly arranged, the style is obscure, the tone is sometimes unpleasantly personal, (b) the borrowed parts (which form the greater portion) are badly translated—for example, we read of *ameisenic* acid for *formic* acid—and there are few pages in which several misprints may not be detected; this last, however, is a fault for which the editor is responsible.

(To be continued.)

GENERAL CORRESPONDENCE.

HILL STATIONS IN INDIA.

LETTER FROM DEPUTY INSPECTOR-GENERAL GORDON.

[To the Editor of the Medical Times and Gazette.]

SIR,—I shall have something to say on the subject of hill stations in India in an early part of my papers on army sanitation now, through your courtesy, being published in the *Medical Times and Gazette*. The subject is a very important one in its bearing upon the health of our army; but it is an old one, having been discussed at short intervals during the past five-and-forty years, and apparently with a degree of care and respect for opinions of men of Indian experience that contrasts favourably with the tone of more recent correspondence with reference to it. I do not on this occasion intend to do more than, as briefly as is possible, submit my views in regard to some of the opinions on this question expressed in the pages of your contemporaries, leaving the matter in all its bearings to be considered in its proper place.

That the occupation of hill stations by troops is a measure calculated to benefit our army in that country in the mass is a point on which all are agreed. The question on which writers and "authorities" are at issue is as to the precise means by which the maximum of good to our troops may be obtained, due regard being had to the military requirements of the country. Experience has shown that the climate of hill stations is well calculated to preserve health in the European of short residence in India; to restore health in a small number of cases in which it has been lost, but not in persons affected with organic and a large class of other diseases. It has, moreover, been found that there are some classes of soldiers who not only derive no benefit from such climates, but who are actually injured by exposure to them, and that another, although smaller, class retain excellent health in the plains, but lose it on being sent to the hills; hence it has become apparent to all who have fully considered the question that not only is a careful selection of persons to be sent to hill sanatoria necessary, but that the system of sending regiments in a body, and irrespective of the particular circumstances attending each, has been a failure.

It is quite true that the recommendations of the Royal Commission have not yet been carried out with regard to the manner of occupying hill stations, but it is, I fear, no less so that the delay in this respect has arisen in some measure from objections of a few men holding positions of influence, who, with very partial experience of their own on questions of Indian sanitation, have omitted to avail themselves of the well-matured opinions of those who were qualified to speak with authority on such matters.

A very strange view has of late been put forth, that the climate of many parts of the Himalayas is not inferior to that of the Malvern Hills. Compare the meteorology of the two, and you will find them very different: and not only so, but the climate of different parts of the former itself is various. Rain falls in much larger quantities in the former than at Malvern; electric phenomena are more frequent and more violent; the range of temperature in the shade different; the radiated heat greater; the hygrometric conditions very different, as may be observed by those of your readers who have time and inclination to institute comparisons.

Almost every Indian military and civil officer who gave evidence before the Royal Commission expressed opinions that it was necessary, on political grounds, to have the principal part of our forces in the plains, and they expressed themselves as confident that had Delhi and Cawnpore been strongly garrisoned in the early part of 1857, those places would never have been lost as they temporarily were. Yet, in opposition to the views of all these, the specious argument is now adduced: "Which is more likely to impress a disaffected native population with awe—the sight of a splendid and efficient brigade of British soldiers coming down from the hills for a winter camp of exercise, or the sad and mournful spectacle of a cholera-stricken corps moving feebly along in the heat and rain in its endeavour to escape from pestilence and death?" Let us not be carried away by language like this. Official records prove that regiments suddenly brought from the hills to active service in the plains have not, as a rule, been so efficient as those that had not been for a time removed from the latter; and the fact is well known that so long as troops are victorious in a campaign, and engaged in pursuit of an enemy, they are not liable to epidemics of disease. Those before Delhi and in the advance from Cawnpore to Lucknow under Havelock could scarcely be said, when so stricken, to be under either circumstance. I would also instance the 10th Foot, a regiment which landed in India in 1842, served continuously in the plains till 1857, and during that and the following years performed feats in service against the rebels unsurpassed by any other corps.

For some time prior to 1854 the system was in force of sending entire regiments to hill stations, with the exception of one or two that had been always reserved for "convalescents." In that year the late Dr. Dawson urged upon the authorities the unsatisfactory results that were obtained. He recommended that such corps as had suffered from sickness should, in the first instance, be sent to healthy stations in the plains, like Ferozepore and Rawul Pindee. He advocated careful selection of all men about to be sent to the hills; and so long as the system introduced by him was followed, it was productive of the best results.

It is a very easy matter to say send one-half or one-third of the troops in India to the hills: it is quite another to do so in such a manner as shall render the measure beneficial instead of injurious to their well-being and military efficiency. All are agreed that newly arrived lads, whether as recruits or as entire regiments, should proceed thither direct, but that in the case of all others very careful selection is necessary.

I am, &c. C. A. GORDON,
February 1. Deputy Inspector-General of Hospitals.

POISONING BY COLOURED WOOLS.

LETTER FROM MR. A. BRUCE.

[To the Editor of the Medical Times and Gazette.]

SIR,—Your article on "Poisoning by Coloured Socks" informs us that a committee is investigating this subject. I may perhaps be allowed to give the particulars of a somewhat similar case which has recently come under my notice. A guard of an express mail-train, who has been under my care from time to time for chancrous abrasion of the penis, but in whom I have never detected any trace of constitutional syphilis, came to me a few weeks ago with an eruption covering the front and back of his chest, which he was convinced was specific, and which certainly presented an anomalous appearance. He stated that it commenced with rose-coloured papules, which speedily became pustular at the apex, and ultimately ulcerated, the surface of the ulcers being covered with a scab. The irritation had been extreme, especially at night, and the intervening skin was red and angry-looking. The eruption occupied the front of the chest, extending from the root of the neck to the ensiform cartilage and outwards as far as the nipple line on each side. A narrow band of eruption extended over each shoulder and joined a large patch which occupied the interscapular space.

The patient had been placed under treatment for syphilis by a Practitioner whom he had consulted, and was firmly con-

(b) Thus in p. 336 he speaks of Schiff and Valentin as being "notoriously inexact, though pompous investigators;" and he too often depreciates the claim of Matteucci when comparing or contrasting his labours with those of Du Bois Reymond.

vinced that he had "caught it at last." It was, however, evidently non-specific, and I was puzzled to make out its nature, when I noticed that the man was wearing a red woollen chest protector, which exactly corresponded in size to the area of the eruption. On further inquiry I learnt that the redness had appeared three or four days after the new chest protector had been worn, and that for more than a week the dye had come off freely when he was hot. The indication for treatment was obvious: the chest-protector was sacrificed, and one made of soft white flannel substituted, whilst a little lead lotion soon relieved the irritation. I am, &c. ALEX. BRUCE.

8, Old Cavendish-street, Feb. 23.

POOR-LAW MATTERS AT BIRMINGHAM.

LETTER FROM MR. JOHN CLAY.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your impression of Saturday last I noticed a leading article upon "Poor-law Matters at Birmingham," in which I am censured unjustly for my conduct in reference to the matters in question. Pending further inquiries and proceedings in another place, I may be allowed the opportunity to simply deny most emphatically that the changes in question have been effected with "my advice and concurrence," and therefore I cannot give my "reasons for this peculiar line of policy," as I have not followed the line of policy which the article indicates.

I am, &c. JOHN CLAY.

95, Newhall-street, Birmingham, Feb. 23.

CIVILIAN INQUIRIES INTO NAVAL AND MILITARY HOSPITALS.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your remarks upon the commission of inquiry into the administration and expenditure of naval Hospitals, you attribute considerable value and importance to the opinions of independent and unprejudiced Physicians and Surgeons connected with civil Hospitals and Dispensaries upon such matters. In so doing, it appears to me that you have lost sight of the fact that the duties and responsibility of the Medical officers of our large civil Hospitals are limited to the treatment of the sick, all questions of Hospital finance and general administration being decided by corporate bodies of governors or trustees, among whom only in some instances do the Medical officers of particular establishments hold a place. On the other hand, Medical officers in our public services, although not invested with a commensurate degree of administrative authority, have to sustain the burden of a very considerable amount of responsibility in the organisation and administration of Hospitals, and have thus acquired—or have at least had the opportunity of acquiring—a very extensive experience on those very points on which, as concerns naval Hospitals, a commission of civil Practitioners has been directed to report. In these days, when the struggle for life is so intense that personal advancement is in most cases only to be attained by pushing beyond the bowed heads and weary shoulders of less fortunate brethren, it is perhaps hardly to be wondered at that, when the opening presented itself, three civilian members of our common Profession, in high positions, should have been found willing to confer and advise upon a case without admitting to their councils in an officially recognised position those in whose hands it had hitherto been. It strikes me that the first duty of the three members of the present commission, on the proposal to form it being made to them, should have been to have insisted that at least one naval Medical officer of high rank should be associated with them.

As a member of another branch of the public Medical service, I take the liberty of addressing these remarks to you, in the hope that you will admit them to publication, as the expression of what I know to be the general feeling of the Medical officers of both army and navy.

I am, &c. ARMY SURGEON.

EXTIRPATION OF THE EYEBALL FOR MALIGNANT DISEASE.

[To the Editor of the Medical Times and Gazette.]

SIR,—Dr. Mackenzie, in his admirable and exhaustive work on "Diseases of the Eye," says of malignant kinds of disease in general:—"Extirpation of the eye has frequently been performed, but there seems to be no sufficient evidence that it has ever effected a radical cure; on the contrary, it probably hastens rather than retards the termination of the disease." This, Sir, is the experience of all who practise Ophthalmic Surgery, and therefore I am tempted to ask Mr. Carter if he regards the case to which he directs attention in the last number of your journal as an exception to Dr. Mackenzie's rule, and believes that he has, in this particular instance, arrested or cured malignant disease of the eyeball? I should like also to know whether the case was seen by any other Surgeon before removal, and afterwards submitted to a careful and competent microscopical examination, and if so, what was the result? Mr. Carter has advanced an opinion, and no doubt will be able to adduce evidence in support of the same, but until I see his views confirmed, he must pardon me if I say I have my doubts of the malignancy of the disease affecting the eyeball he extirpated six years ago. I am, &c.

February 22. A SURGEON.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, FEBRUARY 3, 1869.

Dr. GRAILY HEWITT, President, in the Chair.

ON taking the chair, the PRESIDENT delivered a brief address, cordially thanking the Society for the great honour they had conferred upon him. He stated that the interests of the Society had from the first occupied much of his attention; that, in his new position as President, his best efforts would be directed to further its advancement. Congratulating the Society on its present prosperity, almost unparalleled in the history of scientific societies, he pointed out what had been done during its ten years of work for obstetric science, enlarging specially on the great influence of the Society on the education of Practitioners. The *Transactions* had become the depository of experience collected in all parts of the globe. The discussions had been most interesting, contributing to mutual improvement, dissipation of prejudice, and discovery of truth. Engaged in a common work, both pleasure and profit were derived from hearing the opinions of others. No pleasure was so great or so unalloyed as that experienced in the deserved applause of our Professional brethren. The good work of the Society would continue—*ars longa, vita brevis est;* the necessities for it would long outlive our time, and humanity would lie under further and deeper obligations to it. Alluding to the relegation of obstetric practice to another, he would not say inferior, order of Practitioners advocated in certain quarters, Dr. Graily Hewitt said:—"The simplicity of the natural process of parturition, and the fact that in the majority of cases all goes so smoothly, have lent support to the fallacy that in this department midwives only are required. We, who know how unexpectedly difficulties often occur requiring the application of great skill, do not trust our wives and daughters to any but practised hands; and I cannot refrain from expressing my belief that the great emergencies of obstetric practice can never be adequately met by anything short of masculine intelligence." Midwives must probably, however, continue to be necessary to supplement the work of the Medical man. The employment of uneducated and ignorant midwives, and the disastrous effects therefrom resulting, were next touched upon, Dr. Graily Hewitt suggesting that, this being a matter notoriously requiring legislative enactment, it might be the duty of the Society at all events to give expression to its opinion on the subject.

The following gentlemen were then elected Fellows:—Dr. Adams (Croydon), Mr. Cross (Petersfield), Dr. Dempsey, Dr. J. Moore, Dr. Selby Norton, Mr. Shaw (Louth), Mr. Murray Steele, Dr. Tomkins (Croydon), and Mr. Yule (Bury).

Mr. CHAMBERS exhibited a Uterine Fibroid possessing points of special interest. The lady from whom the specimen had been removed was a widow, aged 50, had never been pregnant, but had enjoyed good health up to the year 1867, when she began to suffer from menorrhagia. In the autumn of that year she came to England, hoping that change and rest would be sufficient to meet her case; but this was not so, the menorrhagia often continuing for twenty days or more at a time. In May, 1868, Mr. Chambers saw her, and diagnosed the case to be one of intra-uterine fibroid. The sound could easily be passed up six inches, the fundus uteri could be felt midway between the

pubis and umbilicus, and to it was attached a second tumour, about the size of a double fist, and freely movable. The patient declined to submit to any treatment. In November, 1868, while residing at Wimbledon, she was seized with an attack of peritonitis, which was believed by the gentleman who saw her to be associated with the presence of an ovarian tumour. She recovered from this attack, though reduced in strength. In December Mr. Chambers again saw her, and found the abdomen greatly distended, the legs anasarcous, and that the last period had extended to thirty days. Any operation was evidently out of the question, and she died on January 9. At the post-mortem a large fibrous tumour was found occupying the abdominal cavity, extensively adherent to the peritoneum. It had a vertical measurement of fifteen inches and a transverse of twenty inches, and was attached to the fundus uteri by a short pedicle in which were several large blood-vessels, some large enough to admit a quill. On accidentally breaking through the peritoneal covering of the tumour, an enormous quantity of pus escaped—as much as ten or twelve pints. This was quite unexpected, as during life fluctuation could not be detected. On section it was found to be a white fibroid in a state of degeneration, divided into innumerable distinct cavities, thus explaining the impossibility of detecting fluid during life. A microscopical examination of its structure by Mr. Francis Mason leads to the belief that it is malignant. The two points of special interest in the case are the rapid growth of the extra-uterine fibroid, producing much difficulty in its diagnosis, and its malignant character, it being generally believed that such degeneration never occurs.

Dr. Arthur Edis exhibited a large Fibroid Uterus removed post mortem from a patient aged 50. On the fundus was a small fibroid tumour, about the size of a small orange, in a state of calcareous degeneration; in the posterior wall another in a state of sloughing and disintegration, and the internal surface of the uterine cavity was in a state of slough. The case was of much clinical interest, the symptoms having extended over the last twelve years, the patient ultimately succumbing to the incessant vomiting and exhaustion consequent upon the breaking up of the mass.

Mr. Sass exhibited an Anencephalous Fœtus, the vessels of whose umbilical cord broke up into five divisions before reaching the placenta.

Mr. Hodgson exhibited the Twin Fœtuses and Secundines from a case of hydrops amnii which had occurred in University College Hospital under the care of Dr. Grailly Hewitt. The distension of the uterus had been very great, and spontaneous rupture of the amniotic sac took place, shortly prior to the time at which it was intended to relieve the uterus by a small puncture of the membranes. Labour pains followed in a few hours, and a dead fœtus was pretty quickly expelled, followed after a short interval by a living one, which, however, died almost immediately. The placenta was single and very large. The bag of the live fœtus was very much the larger of the two.

Dr. Carlyle, of Carlisle, exhibited two casts of the Head of an Anencephalous Fœtus, and gave a description of the labour.

A paper was then read by Dr. Matthews Duncan on the occasion of his presenting a specimen of his Cephalotribe to the Society. Dr. Duncan states that recent British cephalotribes appeared to him as being inappropriately constructed and ill adapted to effect the crushing which was the purpose of their invention. They might effect some moderate amount of crushing and breaking; but their blades, when the instrument was closed, were so far apart, had so wide an interval between them, that the crushing must be imperfect, even supposing the instruments to act with mathematical precision, which they were far from doing. Under these circumstances, he had investigated, experimentally and otherwise, the value of the British and French cephalotribes, and the result had been the production of the instrument he now laid before the Society. In the main, it was a reproduction of the French instrument, the chief changes being in the lock, which was, he thought, simplified, being a mere pivot with a broad top; in the screw, whose thread was made stronger; in the pelvic curve, which was slightly diminished; and in the handles, which were at once broadened and thinned. Besides these changes, there were some others of less importance. The British cephalotribes which had been constructed had apparently not been intended to crush the fœtal head completely, the blades of the closed instrument being not only far apart, but the blades themselves being so long and flexible that in practice this fault was greatly increased—indeed, both in scientific construction and practical efficiency, he could not but think the British to be very inferior to the French implement. But, although this was the case, the British cephalotribe, or some modification of it, might be found useful in cases of slighter deformity than those which demand all the advantages of a thorough cephalotripsy. It might be useful, and had been found of use, in many cases where its application was not demanded, but where it was found to be a convenient combination of the cephalotribe and crotchet. In conclusion, Dr. Duncan expressed the opinion that accoucheurs who wished to discover what assistance could be gained in difficult labour from thorough cephalotripsy must either use his instrument or the French one, or some other equally, if not more, efficient in its working.

A paper by Dr. Braxton Hicks, on the same subject, was then read. After referring to a recent paper by Dr. Duncan on the cephalotribe, in which a comparison was instituted between the long- and short-handled instruments, showing the greater power of the long-handled one, he proceeded to show that the short-handled one could be made as strong as the other, and that the only point then would be to increase the power of the screw. He then alluded to the one he had modified from Sir James Simpson's, which he had proved to be equal to all the requirements of the case (and this Dr. Hicks subsequently illustrated practically on a fœtal head). Although he agreed with Dr. Duncan as to the great strength of the long-handled, yet he considered that there were other considerations than that of crushing the base, which rendered extreme strength of less importance than at first would seem necessary. First, there was the difficulty, especially in severe cases of distortion, of applying the blades exactly in the transverse diameter, and particularly with the ends of the blades on the head to an equal depth, so that the base frequently tilted, and the vault was crushed down sideways on the base; or, if the blade went over one orbit, the vault was crushed down, so that the frontal was driven down on the base. He also showed how, in face-presentations, the vertical diameter was flattened down to 1 in. or 1¼ in. with ease. He then went into the question as to whether the cephalotribe could be used as a tractor. He believed it could, and with the advantage of not requiring the use of any other instrument. He considered that the addition of the substance of the blades quite compensated, if not more so, by the after expansion of the crushed head when pressure was removed, as in the French operation, this expansion varying from ½ in. to 1 in. In his instrument the external diameters were the same as in the French kind, and the incurvation of the ends was reduced to a mimimum consistent with employing traction, so that the blades, when in use, reduced the size to the limits of the possibility of operating by any cephalotribe. He then objected to the plan of allowing long intervals between the crushings as employed by Pajot, as tending to add much to the dangers of the mother. He considered we owed much to Sir J. Simpson for giving us a light and easily used instrument, so that (setting aside the extreme cases) we could now deliver the head without the crotchet and craniotomy forceps in two-thirds the time, and with much less risk to the patient. He considered, however, that Simpson's instrument was not quite strong enough for all work, but that the French one was needlessly heavy, rendering it very unwieldy and ill adapted for ordinary use. The weight of the one he exhibited was 2 lbs. 10 oz., that of the French one 4 lbs.

Dr. Barnes bore strong testimony to the value of Dr. Hicks's instrument, and gave details of an extreme case of distortion in which he had recently used it with entire success.

The President said that that there was every reason now to believe that, in future, the operation of cephalotripsy would cease to be so exclusively continental as it had been.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Saturday, January 16, 1869.

Dr. Druitt, President, in the Chair.

After a discussion on scarlatina, in which the President spoke of the influence of tainted water in propagating the disease and on the means of prevention, proposed that an effort should be made to collect statistical details of the late epidemic of scarlatina.

Dr. Buchanan thought that general sanitary measures had no influence in checking scarlatina, and doubted whether fæcal contamination had any share in the spread of it.

Dr. Gavin Milroy read a paper on the Medical Topography and Chronology of London. This valuable paper, which, we believe, is to be published *in extenso*, contains an account of the

existing materials for a history of prevalent disease in London at successive epochs since the time of Sydenham. It epitomises the labours of Fothergill, Bateman, Willan, Heberden, and Sir Gilbert Blane. It describes the paucity of information we have as to the rise and decline of epidemics, as ague, dysentery, hooping-cough, and scarlet fever; and claims from the persons officially concerned in sanitary matters, and from all who hold public appointments in Hospitals or Poor-law unions, an exact and continuous record of the diseases prevailing in given places at successive times. After a most interesting paper, Dr. Milroy concludes—"While all admit the prime importance of the ordinary sanitary measures of draining, sewering, and paving streets, and of effective scavenging for the removal of all surface nuisances, of cleanliness within and without dwellings, and of better accommodation for the poor, together with a due supply of pure water, for the mitigation, arrest, or even the prevention of the different forms of alvine flux, including cholera, and of continued fever, it must be confessed that these desirable measures exert a very much less controlling or modifying power over the prevalence and fatality of the exanthemata, or of hooping-cough, croup, and diphtheria—diseases which occasion from year to year such a large proportion of mortality in infancy and youth. There has been no sensible diminution, as far as I am aware, in the proportionate number of deaths from these diseases during the last decade. Nay, is there not reason to fear that some of them have been, and are, on the increase of late years? Nor does there as yet seem to be any prospect of the advent of a happier state of things. Then, we have to ask ourselves, Is the average number of deaths to cases stationary, or is this greater or is it less than formerly?—a point of no small moment from a therapeutic as well as a merely statistical point of view. However this question may be answered—and I know of no data to enable one to form even a reasonable conjecture on the subject—it is pretty obvious, I presume, that we must not confine our attention to any one groove of hygienic inquiry, or permit ourselves to imagine that we have only to pursue the sanitary track which we have been hitherto pursuing, if we hope to extend the domain of prophylactic and preventive medicine in regard to many diseases. Nay, everything seems to indicate that we must enlarge our field of research, and seek to methodise our observations upon some better plan than we have yet adopted, in conducting an inquiry confessedly very difficult and obscure. Whatever may be the progress which Medical science has achieved in other directions during the last fifty years, it cannot claim, I fear, to have made any advance in tracing the laws which determine the development, the extension, or the persistence of most of those zymotic diseases which swell so largely our bills of mortality. In short, do we know anything more about their natural history than did our predecessors? or more than they did as to the means—I do not say how to prevent or arrest, but—how to modify or to mitigate in any degree their character and type, and thus to lessen their destructive ravages from year to year? If we cannot answer these questions affirmatively, does it not follow either that the subject-matter is inscrutable and beyond our ken, or that our mode of investigating it hitherto has been imperfect and faulty? Now, what is the plan which has been followed of recent years, and is now being sedulously pursued, in respect of other and somewhat kindred branches of inquiry in the science of nature, and the results of which have already been such as to encourage the persevering and diligent continuance of its adoption? That of simultaneous and systematic registration from year to year of ascertained phenomena in various localities over given areas of observation, more or less distant from each other, and then of tabulating and co-ordinating the results, so that they are in future made readily available for reference and comparison. It has been in this way that so much has been of late years done, and is now being done, in investigating the phenomena of atmospheric storms, of oceanic currents, of terrestrial magnetism, and of solar physics, with no small advantage to science, apart from all other considerations. Let epidemiological students try the same method in their researches, and the like encouraging results will after a time doubtless stimulate them to persevere. No country, be it remembered, is provided with such a well-organised machinery for extensive observation and record of diseases as our own is, through its system of poor relief by the State, and certainly no city in the world has anything like the facilities which this metropolis enjoys for this purpose, possessing as it does not only a staff of able parochial Medical officers, but also the advantage of having in its midst an Association like that which I have now the honour of addressing."

Dr. Aldis remarked on the importance of knowing the death rates of London districts, and spoke of the difficulty of obtaining returns from public institutions.

Mr. Burge spoke of the high rate of infant mortality; and Dr. Camps declared London unfit for children.

Mr. Lord spoke of the prevalence of typhoid fever near Haverstock-hill, spite of which the whole mortality of Hampstead was only 14 per 1000.

Drs. Buchanan, Rygate, Woodford, and Mr. Orton thought the reports of Medical Officers of Health should be systematised on a uniform plan.

NEW BOOKS, WITH SHORT CRITIQUES.

A Manual of the Diseases of the Skin. By Balmanno Squire, M.B., F.L.S., Surgeon to the British Hospital for Diseases of the Skin, etc. Smaller edition. John Churchill and Sons. Pp. 204.

⁂ Mr. Squire says that the state of the pathology of skin diseases is so very unsatisfactory that nothing certain can just now be laid down with regard to it. He also holds that the day of specifics has gone by, and that no specific has sunk more in the estimation of modern dermatologists than arsenic. This, he says, does affect some eruptions slowly, and sometimes with much discomfort to the patient, but can no longer occupy the high place it did in our armamentarium.

Nouveaux Eléments d'Anatomie Chirurgicale. Par Benjamin Anger, Chirurgeon des Hôpitaux, etc.

New Elements of Surgical Anatomy. By B. Anger, Surgeon to the Hospitals, late Prosector for the Amphitheatres of the Parisian Hospitals, etc. Paris: J. B. Baillière and Fils. Pp. 1056.

⁂ The French have always been famous for their knowledge of Surgical anatomy, and Paris has long been esteemed the best school for making oneself acquainted with this subject. Velpeau's work in its day was unrivalled, but its day has gone by, and we may say that in all probability this volume will take its place. It is unfair to call such a book a work on Surgical anatomy; it takes up the whole subject both in its Medical and Surgical relations. Above all, it is illustrated both bountifully and beautifully, there being nearly 1100 engravings interspersed throughout the pages of the work.

Collection de Calculs Urinaires et d'Instruments de Chirurgie du Dr. J. Civiale.

The Collection of Urinary Calculi and of Surgical Instruments belonging to the late Dr. J. Civiale. Paris: Rothschild. Pp. 80.

⁂ Civiale, who had inaugurated the wards for those suffering with urinary calculi in the Hospital Necker, left at his death his collection of calculi and the instruments of his art to the Hospital. These have been placed in a little closet of the Hospital, and arranged with care. The calculi amount to nearly 900, the instruments to 136, and have been located, along with Civiale's works and a number of copies of this catalogue, in the closet referred to. These are intended to aid the students of the Hospital, and any strangers who may desire to study this subject. It was Civiale's wish that this catalogue should be appended to a forthcoming posthumous work—his "Practitioners' Guide in the Operations of Lithotomy and Lithotrity;" but the latter is already too large.

Disinfectants and Disinfection. By Robert Angus Smith, Ph.D., F.R.S., F.C.S. Edinburgh: Edmonston and Douglas. Pp. 138.

⁂ This, which is really a collection of what Dr. Smith has already written on the subject of disinfection, especially in the Cattle Plague Reports, cannot fail to be useful. It may be said to exhaust the subject up to the present moment, and Dr. Smith's name is a guarantee of the soundness of the views herein expressed.

Lectures on Orthopædic Surgery, delivered at the Brooklyn Medical and Surgical Institute. By Louis Bauer, M.D., M.R.C.S.E., Professor of Anatomy and Clinical Surgery. Second edition. New York: Wood and Co. Pp. 336.

⁂ We had not very long ago the pleasure of noticing favourably Dr. Bauer's work in the first edition. This, the second, is greatly superior to the first in every respect—paper, printing, binding, illustrations, and letterpress. Dr. Bauer's views are always worthy of attention, although they have given rise to some discussion, especially recently with Professor Sayre, of New York.

The Polar World. By Dr. G. Hartwig. London: Longmans. Pp. 548.

⁂ A popular and interesting yet scientifically accurate description of the Arctic and Antarctic regions, their products, inhabitants, meteorology, etc.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, February 18, 1869:—

Atkinson, Robert, Coniston, Ambleside.
Gay, John Henry, Wisbeach, Cambridgeshire.
Hunter, Frederick, Clapham.
Nadin, Alfred Cutler, Sheffield.
Tay, Waren, Worcester.
Taylor, John, Sheffield.

As an Assistant in Compounding and Dispensing Medicines:

Denney, Edwin James, Roughton, Norwich.

The following gentlemen also, on the same day, passed their First Examination:—

Kynaston, Albert Edward, Guy's Hospital.
Pippette, Walter, Westminster Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

HARLEY, JOHN, M.D., F.R.C.P. Lond.—Physician to the Infirmary for Epilepsy and Paralysis, Charles-street, Portman-square, W.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—The following appointment has been made: Dr. George Mason, Surgeon, to the *Prince Consort*.

The following is contained in a General Regimental Order signed by Colonel Gloucester Gambier, C.B., Deputy Adjutant-General Royal Artillery, issued by command of the Field Marshal Commanding-in-Chief:—To be Surgeons: Staff Surgeon J. Harman, Depot Brigade, *vice* Surgeon-Major A. Smith, M.D., appointed to the Staff; and Surgeon D. Woods, from the 107th Regiment, *vice* Gibaut, appointed to the Staff. To be Assistant-Surgeons: Staff Assistant-Surgeon A. Jennings, M.D., 2nd Brigade, *vice* Cashman, M.D., promoted on the Staff; Staff Assistant-Surgeon S. G. White, M.D., 8th Brigade, *vice* J. Kelly, appointed to the Staff; and Staff Assistant-Surgeon W. E. Riordan, 24th Brigade, *vice* Howitson, M.D., appointed to the Staff.

BIRTHS.

BUCHANAN.—On February 19, the wife of George Buchanan, M.D., of 53, Harley-street, of a son.

COLEMAN.—On February 23, at Hully Lodge, Streatham, the wife of Alfred Coleman, F.R.C.S., of a daughter.

FAUGHT.—On January 8, at Peshawur, the wife of J. G. Faught, Esq., Staff Surgeon, of a daughter, stillborn.

HOOPER.—On February 23, at Kent House, Teuby, the wife of J. Harward Hooper, F.R.C.S., of a son.

MACAULAY.—On February 18, at Kibworth, Beauchamp, Leicestershire, the wife of Thomas Macaulay, Esq., Surgeon, of a daughter.

MARTIN.—On February 19, at 3, Strand-terrace, Walmer, the wife of Henry A. Martin, M.D., Staff Assistant-Surgeon, of a son.

MURIEL.—On February 14, at Alrewas, near Lichfield, the wife of George John Muriel, M.R.C.S.E., of a daughter.

MARRIAGES.

BELCHER—WILLEY.—On February 13, at St. John's, Walham-green, Joseph Silverthorne Belcher, M.D., to Ada, only daughter of Mrs. Jane Willey.

HUGHES—WOTTON.—On February 18, at All Souls' Church, Langham-place, Walter, second son of William Phillips Hughes, Esq., of Harley-street, Cavendish-square, to Maria, third daughter of Henry Rendell Wotton, F.R.C.S.E., of Cavendish-square.

MARSHALL—CORNER—On February 18, at Christ Church, Croydon, Francis Marshall, M.R.C.S., of Bedworth, Warwickshire, to Eleanor, youngest daughter of George Ive Corner, Esq., of Mitcham-road, Croydon, Surrey. No cards.

MOORE—MORRIS.—On February 4, at West Bromwich, R. Bond Moore, L.R.C.P.L., of Wolverhampton, to Emily, youngest daughter of the late James Morris, Esq., of Dudley. No cards.

WARD—MCNEALE.—On January 6, at St. James's, Toronto, John Edmund Ward, M.R.C.S.E., fourth son of the late Joseph Ward, Esq., of East-hill House, Epsom, to Elizabeth McNeale, daughter of C. McNeale, Esq., of New York.

DEATHS.

FOLEY, EMMA HORATIO, widow of Henry Foley, M.D., at Wangford, Suffolk, on February 21.

HEY, JOHN, M.R.C.S.E., of Liverpool, at Hastings, on February 7, aged 47.

KINNEAR, CHARLES, M.D., Deputy Inspector-General of Hospitals and Fleets, at Great Yarmouth, on February 21.

MANT, NEWTON, L.R.C.P. Edin., fourth son of the late Henry Mant, Esq., of Bath, at Stapenhill, on February 21, aged 54

NOBLE, THOMAS, M.D., eldest son of the late Thomas Francis Noble, of Charing-cross and Enfield, Middlesex, at Charing-cross, on February 19.

O'NEILL, Dr., late of Ballycastle, Co. Antrim, at Caramena, on January 25, aged 66.

STUART, CATHERINE MARY, only child of John Stuart, Assistant-Surgeon, Royal Engineers, Malta, at the residence of her grandfather, Philip Hedger, Woolston, Southampton, on Feb. 20, aged one year and four months.

WATKINS, LEWIS POWELL, engineer H.M. s.s. *Earl Canning*, I.N., second son of John Watkins, F.R.C.S., 2, Falcon-square, at Cape Jask, Mekran Coast, on January 4, aged 25.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BRADFORD INFIRMARY AND DISPENSARY.—Two Physicians; must be graduates in Medicine of one of the Universities of the United Kingdom, or Fellows or Members of one of the Colleges of Physicians, and be registered under the Medical Act. Diplomas and Testimonials to Mr Chas. Woodcock, Secretary, Sun-bridge, Bradford, on or before April 15. Election on May 5.

BRADFORD INFIRMARY AND DISPENSARY.—Two Resident Medical Officers; one to attend to the patients in the Hospital, and the other to visit those belonging to the Dispensary department. Candidates must have both Medical and Surgical qualifications. Applications and testimonials to Mr. Chas. Woodcock, Sun-bridge, Bradford, on or before March 16. Election on April 6. Candidates must state for which of the situations they apply.

CASTOR UNION.—Medical Officer for the Wreddingham District; must have one of the four qualifications prescribed by Article 168 of the General Consolidated Order of the Poor-law Commissioners. Candidates are required to attend before the Board of Guardians at the Workhouse, at 12 o'clock, on Saturday, February 27. Residence within the district is required.

CLEOBURY MORTIMER UNION.—Medical Officer; must be registered under the Medical Act, 1858, and possess the qualifications prescribed by the orders of the Poor-law Board. Applications, stating age and qualifications, and enclosing testimonials, to Adam P. Trow, Esq., Cleobury Mortimer, on or before March 6. Election on March 15.

CROYDON UNION.—Medical Officer for the Fifth District, which comprises the south part of Croydon; candidates must be duly qualified. Applications and testimonials to A. G. Blake, Esq., 23, George-street, Croydon, on or before March 1. Election on March 2, at 1 o'clock, at the Workhouse, Queen's-road, Croydon. Candidates must attend the Board at the time appointed for the election, and, if elected, be prepared to enter on the duties forthwith.

HOLBEACH UNION.—Medical Officer. Testimonials and applications to E. G. Ayliffe, Esq., Holbeach, on or before March 12, from whom further information may be obtained. Election on March 15.

HOSPITAL FOR SICK CHILDREN.—Assistant-Physician; must be F. or M.R.C.P.L. Applications and testimonials to S. Whitford, Esq., Secretary, 49, Great Ormond-street, on or before March 10.

HOSPITAL FOR SICK CHILDREN.—Surgeon-Dentist; must be F. or M.R.C.S.E. Applications and testimonials to S. Whitford, Esq., Secretary, 49, Great Ormond-street, on or before March 10.

LURGAN UNION.—Medical officer for the Moyntagh sub-district of the Lurgan Poor-law Union; candidates must be legally qualified. Applications and testimonials to J. Hancock, Esq., the Manor House, Lurgan, Co. Armagh, on or before April 9, at 10 o'clock a.m. The election will take place at 3 p.m. on the same day. Residence within the district of the Union will be required.

SHEFFIELD GENERAL INFIRMARY.—Assistant to the House-Surgeon; must be M.R.C.S., or a Licentiate of the Faculty of Physicians and Surgeons of Glasgow, and also L.S.A., or L.R.C.P.L., and be on the Medical Register. Applications and testimonials to the Medical Staff of the Infirmary, care of the Secretary, on or before March 2. Election on March 5.

ST. LUKE'S HOSPITAL FOR LUNATICS.—Resident Medical Superintendent; must be F. or M.R.C.S.E. and L.S.A., unmarried, and under 25 years of age. Applications and testimonials to the Treasurer on or before March 17. Election on March 19. Any further information may be obtained from Mr. Owthwaite, Secretary, at the Hospital, between 11 a.m. and 3 p.m.

SUNDERLAND INFIRMARY.—House-Surgeon; must possess both Medical and Surgical qualifications, and be registered. Testimonials and diplomas to the Secretary, on or before May 1. Election on May 10.

SWAFFHAM UNION.—Medical Officer for the district comprising the parishes of East and West Bradenham. Candidates must be duly qualified according to the general orders of the Poor-law Board. Diplomas and testimonials to Robt. Sewell, Esq., Swaffham, on or before March 6. The duties will commence on March 26.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Bangor and Beaumaris Union.—Mr. L. R. Barker has resigned the Second Anglesey District; area 12,075; population 4217; salary £75 per annum.

Newhaven Union.—The First District is vacant; area 5349; population 1137; salary £63 per annum. And the Second District; area 5170; population 2297; salary £ per annum. Also the Fourth District; area 6390; population 844; salary £25 per annum.

Swaffham Union.—Mr. J. R. Clouting has resigned the East Bradenham District; area 4091; population 786; remuneration per case.

Wigan Union.—Mr. Heaton has resigned the Scholes District; salary £100 per annum.

APPOINTMENTS.

Luton Union.—Gillman C. P. Pauli, M.R.C.S.E., L.R.C.P. Edin., to the Barton District.

Wangford Union.—Edward B. Crowfoot, M.B. Lond., M.R.C.S.E., L.S.A., to the Beccles District and the Workhouse.

PROFESSOR HUXLEY, F.R.S.—This gentleman commenced his course of lectures on Comparative Anatomy in the theatre of the Royal College of Surgeons on Monday last, and will continue the same on each Monday, Wednesday, and Friday until the completion of the course.

MR. JOHN CARTER, M.R.C.S. Eng., has been appointed a life governor and an extra member of the Committee of Management, for life, of the Birmingham General Dispensary, "in recognition of his great services to the institution as Senior Resident Surgeon for twenty-nine years."

DEATH FROM CHLOROFORM.—A chemist of Sheffield, named Godley, about to undergo an operation, had chloroform administered to him at his own request, when the heart became paralysed, and death ensued. The fatal result was attributed by one of the Surgeons at the inquest in great measure to the effect of fear.

A MAN named Williams, of weak intellect, living in Camden Town, destroyed himself on Saturday last by pouring paraffin over his body and setting himself on fire.

SMALL-POX IN AUSTRALIA.—The Melbourne correspondent of the *Times* states that small-pox has been for the first time introduced into that colony. Active measures have been taken for stamping it out.

We learn that Professor Hallier has recently made arrangements to bring out a journal on parasitology, which is to appear every second month; each part is to consist of from eighteen to twenty sheets, and to contain six plates. The subject-matter will embrace the parasites of man, of the lower animals, and plants, together with considerations connected with the etiology of diseases having a parasitic origin. The editor invites the assistance of observers in all parts of the world, and has arranged that the original papers shall be published in the author's own language, whether English, French, or Italian. The first number will appear shortly, and be published at Jena.

The first meeting of the London Students' Debating Society took place on Wednesday evening last, at 7.30 p.m., when Dr. Sibson delivered an eloquent address. Notwithstanding the inclemency of the weather, the attendance was large, some fifty or eighty Medical students being present. Provisional rules were adopted, and a second meeting for Wednesday next, at 7.30 p.m. in the Botanical Theatre, University College, was appointed to be held in order that permanent rules for the Society may be formed. Dr. Sibson was elected President for the ensuing session, and Professor Seeley (University College) and Dr. John Murray (Middlesex Hospital) Vice-Presidents. Two Secretaries, a Treasurer, and representatives from most of the Colleges to act as Members of Committee, were elected from the students. The first debate will take place on the third Wednesday of March.

The late Joseph Hodgson, Esq.—The General Hospital, Birmingham.—At the weekly Board, held on Friday, the following resolution was unanimously passed:—"That this Board has heard with deep sorrow and regret of the death of Joseph Hodgson, Esq., F.R.S., whose varied acquirements and conspicuous talents contributed so greatly to the advancement of the science of Surgery, and whose benevolence and kindness of heart endeared him to all who became acquainted with him. The many and important services that he rendered to this Hospital during a period of forty-eight years, whilst filling the offices of Surgeon and Consulting Surgeon, will cause his name to be ever remembered with feelings of gratitude and respect. The Board avails itself of this occasion to express to his surviving relatives the assurance of its deep sympathy with them under their great affliction."

The Proposed Infirmary for Oldham.—After a lengthened and somewhat exciting discussion the Committee of the proposed infirmary have adopted by a considerable majority the West Union-street site. This conclusion has been deliberately come to in face of the opposition of the Medical gentlemen of the town, who were most ably represented by Mr. A. T. Thomson. We think the Committee have acted most unwisely in rejecting the advice of men well calculated to give it. In selecting the West Union-street site they have retrograded in the movement now being made with respect to the proper situation of Hospitals, and have inflicted a grievous and lasting injury on the inhabitants of their town. The *Oldham Standard* of February 13 contains an able leading article on the subject of Medical charities in general, and urges the necessity of a general inquiry into the subject.

Dr. David Johnston reports rather fewer cases treated in the Royal Infirmary, Montrose, during the past year than on some previous occasions, the number amounting to 240. This he ascribes chiefly to the absence of any epidemic which would affect the admissions into that institution. The following facts are of interest:—During the last eighteen years the admissions from fever have ranged from 8 cases per annum as high as 125 in the years 1854-55. This year the number is 39, and the deaths 2; one of these occurred two hours after admission. The other principal diseases which have obtained numerical prominence are ulcers and abscesses, numbering 25; diseases of the digestive organs, 21; of the respiratory organs, 28; and of the skin, 25. An epidemic of measles was unusually prevalent in town during the spring months, but, occurring entirely among the juvenile portion of the population, it has not afforded a single patient for the house. The number of wounds and injuries on the register bears about the same proportion as usual to the other cases, while the operations performed have been rather fewer than during former years.

Chronic Cystitis.—M. Ségalas recommends an injection composed of 5 parts of phenic acid to 100 of distilled water. A spoonful of this added to a glass of water is to be used daily. If the injection is well borne, its strength may be gradually increased. From three to six capsules of essence of turpentine should be also given daily.—*Union Méd.*, No. 20.

Royal College of Surgeons.—In pursuance of the resolution of the Council, the proceedings of the quarterly meeting of that body on the 14th ult. have just been exhibited in the hall of the College, and contain but little information beyond what has already been published. It appears that when the report of the committee on the income and expenditure of the College was read, it was moved by Mr. South, and seconded by Mr. Hancock, that the report be referred to the committee for further consideration, whereupon Mr. Charles Hawkins and Mr. Spencer Smith demanded that the names of those voting for and against the motion be entered on the minutes, when it appeared that there were for the motion 5—viz., Mr. Swan, Mr. South, Mr. Thomas Paget, Mr. Hancock, and Mr. Turner. Against the motion, 9—viz., Sir Wm. Fergusson, Bart., Mr. Adams, Mr. Busk, Mr. Curling, Mr. Clark, Mr. James Paget, Mr. Charles Hawkins, Mr. Hewett, and Mr. Birkett. The motion for such reference was therefore lost. Mr. Busk moved, and Mr. Solly seconded, the motion that the payments on account of the trust funds should in no case exceed the income derived therefrom, and, the votes of the Council having been taken on such motion, a majority was against the same. The Council adjourned until the 11th inst. Of the proceedings of this meeting an abstract has already appeared in the *Medical Times and Gazette*.

Indian Medical Service.—List of the candidates for Her Majesty's Indian Medical Service who were successful at the competitive examination at Chelsea in August, 1868, and who have undergone a course of instruction at the Army Medical School, together with the total number of marks obtained at the examinations at Chelsea and at Netley:—

	Name.	Studied at	Total No. of marks (max. 6500).
1.	Downie, K. M.	Edinburgh	5745*
2.	Mackenzie, F. M.	London	5183
3.	Lupton, A. W.	Edinburgh	4930
4.	Macgregor, J.	Do.	4768
5.	Hutcheson, G.	Do.	4735
6.	Johnson, C. R.	London & Edinburgh	4676
7.	Wright, W. E.	London	4535
8.	Robb, J.	Aberdeen	4388
9.	Kiernander, W. C.	London	4278
10.	Blenkinsop, F. H.	Do.	4018

* Obtained the Herbert Prize.

List of the candidates for Her Majesty's Indian Medical Service who were successful at the competitive examination at Chelsea on February 8. Thirty-eight candidates competed for twenty appointments. Thirty-six were reported qualified.

	Name.	Total No. of marks (max. 2400).		Name.	Total No. of marks (max. 2400).
1.	C. W. Calthrop	2730	11.	H. P. Roberts	1870
2.	A. Wood	2455	12.	C. W. Mackury	1840
3.	R. C. Sanders	2355	13.	C. T. Peters	1830
4.	E. Sanders	2290	14.	J. Backhouse	1820
5.	R. T. Wright	2260	15.	W. Price	1809
6.	G. MeB. Davis	2220	16.	S. M. Tyrrell	1795
7.	K. P. Gupta	2175	17.	E. Calston	1780
8.	J. A. Howell	2160	18.	M. E. M. Murphy	1765
9.	F. P. Edis	2135	19.	H. J. Linton	1755
10.	B. Franklin	1985	20.	W. H. Boalth	1705

Direct Representation of the Profession in the Medical Council.—The following petition has been unanimously adopted at a special meeting of the Lancashire and Cheshire Branch of the British Medical Association on the proposition of Dr. Edward Waters, of Chester, seconded by Mr. Southam, of Manchester, and supported by Dr. Henry Simpson. Dr. Wilkinson proposed a vote of thanks to Dr. Waters for bringing the question before the Branch.

"*To the Honourable the Commons of the United Kingdom of Great Britain and Ireland in Parliament assembled.*

"The humble petition of the President, Council, and members of the Lancashire and Cheshire Branch of the British Medical Association showeth: That your petitioners are aware it is intended to bring before your Honourable House a Medical Acts Amendment Bill to increase the powers of the General Medical Council of the United Kingdom. That, as at present constituted, the Medical Council comprises representatives of all the Universities, Medical corporations, and licensing bodies of the United Kingdom, and also Government nominees, appointed by her Majesty with the advice of her Privy Council, in the proportion of one-third of their number. That the expenses of the General Medical Council are entirely defrayed by the registration fees exacted from the Medical Practitioners of the United Kingdom.

That the Medical Practitioners, as a body, have notwithstanding no direct voice in the Medical Council which they thus support. That owing to the Medical Practitioners having no direct representatives in the Council, the Profession evinces but little interest in its proceedings, a disadvantage which has been admitted in the debates of the Council. That the Council, as at present constituted, has, amongst other matters, failed to deal satisfactorily with the question of Medical education, and that the public still suffers from the inadequate education of many of those to whom licences to practise are accorded, as proved by the not unfrequent rejection of licensed Practitioners by the examining boards for admission into the Medical service of the army and navy. That the introduction of representatives elected by the Profession would supply to the Council a knowledge of the needs of the public and of the Profession in respect to sanitary measures, Medical Jurisprudence, and Poor-law Medical relief, with regard to which there is at present a decided want. That the difficulty in the election of direct representatives by the Medical Profession which existed at the time of the passing of the Medical Act has been removed by the system of registration enforced by that Act. That the election of direct representatives by the registered members of the Profession can now be readily managed for each of the three divisions of the kingdom by means of voting papers. That your petitioners pray that in any Medical Acts Amendment Bill a provision may be introduced for the direct representation of the Profession in the General Medical Council, in the proportion of one-fourth of its members, four representatives being elected for England, two for Scotland, and two for Ireland. And your petitioners will ever pray, etc."

Diarrhœa was unusually fatal; 4060 deaths in the summer, and 320 deaths by simple cholera were registered. The other fatal zymotic diseases were fever 2483 deaths, scarlatina 2921 deaths, hooping-cough 2369, measles 1989. The past year was distinguished by very heavy floods in the Thames basin in the winter, followed by excessive drought in summer. It was therefore to be expected that the quality of the waters of the Thames and the Lea would vary between limits unusually wide. Thus the total solid impurity in Thames water varied from 22·6 to 38·6 parts in 100,000, whilst that in the Lea water ranged from 21·2 to 36 parts in 100,000. In January, the Thames overflowed its banks above the point at which the metropolitan water supply is drawn, and, washing the surfaces of cultivated fields, mingling with the stagnant ditches and ponds, and receiving the contents of the suddenly flushed sewers of Oxford, Reading, and Windsor, became contaminated to an intolerable degree, as evidenced by the unusually large proportion of organic carbon, organic nitrogen, and previous sewage contamination in the waters of those companies which draw from that river. It is remarkable that the quality of the water supplied from the Lea by the New River and the East London Companies, was but slightly affected by this flood. On the other hand, in the summer months, the waters of both rivers attained a degree of purity which I have never before observed in them. The excessive drought prevented much animal matter, both solid and liquid, from reaching the streams. The refuse was absorbed into the thirsty soil, whence it was afterwards partially disloged by the heavy rains of October and December. It has been frequently asserted, but without proof, that the noxious organic matter of sewage, when discharged into a river of considerable magnitude, is entirely destroyed by oxidation after a flow of a few miles. This assertion is erroneous. The analyses of Thames water delivered in London during the past year, completely confirm Sir B. Brodie's opinion. They leave no doubt that, although oxidation does take place to some extent, a considerable proportion of the animal organic matter contained in the sewage of Oxford, Reading, Windsor, etc., reaches Teddington in an unoxidised condition.—*Registrar-General's Summary of Weekly Returns of Births, Deaths, etc., in London during* 1868.

Remarkable Mortality from Measles.—In his annual report of the health of the Union Infirmaries at Leicester, Dr. J. St. Thos. Clark, Medical officer, says:—"In reference to the measles I may state that the first case appeared in the schools on February 12, in a little boy aged 5, admitted on January 29 from the town. As the time which elapses between the date of infection in this complaint and the appearance of the eruption varies from ten to fifteen days, it is highly probable that the lad had the germs of the disease in his blood when sent in, for he had been attending a large day school up to the date of his admission, and measles of a severe character were already rife in the town. The patient was immediately removed to the infectious ward of the workhouse, a considerable distance from the schools, but the ease, though only as yet in its state of development, had been sufficient to infect several others, for eleven more children showed the disease in from nine to twelve days, and others kept falling till twenty-one in all were affected. These were similarly removed as soon as discovered. The disease further spread, owing to too close proximity, from the infectious ward to the children's sick ward in the female Infirmary, and from the convalescent ward in the workhouse to the infant nurseries. Some of those in the children's ward were in feeble health, and the tender age of the infants exposed them all the more to danger from the complaint, which soon made sad work amongst them. Of seventeen infants under 2 years of age who were attacked, twelve died (about 70½ per cent.), chiefly owing to the intensity of the chest complications, seven of these being carried off within five days; two children died two years old, and three aged three years; all above three years of age got well. The mortality of the complaint in the infants was materially checked by the infectious ward being at once thoroughly cleansed, white-washed, and provided with fresh bedding, etc., while the chance of fresh cases occurring in the schools was greatly lessened by your board sanctioning the application that no children should be allowed to go into the town, on any pretence whatever, so long as the measles remained prevalent. This regulation remained in force from February 14 to July 9, 1868. The mortality strikingly shows how greatly increased is the danger the younger the patient."

Sarah Anderson, aged 102, born at Polsted, Suffolk, died at Lexden and Winstree Union-house on the 5th inst., after being an inmate about twenty-seven years. At the age of 97 she fell out of bed and broke her leg, but was able to walk in seven weeks afterwards. She enjoyed good health throughout life, and, with the exception of dimness of sight, was in possession of all her faculties. She leaves over 100 descendants.—*Guardian.*

The Depths of the Ocean.—At a recent meeting of the Academy of Sciences, M. Henri Deville invited the members to visit his laboratory at the Ecole Normale, in order that they might inspect the apparatus erected by M. Cailletet, in which fishes are living under a pressure of 400 atmospheres, proving that the greatest depths of the ocean may be habitable.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The letter of a Brighton Practitioner shall appear next week.

Medico-Ethical.—Dr. Barnes's forceps may be procured at Krohne and Sesemann's, Whitechapel, or at Weiss's, Strand.

Dr. Barnes's concluding Lecture on Induction of Labour, which completes the subject of operative midwifery, will appear in our next number. We regret to say that the publication of Dr. Barnes's lectures must now be suspended till the close of the London season enables him to resume his pen.

Gymnast.—There is no doubt but that a very elaborate and complete system of gymnastic exercises was introduced by Dr. Roth. The worst of it is that these things tend to degenerate into specialties and panaceas; some Physicians advocate gymnastic exercises as a cure for all complaints; hence others neglect them altogether.

A Stranger will find that most of the places mentioned are sufficiently well known; any cabman will be able to take him to the places he may wish. Other information may be procured from the Medical Directory, Kelly's London Directory, and our Diary.

A Hospital Governor.—Dr. Heslop's pamphlet was published in 1864, and may be obtained of Hall, 71, High-street, Birmingham. It is entitled "System of Admissions at Hospitals: a Plea for Reform," etc. Just at this time, when the question of Medical charities is attracting so much attention, Dr. Heslop's pamphlet should be read by all who take an interest in the subject. He discusses with much ability the whole question under the following heads:—How and when Privileged Admissions arose! Evils of the System—Reply to Defenders of ditto. Continuation. Positive Advantages of the Free Method. Best Mode of working a Privileged System. Model of a Modified Free Method. Machinery for working Free Method.

Where shall a West-end Doctor fix his Tent?—A correspondent desires information on this head. He wishes to know the best site for a residence in the West-end of London, easily accessible, well known, and not extravagant in price. The house must be suitable for a married man. This is a question much easier asked than answered. Let us see how far we can be assisted by reference to this month's list of houses to be sold and let, of a fashionable firm of West-end house agents. We will give a specimen or two alphabetically:—Upper Brook-street—house, 16 rooms; ground rent £80; 7 years' lease; price £3000. Brook-street—house,

12 rooms; ground rent £20; 15 years' lease; price £3000. Charles-street, Berkeley-square—two houses, 13 rooms each: one, ground rent £46, the other £50; first lease 46 years, second lease 60 years; price of each £7000. Grosvenor-street—12-roomed house; ground rent £50; lease 20 years; 5000 guineas. Wimpole-street—ground rent £100; 27 years' lease; £4000. A house is to be let in Harley-street, containing 13 rooms, for £350. One in May Fair—15 rooms; £260 rent; 20 years' lease, £2000 premium. The agents mark this moderate. These are a few specimens, but they represent the rest. The above question is often put; who is to answer it?

Rochdale.—This town is just now in a state of considerable excitement. A resolution has been carried at a meeting of the Governors of the Infirmary that a ward should be devoted to the treatment of patients on "the homœopathic system." The Practitioners of legitimate Medicine have resolved in a body, if this resolution be carried out, not to enter the Infirmary again. Of course this resolution has called forth an abusive and angry series of letters in the local papers. The friends of homœopathy have no words strong enough—though they use pretty strong ones—to denounce such an odious "trades union." These gentlemen seem to forget that there are two sides to a question. The "reciprocity," said Sheridan once in his humorous and pithy way, in a case in some respects similar, "is all on one side." If homœopathy be true and worthy of general support, why not convert the entire Infirmary into a homœopathic institution? If the governors are powerful enough to carry such a resolution as that mentioned above, they are surely powerful enough to carry one having a more extended influence. Let them, if they are in earnest, attempt to do so; if not, let them establish a Hospital for the practice of their favourite "system." It has been done in London—why not on a limited scale in Rochdale? "That is the question." Let them answer it without equivocation. The resolution, however, in favour of homœopathy seems to have been carried at a meeting very thinly attended, and without notice that such a resolution would be proposed. A requisition has been forwarded to the proper quarter demanding that a special meeting of the governors shall be called to discuss the question. The requisitionists assert that the proposal of the resolution was, as the lawyers say, "a surprise." We shall be anxious to see the result of the discussion of so important a point by the collective wisdom of the Rochdale governors.

Venereal Diseases in the French Army.—We are indebted to Mr. Berkeley Hill for the correction of an error in the summary of the Medical statistics of the French army for 1866, published in our number of January 30, as to the prevalence of venereal diseases in that army as compared with the British. Mr. Berkeley Hill's correction appeared in our number of the 13th inst. We did not comment on it at the time, as the difference between our estimate on the subject and that formed by Mr. Berkeley Hill entirely depended upon the view taken on the question whether the French returns included under the heading "Maladies Vénériens" patients suffering from all the diseases which we have until lately been in the habit of calling "enthetic," or merely those treated for syphilis. We had been informed, on authority which we had every reason to consider reliable, that the latter was the system of compilation of the French returns. On further inquiry, we have ascertained that we were mistaken, and have no hesitation in acknowledging the fact, and in expressing our obligations to Mr. Berkeley Hill for pointing out to us the much greater prevalence of venereal diseases in the British than in the French army. We need hardly say that, in giving expression to what we considered to be a fact as regards the prevalence of syphilis in the French army, we were not actuated by any desire to oppose the extension of the Contagious Diseases Act of 1866 to the civil population of this country, as advocated by the association of which Mr. Berkeley Hill is one of the honorary secretaries. On the contrary, we have steadily supported the views advanced by that association, and hope to see some effectual legislation on the subject during the present session. Mr. Berkeley Hill's letter in the *Times* of the 22nd inst. states the case so powerfully that it is a wonder to us that there should be any further hesitation about it. In his correction of one error, which we have admitted, Mr. Berkeley Hill has accused us of another, to which, however, we must plead "not guilty." The discrepancy between the strength of the British army at home as stated by us and by Mr. Berkeley Hill is more apparent than real. We took our numbers from the Appendix No. 1, which only refers to troops who have served throughout the year uninterruptedly in the United Kingdom. He took his from the table in page 2, compiled from the weekly returns, and including those who have served during broken periods, either on arrival from, or previous to embarkation for, foreign stations. It is evident that the numbers taken by us supply a more correct estimate of the strength of the army and of the prevalence of the various classes of disease. In the French returns, also, Mr. Berkeley Hill assumes as the basis of comparison the "effective" instead of the "mean strength present" of the French army. It is only the diseases of men actually present with their regiments which come under treatment by the French military Surgeons, and it is therefore upon their strength that the more accurate calculation can be made.

Dr. McM.—The value in English currency of the gold mohur of the East Indies ranges from £1 8s. to £1 9s.; that of the Sicca rupee, from 1s. 10d. to 1s. 11d. The salary attached to the office of Colonial Surgeon South Australia is £700 per annum, and is held by Mr. R. W. Moore. The resident Medical officer of the Lunatic Asylum, Dr. A. S. Patterson, receives £500 per annum. The office of Immigration Agent is held by Dr. H. Duncan—salary £450 per annum.

Cure for Snakebites.

Mr. Arthur Baillie, of Plymouth, recalls to our memory the fact that he paid attention to this subject as early as 1835. He entertained an idea that an emetic would be efficacious. Many years passed before he had an opportunity of trying the effect of such treatment. At length, in 1849, when he was staying at a cattle farm in Venezuelan Guiana, an Indian peon was brought to him who had been bitten by a rattlesnake. He treated him as he had previously determined, and had the satisfaction of seeing him recover. At the time he took notes of the case, and, a few weeks after, sent them to London for publication, and the fact was duly recorded in the *Medical Times*, September 1, 1849. He confidently recommends to the Profession the following treatment:—When a man is bitten by a venomous snake, the prompt exhibition of a full dose of ipecacuanha combined with a little extract of capsicum, which is a powerful diffusive stimulant. After waiting fifteen or twenty minutes, let him have warm water to promote its operation. After that ceases, give him some light or liquid food, with brandy or other alcoholic stimulant. Ligatures and all kinds of applications to the external wounds are useless; the punctures simply indicate the part where the reptile has injected two drops of venom into the capillaries.

Poor-law Matters at Birmingham.

The following additional names have been appended to the memorial for the Medical Practitioners of Birmingham to the Poor-law Board against the proposed reduction of the Poor-law Medical staff in that town:—

Oliver Pemberton, Honorary Surgeon, Birmingham General Hospital.
V. W. Blake, F.R.C.S., Honorary Surgeon, Lying-in Hospital.
John Joseph Hadley, M.R.C.S.E., L.A.C.
Langston Parker, F.R.C.S., Consulting Surgeon, Queen's Hospital.
David Johnston, M.R.C.S.
W. P. Goodall, Honorary Surgeon, Birmingham General Hospital.
John D. Melson, M.D. and J.P.
John Jordon, M.R.C.S.
Josiah Clarkson, M.R.C.S.
Henry Davis, M.R.C.S.
G. F. Evans, M.D., Consulting Physician, Birmingham General Hospital.
Alexander Fleming, M.D., Honorary Physician, Queen's Hospital.
Lumley Earle, M.D.
Edwin Cheshire, F.R.C.S.
James Russell, M.D., Honorary Physician, Birmingham General Hospital.
George Jones, M.R.C.S.
Dickinson W. Crompton, F.R.C.S.
B. S. Robins, M.R.C.S.
Thomas Savage, M.D.
Samuel Westwood, L.R.C.P.
James Neal, M.D.
Horatio Wood, M.R.C.S.
W. J. Scofield, M.R.C.S.

Propositions for the Better Administration of London Medical Charities.

By F. Oppert, M.D.

A. *Admission of in-patients to the general Hospitals.*

1. Emergency wards should exist, not only for Surgical, but also for Medical cases, no governor's letter being required.

2. No patient should be admitted solely on a governor's letter, but a Medical certificate should be required in addition. This he should have to obtain either from a Medical Practitioner or the Medical officer *du jour*—*i.e.*, the House-Surgeon at the Hospital, or whoever does duty for him, should recommend him for admission.

3. The establishment of special departments should be proceeded with.

B. *Admission to the out-patient department and to the free Dispensaries.*

1. Patients should, except in cases of urgency, produce a certificate of poverty, to be given by the governor who recommends them, their employer, or another respectable man of their district.

2. These departments or charities—at least, the more central ones—should be raised in position by the admission of pupils, and become a means of Medical education. The consulting Medical officers or Hospital lecturers should be delegated to lecture on the out-patients, and receive payment for this.

3. The free Dispensaries should allow the pupils to visit the poor at their houses occasionally under the supervision and guidance of the House-Surgeon.

C. *Central office for inquiries.*

It should be founded in order to afford information on Hospital matters, and possibly be connected by telegraph with the principal charities. All the reports should be found there.

D. *Parish Dispensaries.*

Their establishment, under the Act of 1857, should be proceeded with immediately.

Spear *v.* Doidge.—Doidge Defence Fund.

Since the commencement of the appeal to the Medical Profession and others in October last in aid of the above, the Secretary has received numerous remittances, accompanied by deep sympathy for the defendant in this case, with many suggestions for increasing the fund. The following extracts from letters may be interesting to our readers:—

"Broadclyst, Exeter, October 27, 1868.

"Dear Sir,—I deeply sympathise with Mr. Doidge, and enclose a Post-office order for £1 1s. towards the fund being raised to defray his expenses.

"Yours truly, James Somer."

"Devonport, October 26, 1868.

"My dear Sir,—I wish I could do more for your good cause. If I can get any one else here to subscribe, I will.

"Yours very truly, W. P. Swain."

"St. German's, Cornwall, October 28, 1868.

"Dear Sir,—I herewith enclose a Post-office order for Mr. Doidge. I have not the pleasure of his acquaintance, but shall be heartily glad to find that your efforts in his behalf are attended with the success they deserve.

"Yours faithfully, Geo. M. Gifford."

A highly influential landowner and magistrate in the neighbourhood of Lifton, where Mr. Doidge resides—A. Kelly, Esq.—sends his cheque for £10, and encloses another for £2 2s. from a friend at Bristol, both letters speaking in the highest terms of Mr. Doidge as a Medical man, and expressing deep sympathy for him.

"Plymouth, November 6, 1868.

"Sir,—I have much pleasure in forwarding the enclosed Post-office order for £1 1s. as a contribution to the fund towards meeting Mr. Doidge's expenses in the trial Spear *v.* Doidge. I am exceedingly sorry for him. Although I have not the pleasure of knowing him personally, his name is well known to me. "Yours faithfully, C. R. PRANCE."

"Barnstaple, November 14, 1868.

"Dear Sir,—Enclosed I send you a cheque for £1 1s., my small subscription towards defraying the heavy expenses incurred by Mr. Doidge, of Lifton. I hope the call has been liberally responded to, and that Mr. Doidge, who must have suffered greatly in his mind, will not suffer much in pocket. "Yours very truly, JOSEPH HARPER."

"Port Isaac, Cornwall, February 4, 1869.

"Sir,—I herewith send you a cheque for £1 1s., as my subscription towards defraying the law expenses incurred by Mr. Doidge in defending his case against a most wicked and unjust prosecution. I most sincerely sympathise with him. "Yours very truly, F. TREVAN."

The Committee would venture to remind the Medical Profession that the total damages and costs in this action exceeded £583. The subscriptions to the present date are short of £120.

COMMUNICATIONS have been received from—

Mr. G. F. WHITE; Dr. C. B. TAYLOR; Dr. MACCORMAC; Dr. CHAEON; Mr. ARTHUR BAILLIE; Mr. PEAL; Dr. HESLOP; MEDICO-ETHICAL; Dr. BATEMAN; Mr. J. SCALES; Mr. H. SERJEANT; Mr. C. J. FOX; Dr. W. ARDING; A STRANGER; Mr. LE NEVE FOSTER; A SURGEON; Dr. JOHN HARLEY; Mr. J. B. CURGENVEN; Mr. CHARLES BRADLEY; Mr. JOHNSON; Mr. A. BRUCE; Dr. GERVIS; Mr. ROBERT SOUTHEE; Mr. JOHN CLAY; Dr. WHITEHEAD; Dr. J. B. SANDERSON; Dr. JAVAKAR; Dr. LIONEL S. BEALE; Dr. B. W. RICHARDSON; Dr. DAY; Mr. JASEZ HOGG; Dr. GRAY; Mr. J. CHATTO; Mr. J. D. HILL.

BOOKS RECEIVED—

Dunn on Loss of Speech—Annual Report of the Shedfield Cottage Hospital—Wirksworth Cottage Hospital Report—Modern Instances of "Healing by the Laying on of Hands," by Rev. F. R. Young—Report on the Royal Infirmary and Dispensary of Montrose—Report on the Royal Lunatic Asylum of Montrose—Soelberg Wells on Impaired Vision—Medicine in Modern Times—Debrett's Peerage, 1869—Debrett's Baronetage, 1869—Dublin Quarterly Journal of Medical Science, February 1869—Brown's Conduct of the Admiralty—New York Medical Journal, No. 47—Pacific Medical and Surgical Journal, No. 20.

NEWSPAPERS RECEIVED—

Leicester Journal—Oldham Standard—Oldham Chronicle—Carlisle Patriot—Rochdale Observer.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, February 20, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending Feb. 20.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Feb. 20.	Temperature of Air Fahr. Highest during the Week.	Temperature of Air Fahr. Lowest during the Week.	Temperature of Air Fahr. Weekly Mean of Mean daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London Metropolis	3170754	40·7	2491	1462	1491	53·9	33·2	45·5	0·17	17
Bristol (City)	169423	36·1	147	70	*77	53·9	32·7	45·1	0·29	29
Birmingham Boro'	360846	46·1	313	175	136	52·0	36·0	45·1	0·26	26
Liverpool Boro'	509052	99·7	385	295	287	53·7	38·0	46·4	0·20	20
Manchester (City)	370892	82·7	261	210	*204	...	...	...	...	...
Salford Borough	119350	23·1	109	60	71	53·0	33·0	44·7	0·53	54
Sheffield Borough	239752	10·5	223	126	140	53·0	34·4	45·4	0·29	29
Bradford Borough	138522	21·0	79	71	70	...	...	...	...	...
Leeds (Borough)	253110	11·7	251	120	122	54·0	38·0	47·2	0·17	17
Hull (Borough)	126682	35·6	86	55	78	54·0	28·0	44·0	0·17	17
Newstl-on-Tyne, do.	130503	24·5	95	68	94	53·0	34·0	43·6	0·00	0
Edinburgh (City	178002	40·2	130	86	104	51·7	33·0	42·7	0·80	81
Glasgow (City	458937	90·6	344	268	309	53·6	36·7	44·2	0·05	5
Dublin (City and some suburbs	320762	32·9	214	158	167	56·0	33·0	47·1	0·21	21
Total of 14 large Towns	6546587	35·5	5026	3244	3339	56·0	28·0	45·1	0·26	26
					Week ending Feb. 13.		Week ending Feb. 13.			
Vienna (City)	1863 580000	...	...	...	Feb. 13. ...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·856 in. The barometrical reading decreased from 30·24 in. on Monday, February 15, to 29·52 in. on Thursday, February 18.

The general direction of the wind was W.S.W. and S.W.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 20, 1869.

BIRTHS.

Births of Boys, 1209; Girls, 1192; Total, 2401.
Average of 10 corresponding weeks, 1858-67, 2071·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	788	703	1491
Average of the ten years 1858-67	701·2	683·1	1384·3
Average corrected to increased population	...	...	1522
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463988	1	1	5	1	12	9	2	...
North	615210	.	3	12	4	21	18	3	...
Central	378058	...	3	4	2	8	9	1	...
East	571158	.	4	13	2	14	23	2	..
South	773175	5	4	5	1	27	20	6	...
Total	2803589	6	15	39	10	82	79	14	..

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·856 in.
Mean temperature	45·5
Highest point of thermometer	53·9
Lowest point of thermometer	33·2
Mean dew-point temperature	40·7
General direction of wind	W.S.W.&S.W.
Whole amount of rain in the week	0·17

APPOINTMENTS FOR THE WEEK.

February 27. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Odling, "Hydrogen and its Analogues."

March 1. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

MEDICAL SOCIETY OF LONDON. 7 p.m.: General Meeting for Election of Officers and Council. 8 p.m.: Casual Communications. 8½ p.m.: Dr. John Cockle, "Further Contributions to the Pathology and Diagnosis of Pulsating Tumours of the Neck."

ODONTOLOGICAL SOCIETY, 8 p.m. Mr. J. Turner, M.R.C.S., L.D.S., "On Chlorætherine."

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

ROYAL INSTITUTION, 2 p.m. General Monthly Meeting.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8 p.m. Anniversary Meeting.

2. *Tuesday.*

Operations at Guy's, 1½ p.m.: Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

ANTHROPOLOGICAL SOCIETY, 8 p.m. F. Hovenden, F.A.S.L., "Man an Indestructible Atom."

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

ROYAL INSTITUTION, 3 p.m. Rev. F. W. Farrar, "On Comparative Philology."

3. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

OBSTETRICAL SOCIETY, 8 p.m. Dr. Madge, "Case of Hydronephrosis of the Fœtal Kidneys." Dr. Brunton. "Observations and Remarks on Cases of Twins." And other Papers by Dr. Cory, Dr. Wynne, and Mr. Houghton.

ROYAL COLLEGE OF PHYSICIANS, 5 p.m. Croonian Lectures—"Regarding certain Effects of Modifications of Nerve-Influence in Disease," by Dr. John W. Ogle.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

4. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

HARVEIAN SOCIETY, 8 p.m. Dr. Sanderson, "On Pneumonic Phthisis."

ROYAL INSTITUTION, 3 p.m. Dr. John Harley, "On Respiration."

5. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ROYAL COLLEGE OF PHYSICIANS, 5 p.m. Croonian Lectures—"Regarding certain Effects of Modifications of Nerve-Influence in Disease," by Dr. John W. Ogle.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

ROYAL INSTITUTION, 8 p.m. Mr. W. Huggins, "On some further Results of Spectrum Analysis applied to the Heavenly Bodies."

WESTERN MEDICAL AND SURGICAL SOCIETY, 8 p.m. Mr. T. Holmes, "Some Remarks upon Lister's Method of Treating Abscesses by Means of Carbolic Acid." Dr. Martyn, "A Case of Extra-Uterine Pregnancy."

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ORIGINAL LECTURES.

A COURSE OF LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D. Lond.,

Fellow and late Examiner in Midwifery at the Royal College of Physicians; Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital; Physician to the Royal Maternity Charity; Consulting-Physician to the East London Children's Hospital; Examiner in Midwifery at the Royal College of Surgeons.

Lecture XX.—Part III.

THE INDUCTION OF PREMATURE LABOUR CONTINUED.—THE MODE OF PROCEEDING—PROVOCATION OVERNIGHT — ACCELERATION AND CONCLUSION OF LABOUR NEXT DAY—DESCRIPTION OF CASES DEMANDING INDUCTION OF LABOUR—MODE OF DETERMINING EPOCH OF GESTATION — PROCEEDING IN CONTRACTED PELVIS OR OTHER MECHANICAL OBSTRUCTIONS —IN CASES OF URGENT DISTRESS OF MOTHER.

Having discussed the various methods of provoking labour which have been practised, we are now in a position to select the most safe, convenient, and efficient. It has been already said that no method is so much in harmony with the principle of acting *cito, tuto, et jucunde*, as the introduction of the elastic bougie into the uterus. The plan I have successfully practised for some years is the following:—First, overnight pass an elastic bougie six or seven inches into the uterus, coil up the remainder of the instrument in the vagina; this will keep it *in situ*. Next morning some uterine action will have set in. In the afternoon, at an appointed time, proceed to *accelerative* measures.

Before rupturing the membranes, adapt a binder to the abdomen, and let this be tightened, so as to keep the head in close apposition to the cervix. This will often prevent the cord from being washed down by the rush of liquor amnii. Dilate the cervix by the medium or large bag, until the cervix will admit three or four fingers. Then rupture the membranes, and, before all the liquor amnii has escaped, introduce the dilator again, and expand until the uterus is open for the passage of the child. If the presentation is natural, if there is room, and if there are pains, leave the rest to nature, watching the progress of the labour. If these conditions are not present, and one or other is very likely to be wanting, proceed with accelerative methods —that is, to the forceps or turning, or, in cases where the passage of a live child is hopeless, to craniotomy. By pursuing this method we may predicate with great accuracy the term of the labour. Twenty-four hours in all—counting from the insertion of the bougie—should see the completion of the labour. The personal attendance of the Physician during two hours is generally enough. The mode of proceeding must vary according to the conditions of the case.(a)

What are the conditions that call for the induction of labour?

Gestation may be divided arbitrarily into two parts. During the first part, terminating at 6½ or 7 months, or at the end of 180 or 200 days, it is scarcely probable that a viable fœtus will be expelled. To induce labour within this period is really to bring about abortion. It is therefore only done under the pressure of conditions that preclude waiting till the child is viable, and out of regard solely to the safety of the mother. Between 200 and 230 days is a stage of very doubtful viability, and the Physician will still endeavour to postpone interference until after the latter date, or the second part of gestation, when, the child being viable, the operation may be undertaken in the interest of both mother and offspring.

In a large proportion of cases we are able to select our time within certain limits. For example, where there is moderate pelvic contraction, admitting of the safe passage of a child a little below the full size, we may be justified in waiting until the end of eight months — say, 250 days. The difficulty is to determine the starting-point of the pregnancy. There is a very probable range of error of at least 15 days. If we count 15 days too many, we reduce the duration of pregnancy to 235 days—that is, we run the risk of falling within the first part, when the child is of doubtful viability. If, on the other hand, we count 15 days too few, we run the contrary risk of approaching too near the natural term of gestation, and of having a child too large to pass the narrow pelvis alive.

The best way, perhaps, of avoiding these two rocks is to reckon the pregnancy from the day after the cessation of the last menstrual period, the most probable time of conception. Count 230 days from that epoch, and add 20 days for a margin of safety. This will leave a full month, or 30 days, to complete the development of the child. The cases are few, if all the resources in the acceleration of labour are turned to account, in which a child of 250 days may not be delivered alive. But if we fall upon a child of 215 days or less, the chances of its surviving are very slight. I regard the error of procrastination as being generally of less moment than the error of anticipation. Of course, if the pelvic contraction is great—say to 2·50″—it will be prudent not to calculate beyond 240 days, but rather to incur the risk of bringing a non-viable child.

It will be convenient to enumerate first those conditions which, in the interest of the mother, and disregarding the child, demand the interruption of gestation during the first part.

These are, A. Certain cases of extreme contraction in the bony or soft parts—*e.g.*, distortion and narrowing of the pelvis below 2·00″; the encroachment of considerable tumours, especially if they are unyielding, upon the pelvic canal; some cases of advancing and extensive cystic disease of the ovary; great contraction from cicatrices of the os uteri and vagina, not admitting of free dilatation—retroversion or retroflexion of the uterus not admitting of reduction; some cases of carcinoma of the uterus or vagina; some of tumours of the uterus.

B. Certain cases of urgent disease of the mother, depending upon and complicating pregnancy—*e. g.*, obstinate vomiting with progressive emaciation, and a pulse persistent for some days above 120; some cases of advancing jaundice with diarrhœa; some cases of convulsions associated with albuminuria or chorea; hæmorrhages producing marked anæmia, especially if depending upon commencing abortion or placenta prævia; some cases of disease of the heart and lungs, attended with extreme dyspnœa; such are aneurism, great hypertrophy, valvular disease, œdema of the lungs, pleurisy.

If, in the presence of any of the foregoing complications, we have been fortunate enough to carry the patient over the first part of pregnancy, reaching the period when the child is viable, we may still be compelled to induce labour. The indications from disease beginning in the first part, as hæmorrhage, convulsions, cardiac distress, vomiting, jaundice, may grow more urgent, or they may arise during the second part.

My experience leads me to conclude that in cases of urgent disease there is more frequent occasion to regret having delayed the operation too long than having had recourse to it too soon. When through obstinate vomiting, for example, nutrition has long been arrested, the starved tissues craving for supplies, and falling into disintegration, feed the blood with degraded and noxious materials; the system feeds upon itself and poisons itself; the poisoned blood irritates the nervous centres, and these centres, wrought to a state of extreme morbid irritability, respond to the slightest peripheral, uterine, or emotional excitation. All nervous energy is thus diverted from its natural destination and exhausted in destructive morbid action. Irritative fever ensues, the pulse rises to 140 or more, no organ in the body is capable of discharging its functions, for the pabulum of life is cut off at the very source. At this point labour, whether it occur spontaneously, as it often does, or be induced artificially, comes too late. The tissues are altered, the powers are impaired beyond recovery, and death soon follows delivery.

The most generally recognised indication is the presence of such a degree of pelvic contraction as to forbid the birth of a live child at term.

No one, I believe, disputes that, where we have the choice, induction of labour should be performed where the ultimate alternative is the Cæsarian section, and this rule should hold whether the proceeding hold out a hope of saving the child or not. It should also be resorted to for the sake of avoiding craniotomy.

In the great majority of cases we are led to determine upon the expediency of inducing labour by the history of antecedent labours. Where craniotomy has been performed on account of contracted pelvis clearly recognised, there can be little ground for doubt. But why should one or more children be sacrificed in order to teach the Physician that the pelvis is too small? Is there no other gauge of the capacity of the pelvis than a child's head? Of course it will be admitted that a woman pregnant for the first time is equally entitled to the benefit of the premature induction of labour if it be known that her

(a) For a series of cases illustrative of this practice, see *St. George's Hospital Reports*, 1868.

pelvis is too small. The difficulty is to know this. In this country, and generally in private practice, the opportunity of making an obstetric estimate of the pelvis before labour is very rarely afforded. The first labour at term is therefore the common practical test of a woman's aptitude for child-bearing. But on the Continent, where a very large proportion of women are delivered in Hospitals where they are received one or two months before the end of pregnancy, examination of the pelvis is made on admission, and thus they and their children come within the benefit of this proceeding.

The modifications proper to be adopted in different cases are as follows:—

1. In the case of pelvic deformity not admitting the birth of a live child at term.

There are three degrees of contraction to be considered. The *first* or least degree, say, giving a conjugate diameter of 3·50 in. In such a case a child of seven or eight months' development will probably pass without difficulty. Here it may be enough to provoke the labour, and watch its course, as in ordinary labour.

The *second* degree, giving, say, a conjugate of 3·00″. In such a case, unless the child prove very small or timely aid be given, its head may be delayed so long in the brim that it will be lost. Here it will be proper to provoke the labour by inserting the elastic bougie overnight; to accelerate the labour by dilating the cervix, rupturing the membranes, applying the forceps, or turning.

The *third* degree, giving, say, a conjugate below 3·00″. Here, also, it may be necessary to accelerate the labour by turning, or possibly by craniotomy.

A double advantage is gained by bringing on labour prematurely when the pelvis is greatly contracted. We not only secure a fœtal head that is smaller, but also one that is more compressible. During the last month of gestation ossification of the cranial bones proceeds rapidly. Taking two heads, the one at eight months and the other at the full term of gestation, of equal size, the head of eight months' gestation will, on account of its less perfect bony development, come through the same contracted pelvis with more ease, or may even come through alive when the equal-sized head at term would have to be perforated. This is especially seen in those cases where turning is resorted to as an accelerative proceeding.

The course to pursue is as follows:—If the uterus act with sufficient power, and the pelvic contraction be not so great as to impede the passage of the child's head, and the cord do not fall through, watch and let Nature do her work. But if the head is delayed, or the cord falls through, we must intervene. There are two alternatives. We may first try the forceps. But if the conjugate is reduced to 3·00″ or below, turning is the true accelerative means. If I may trust my own experience, I should, without hesitation, say the prospect of a child being born alive under the conditions postulated is much better than under any other mode of delivery, and even better than is the prospect under turning in ordinary circumstances at the full period of gestation. The explanation is this:—The smaller and more plastic head is caught at the smaller or bi-temporal diameter between the projecting promontory and the symphysis pubis; the jutting promontory leaves abundant room on either side in the sacro-iliac region of the brim for the cord to lie protected from pressure, and, if care be taken that the cervix uteri be adequately expanded, the head comes through so quickly that the danger of asphyxia is not great. The mode of turning deserves attention. The object being to secure a quick delivery, the soft passages must be well prepared. We might turn by the bi-polar method without passing more than two fingers through the os uteri. But I have found that, although it is always well to avail ourselves more or less of the bi-polar principle, it is desirable, in this case, to pass the greater part of the hand through the cervix to grasp the further knee. The reason is this:—The cervix that will admit the hand will, in all probability, permit the ready transit of the child. We thus secure adequate dilatation.

When the turning is completed, extraction must follow. It should be performed gently, drawing upon the one leg until the breech has passed the outlet; the extraction of the trunk should be slow; and a loop of cord should be drawn down to take off tension. When the arms are liberated, the neck of the child is in danger of being nipped in the circle of the cervix. This is the moment for accelleration. The two legs are held at the ankles by the left hand, whilst the right-hand fingers are crutched over the back of the neck. The head is sure to enter the contracted brim in the transverse diameter. It has then to describe the circle round the point of the jutting promontory, which I have described (see Lecture XVII. Part 3, *Medical Times and Gazette*, 1868,) as the "curve of the false promontory." Traction must, therefore, be at first carefully exerted in the direction of this curve or orbit—that is, well backwards—so as to bring the head round and *under* the promontory. When it has cleared the strait, and is in the pelvis, the occiput commonly comes forward, and traction is changed to the direction of Carus' curve to bring the head through the outlet. Unless rigorous attention be paid to the above rule for bringing the head through the brim, so much time may be lost as to imperil the success of the operation.

In dealing with cases in which the induction of labour is indicated by urgent distress in the mother, we must again be governed by a careful estimate of the circumstances. There is no common rule.

Take first the case of *convulsions*. It has been seen over and over again that the convulsions have ceased soon after the uterus has been emptied. Everything conspires to prove that the convulsions are due to conditions arising out of the pregnancy. What, then, more logical than to terminate the pregnancy as soon as possible? Yet experience suggests caution as to the mode of acting. In not a few cases the completion of labour has failed to put an end to the convulsions. In not a few cases death has followed labour, whether this have occurred spontaneously or have been induced. Is the unfortunate issue the consequence of procrastination in inducing labour, or of overhaste, of want of precaution in the mode of proceeding? I believe it is due sometimes to one cause and sometimes to the other.

The question of inducing labour before the actual outbreak of convulsions—that is, during the conditions that lead up to convulsions—seldom or never comes practically before us. We have therefore mainly to do with the question how best to carry out a labour the indication for inducing which is clear. Is it to be done *citissime?* Is it to be done slowly and deliberately? I believe the latter principle is the more judicious, The proceedings should involve the least possible manual or other operative interference. The detachment of the membranes or the insertion of a bougie is too slow in results. It is better to puncture the membranes. This at once lessens the bulk of the uterus, and diminishes the pressure upon the abdominal vessels. If the convulsions remit, we may leave the labour to nature. If urgent symptoms persist, we may dilate the cervix carefully by the cervical dilators, and accelerate by forceps, by turning, or even by craniotomy, according to the special indications.

A similar rule applies in almost all cases where the induction of labour is indicated by urgent distress of the mother, such as heart disease, chorea, etc. In the case of dangerous vomiting in the early months, it will be useful, as a preliminary measure, to insert a laminaria-bougie as far as it will readily pass into the uterus. This will answer the double purpose of detaching the ovum and dilating the cervix.

In retroversion of the uterus irreducible, and with urgent symptoms, the puncture of the membranes is the proper course. We immediately gain relief by permitting the concentric diminution of the volume of the uterus.

Lastly, there is a series of cases in which the indication is simply or primarily to save the child. There are certain conditions which tend to destroy fœtal life before the term of gestation. If we can bring the child into the world before the anticipated period of its death in utero, we may hope, by bringing it under fresh influences, to save it. Denman gives the case of a woman who lost her children about the eighth month, a rigor preceding. He suggested the induction of labour. There are various diseases which are known to endanger the child as they advance. Such are hydrocephalus, syphilis of the child; fatty degeneration, hypertrophy, dropsy of the placenta. In cases where there has been no sufficient opportunity of treating the mothers before or during pregnancy, and where there is a history of labours ending in the birth of dead children, the induction of labour is indicated.

There are cases in which the wisest Medical and ethical judgment is required. A woman pregnant about six months is dying of phthisis. Would it prolong her life or improve her condition if labour were induced? and should we be justified in sacrificing the child with that object?

A woman pregnant about seven months is dying of phthisis. The child is assumed to be viable; its life hangs upon the fragile thread of its mother's life, which may break before the natural term of gestation is accomplished. Are we justified in inducing labour to rescue the child, disregarding the mother? or is such a course likely to prolong her life or to accelerate her death?

The decision in such cases is both perplexing and painful.

Observation of the course of things when pregnancy is complicated with phthisis lends material help in arriving at a solution. It was long thought, and I believe some people still think, that pregnancy is antagonistic to the advance of phthisis. If this were true, the decision would be obvious. Let the pregnancy alone. But experience, I think, is adverse to the opinion that pregnancy exerts any beneficial influence upon phthisis. I am sure I have seen in numerous instances phthisis advance with accelerated speed towards a fatal issue when complicated with pregnancy, the sufferer either dying before the term, or sinking rapidly after labour.

It is an idea founded more, I am afraid, on imagination than on facts, that Nature, in her solicitude to perpetuate species, will struggle with unwonted energy to sustain the life of the expectant parent until the embryo is matured. Faith in this hypothesis would lead us to procrastinate.

Putting aside poetry not supported by facts, there are two considerations that offer material aid in arriving at a decision. First, pregnancy is commonly less trying to a phthisical patient than labour and childbed. The puerperal state especially throws such an increase of work upon the circulation that the system often breaks down at this period. It is therefore desirable in the interest of the mother to postpone labour as long as possible.

Secondly, the prognosis in phthisis, even in cases apparently the most desperate, is often open to grave fallacy. Who has not seen patients whose days, whose hours almost were counted, survive for months and years? In the interest of mother and child, then, it is not wise to take precipitately the irrevocable step.

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

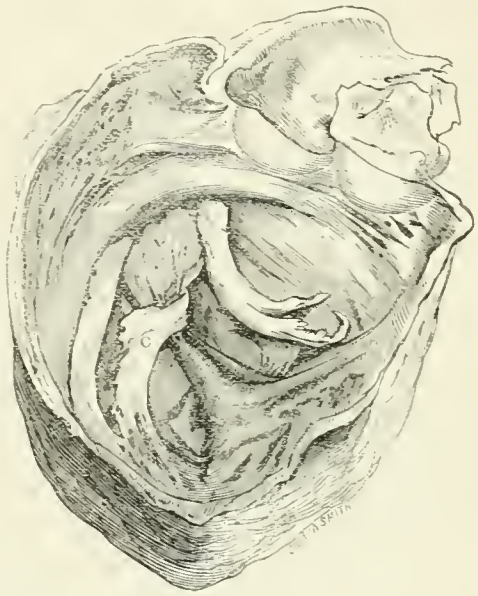
ON THE CAUSE AND PREVENTION OF SEPARATION OF FIBRINE IN THE BODY.(a)

Gentlemen.—In the lecture delivered in this room in November last, we studied the subject of separation of fibrine in the body from a point of view simply practical, or rather clinical. We considered the class of cases of disease in which we meet with separation of fibrine, the living phenomena which proclaim to us that separation has taken place, the results of the separation as affecting life, and the characteristics of separation as indicated after death, at the post-mortem table.

The cause of separation of fibrine, and the treatment, preventive or curative, was left for succeeding lectures, one of which is to be spoken to-day; but before I pass to this subject directly I would invite your attention to two striking illustrations, on the table, of separations of fibrine in the chambers of the heart. They are equally valuable specimens; they bring before the eye the fact and character of separation; and the history of the cases to which they belong shows how the position of the separated mass may influence symptoms during life, and on how slight a change, accident it may nearly be said, the most serious of events may occur.

The first of these specimens is sent to me by Mr. Spencer Wells. He operated upon a young lady for the removal of an ovarian tumour. The operation itself was, by comparison, easy; but fifty-seven hours after the operation there was a fatal end. The symptoms from the first were thoracic, not abdominal, and after death it was discovered that there was intense congestion of the lungs, not of the depending portions only, but generally, as is seen in the first stage of acute pneumonia; there was no peritonitis. On laying open the heart in this case, see then what is found. The right auricle is empty of blood, except in the appendix, where there are a few points of fibrine firmly adherent to the muscular structure. The left auricle and the left ventricle are also empty. But in the right ventricle here is this all-important, this fatally obstructing mass—a ribbon-like band of fibrine, half an inch in breadth and the eighth of an inch thick, firm in structure, elastic, and strong. It commences in the lower part of the ventricle by fibrous interlacement of the closest kind with the muscular fibres; then it runs as a free band round the chordæ tendineæ of the tricuspid, looping up in the most determinate manner the anterior curtain of the tricuspid to the tendons of the fixed valve, or that valve which is connected by simple tendinous cord with the septum ventriculorum. The effect of this interference of function is obvious enough. With every stroke of the ventricle, while its valves were bound in the manner described, there was loss of the necessary force required to drive the blood with freedom over the pulmonic circuit. The result, of necessity, would be what occurred—a slowly increasing, and at length a general, congestion of the lung and death.

Mr. Wells's case will bring back to you, in so far as secondary symptoms are concerned, the case I briefly noticed in a preceding lecture—a case in which a man after an accident was seized with intolerable dyspnœa and congestion of lung, followed by death. I had a drawing made of the band of fibrine which encircled the tricuspid valve in that case, and I place the drawing before you again because the central grasping band is a facsimile of what is seen in the heart now being handed round for examination.



Band of fibrine looping up tricuspid valve. c, the band.

Now, gentlemen, we cannot for a moment contemplate the history of a case like this, which comes to us from Mr. Wells, without being impressed, even solemnly, with the importance of the great subject we are endeavouring, step by step, to elucidate. Here perfect Surgical art, sound Surgical practice, with youth of the patient to back up both, and all that was favourable in the balance, were fatally baffled by the separation of this small ribbon of fibrine which separated around the cords of the valves of the right ventricle. The actual solid fibrine in this mass, when the water is taken from it, would not be five grains in weight. The symptoms were not acutely inflammatory, although there was some elevation of temperature for a short time, and yet by the accident—shall I say "accident?"—of separation at an important portal of the circulation there was death.

It is our business, however, not to lament, but to learn. I have expressed regret in order to impress truth. I have shown the specimen with the object of bringing under the eye these facts of separation of fibrine, and the phenomena which attend them. Two facts in regard to phenomena I would specially name—1. That separation of fibrine in the *ventricle*, on the *right* side of the heart, and involving the tricuspid valve, is followed by general congestion of the lungs. 2. That fatal separation of fibrine may occur without the appearance of any marked local inflammatory disorder, and this even in instances where there has been performed so formidable an operation as the laying open of the peritoneum.

A second very perfect specimen of separation of fibrine is brought to me by my friend, Dr. Wane. In this case also the separation is on the right side of the heart; but now the auricle is filled with the mass, the ventricle is more than half filled, and there is a line of extension into the pulmonary artery. There is here such firm attachment of the mass to the muscular structure of the auricle that it seems to form a part of the muscular wall, but there is no looping up of the cords of the valve. As to the nature of this case, the patient was a child fourteen weeks old. It was born with open spina bifida, which discharged fluid freely. The fontanels were of enormous size, and a few days

(a) Delivered on Tuesday, January 12.

after birth there was increased fulness of the head, which progressed till the head reached the following dimensions:—

From the tuberosity of occiput to the nose .	16¾ inches.
From ear to ear transversely over the head .	17¾ „
Circumference of head	25 „

The child was frequently seized with sudden attacks of dyspnœa, which soon threatened to become fatal, and in one of which attacks death took place. A few days previous to death there was œdema of the feet and hands. The action of the heart during life was rapid and tumultuous, and lividity was produced by the merest exertion. The child, up to the time of its death, was well nourished, and, although suffering from so much distension of the head, it was intelligent. The head was once tapped, two imperial pints of fluid were drawn off, and as much escaped afterwards. The operation gave relief for a time, but the fluid reaccumulated. In this case, on examination after death, the lungs, instead of being congested, were found bloodless, milk-white in colour, and emphysematous.

When we look carefully at this heart, we find the cause of the repeated attacks of dyspnœa. The foramen ovale is imperfectly closed. A valve-like membrane stretches across the foramen on the left side of the septum of the auricle, but the adhesion is imperfect at the upper part, so that when during life there was any undue pressure of blood in the right auricle, there was a current of blood direct into the left auricle. I doubt not but that during one of these attacks, while there was regurgitation of blood in the auricle, the first point of separation of fibrine took place, or that there was the further separation and extension of the fibrinous mass in the course of the circulation through the ventricle. The mass, we see, was thus built slowly up from its base in the auricle.

From the position of the separated fibrine in this example we trace out the after-symptoms, and specially the œdema. The mass obstructed the column of blood as it entered the auricle from the superior and inferior cavæ, and, as is common when there exists such obstruction, there was accumulation of water in the extreme parts of the body. This phenomenon is not for the first time noticed as a sequence of the separation of fibrine in the auricle. I have recorded in my previous lectures and papers a case in this respect precisely similar.

In the case with the details of which Dr. Wane has supplied us, we learn that, when the separation of fibrine is in the right auricle, the lungs, after death, are left bloodless, of milky whiteness, and emphysematous. This condition I have also described in previous lectures, and have explained that the cause of the emphysema lies in the destruction of balance between the circulating and respiratory systems; the balance of pressure between the blood and the air in the lungs is disturbed, the blood pressure is reduced, and the air which should be absorbed by the blood breaks into the connective tissue of the lung.

The two cases we have had before us have one other bearing. They exhibit two distinct conditions of disease under which the separation of fibrine may take place. In Mr. Wells's case there was, slight as were the symptoms by which it was manifested, a so-called inflammatory state following upon operation. In Dr. Wane's case there was partial stasis of blood, and separation of fibrine, after the manner which obtains in cases of dilatation of an artery—aneurism.

And now I am led naturally to the subject proper of this lecture—I mean the circumstances under which separation of fibrine from the other parts of the blood takes place. There seem to me to be four distinct classes of cases leading to separation.

1. The true acute inflammatory case. Type, acute pneumonia.
2. Case of stasis of blood. Type, aneurism.
3. The case of febrile cachexia. Type, malarial fever.
4. The case of acute flux. Type, cholera.

To arrive at the known facts of change in the constituents of the blood leading to separation of fibrine in these various states, it will be well, as a preliminary, to consider for a moment the relationships of these constituents in healthy blood.

We may take for this purpose the following as a standard of healthy blood. You will find in various analyses minor differences from this standard—differences arising not from any necessary fault or error of the analyst, but from differences natural to the specimen of blood subjected to examination; but it is practically a fair standard, and easily remembered.

In 1000 parts of blood:—

Fibrine	3
Corpuscle matter	135
Fat and salts	12
Albumen	70
Water	780
	1000

For the sake of bringing these constituent parts more clearly before the eye, I have here in these test-tubes placed the precise weights of each constituent of a thousand parts of blood. In the large tube there is freshly-drawn blood, 1000 grains. In the tube marked 2 there is the proportion of water, 780 grains; in tube 3 there is the proportion of albumen, dried at gentle heat until it has ceased to lose weight, 70 grains; in tube 4 there is the proportion of the saline and fatty matter of the blood, 12 grains; in tube 5 is the proportion of matter of corpuscles, also dried until it has ceased to lose weight, 135 grains; and in tube 6 is the proportion of fibrine, also perfectly dried and reduced to fine powder, 3 grains.

(To be continued.)

ORIGINAL COMMUNICATIONS.

AN OPERATION FOR THE RADICAL CURE OF HERNIA.

By J. FAYRER, M.D., F.R.S.E., etc.(a)

In the year 1862 I introduced into my wards a new and, as it seemed to me, more simple method of operating for the radical cure of hernia. I had previously practised that which is known as "Wütz er's," or some of its modifications, such as that by Mr. Redfern Davis, with some success; but owing to the complicated apparatus, and the tedium of the treatment, I was led to search for something that might prove as efficacious and, at the same time, more simple. I was indebted for the idea to Mr. Syme's plan of treating hernia, and that I have adopted and now practise, and which I propose to explain, is a modification of Professor Syme's method. I have, up to the end of 1866, operated on 67 cases in the Hospital, and have had several since; some of these cases are still under treatment, and those who are capable of being brought before the meeting I submit for your inspection, that you may have an opportunity of seeing the treatment in this stage. I also hope to show you certain cases that have been operated on some time ago, and have thus satisfactorily solved the doubtful question whether the operation, which at first is successful, can be permanent in its good results.

The object of the operation is to close or so far contract the opening in the abdominal wall on its inner peritoneal aspect that the protrusion of the hernia shall be limited, or altogether prevented; and the mode in which this is accomplished is by procuring adhesion or contraction of the margin of the opening, whether at the internal ring in oblique inguinal hernia, or of the direct opening in the other form. I believe that unless the operation effect this purpose it is not likely to be successful; and as it is not possible to make certain of always accomplishing this end, a proportion of cases will fail. I find that, out of the 67 cases operated on in the Hospital, 11 failed altogether, 9 were only relieved—that is, though not successful altogether, yet were so much improved that the hernia was controllable by a truss; one case only died; and in this instance, death was not due to peritonitis, but to erysipelas affecting the thorax; so that, although no doubt death was indirectly due to the operation, it was not the immediate result of it. Indeed, I know of no operation of importance attended with so little danger. Wound of the peritoneum does not necessarily involve dangerous consequences; more than once I have injured it by puncture, as proved by the free discharge of peritoneal fluid, but no ill result followed; in one case related in the Annals, this happened; the patient recovered and wrote to me from Ceylon some months after to say that he was perfectly well. The recoveries in nearly all the cases have been rapid, and the proportion of success most gratifying; when we consider the importance of a favourable result, it is impossible not to feel satisfied that so simple a Surgical proceeding should suffice so often to insure it.

I have placed the instruments with which I operate on the table for your inspection, and you will see that they are very simple; a plug of wood, with two ligatures, and a curved needle to pass the ligatures, through the abdominal wall; a second small piece of wood to knot the ligatures over, completes the apparatus. The method of performing the operation is simple, but it requires some care and confidence for its effective com-

(a) These remarks form part of an address on Surgery delivered March, 1868.

pletion. The fore-finger of the left hand, oiled, is inserted into the inguinal canal, and the scrotum invaginated is pushed before it up to the internal ring with firm and decided pressure. One ligature, strong and well waxed, is then threaded in the needle, the point of which is insinuated along the palmar aspect of the finger on its radial side, until it has reached the extreme apex of the invagination; it is then forced through the abdominal parietes, and appears on a line with the anterior superior spine of the ilium; about 1½ or 2 inches internal to it. The needle is then unthreaded and withdrawn, to be threaded with the second ligature, and again introduced, this time on the other side of the finger to be pushed through the abdominal wall as before; this time transfixing a short distance from the point where it first pierced, but emerging through the same opening in the integument.

The needle is again unthreaded and withdrawn. The plug is now pulled into the canal, the apex being tied firmly against the apex of the invagination, and the threads firmly knotted over the small piece of wood. The operation is thus completed.

The plug is left *in situ* for three or four days or more, until pus appears to flow freely from beside the ligatures. These are then cut and the plug withdrawn. The discharge is gently pressed out, a pad and spica bandage are applied, and the patient is kept in bed and cautioned not to strain at stool for some days; as soon as the wounds have cicatrised, a truss may be applied, which should be worn for some months, especially when any exertion is made; it may gradually be left off when the tissues have become firmly consolidated. The time occupied in treatment varies from a month to six weeks in ordinary cases; if there be much suppuration, and that have burrowed among the abdominal muscles, there may be delay, and counter-openings may be necessary, but such cases are the exception. The only one was that of a native who was attacked with erysipelas and died of pyæmia, the result of cellulitis.

During the period of the insertion of the plug, the bowels generally remain confined, and indeed for several days after its removal; should they act, the patients must be warned against efforts at straining.

I find, by referring to the records of my wards, that I have, up to the end of 1867, operated 67 times. In 1862, 15 cases, of which 10 succeeded, 1 was relieved, and 4 failed. In 1863, 8 cases, of which 5 were successful, 2 were only relieved, and 1 failed. In 1864, 8 cases, of which 6 were successful, 2 relieved. In 1865, 14 cases, of which 10 were successful, 3 relieved and 1 failed. In 1866, 7 cases, 5 successful, 2 failed. In 1867, 15 cases, of which 10 were successful, 1 was relieved, 3 failed, and 1 died. The fatal case, Ram Coomar Doss, was admitted on February 27, 1867.

Ram Coomar Doss, admitted on February 27, 1867, with inguinal hernia of left side; operated on March 5, 1867, died on March 26, 1867, of erysipelas. Extensive suppuration was set up between the muscles. Erysipelas took place in the chest, the cellular tissue sloughed, and free incisions were made to expose the sloughy tissues. After death, consolidation was found of two lower lobes of right lung, and one large pyæmic patch of upper lobe. There were no cardiac coagula.

There was thus a total of 67 cases, of which 46 were apparently successful; 9 were relieved; 11 failed altogether, and 1 died.

Before discharging any of those returned as cured, they were submitted to the severest tests, lifting weights, climbing up a pole, jumping, running up and down stairs without a truss; and unless they were able to bear this test they were not considered as cured. In many of these I fear the hernia may have returned afterwards. But I have seen some after a long interval, and am happy to say there can be no doubt that, in these cases, the improvement is permanent.

I have placed on the table a specimen illustrative of the mode in which the occlusion is effected; it was the case of a French sailor, who had been operated on some months before he met with an accident, which caused his death. You will see that the internal ring is perfectly closed. I have also brought into the room several patients who are recovering from the operation, and so far they promise to do well. I have also some persons who were operated on at different periods of time past, and you will be able to judge by them how far we may, in favourable cases, hope to succeed.

I would here repeat what I have often before stated, that I regard the operation as one of a somewhat uncertain character as to its results, but offering a sufficient prospect of success to warrant the Surgeon, and justify the patient, in attempting it.

NOTES ON THE

PHYSIOLOGY AND PATHOLOGY OF THE NERVOUS SYSTEM.

By J. HUGHLINGS-JACKSON, M.D., F.R.C.P.,
Physician to the Hospital for the Epileptic and Paralysed, and Assistant-Physician to the London Hospital.

On the Pathology of Chorea.

I think I can make clearer, or rather correct, certain arguments I have advanced as to the pathology of chorea. I am the more anxious to do this since Dr. Wilks, for whose opinion all will have the very greatest respect, says (*Medical Times and Gazette*, February 6, 1869, p. 136):—"A theory is held, which was first propagated by Dr. Kirkes, that embolic particles are carried from the heart to the spine, and there set up the irritation which is productive of chorea. This is, of course, a mere opinion, and not proved to be correct either in fact or in theory."

I will not now repeat the arguments I have advanced in the endeavour to prove that the seat of the pathological change is the region of the corpus striatum, until I have carefully reconsidered them. I wish now to speak of the nature of the local change.

It has been often urged as an argument against embolism being the cause of chorea that *anæmia* from plugging of vessels can scarcely lead to *increased* expenditure of force. If arteries be plugged, it seems certain that the nutrition of parts they supply will be *defective*; still, it does not follow that it will be *decreased*. For, according to certain physiological experiments, it seems that plugging of a small artery does *not* always cause *anæmia* of the capillary region to which the vessel should deliver arterial blood. On the contrary, it may cause *congestion*, and may even lead to extravasation. I must for the facts and arguments of this question refer the reader to MM. Prévost and Cotard's work, "Etudes Physiologiques et Pathologiques sur le Ramollissement Cérébral" (Paris, 1866), and especially to a section (p. 38) "De la congestion qui accompagne infarctus." I will only quote the last of the three conclusions from their experiments (italicising some words):—"Consécutivement aux *oblitérations artériales* il se produit habituellement de *l'hyperémie* et de la tuméfaction," etc. Dr. Ivan Poumeau has also published very interesting statements on the effects of plugging of vessels—"Du Rôle de l'Inflammation dans le Ramollissement Cérébral," 1866. To explain how increase of blood results from *blocking* of an artery is a very difficult thing. The first step towards an explanation lies in determining whether the increase of blood is of the venous or arterial kind. Rokitansky thinks the local congestion is produced by increased pressure on the collateral arteries; Virchow thinks it owing to return of blood from the veins. It is impossible to decide without further evidence when such men differ, except, perhaps, by the clumsy expedient of fitting the two views together—viz., that in the periphery of the congested spot there is arterial congestion, and in the centre venous congestion. As it seems to me, the local increase in quantity of blood, at all events, has an important bearing on the production of chorea and other symptoms implying increased expenditure of force. If it be venous, we may suppose that although nutrition may be carried on faster, it will lead to more imperfect and more easily decomposable nervous matter: or, if we suppose the nerve force is supplied from the blood to the nervous structure in the same way as recent investigators believe force is supplied to the muscles, the increase in the quantity of blood is still significant when associated with increased expenditure of force. I suppose we may fairly say that the general character of blood which is stagnant or slowly changed will be venous rather than arterial.

In a recent examination of the brain of a young man who died of chorea—the movements being almost limited to one side of the body—I found slight extravasations in several parts of the brain, chiefly on the surface, and by the microscope I discovered within numerous small arteries much granular matter. Some of these vessels suddenly bulged, and were evidently blocked up. I cannot attach much importance to one observation, especially as two eminent microscopists who looked at the specimens, although admitting the above appearances, would not give any opinion whether or not they were indicative of embolism. Although the movements in this patient's case were almost limited to one side, yet I found the appearances mentioned in the region of *each* middle cerebral artery, and thus it might be imagined that what I saw was not evidence of the pathological change causing the symptoms. I found similar

changes in other parts of the cerebrum. But the patient was delirious, and we should therefore expect to find changes widespread in the brain. He had been admitted for heart disease, and the chorea came on whilst he was in the Hospital. I shall publish this case when I have made myself more familiar with the appearances of the cerebral vessels of those dying in different ways.

The facts as to the effects of plugging will lead one to think more closely on the effects of the supposed contraction of vessels in health and in disease. The alteration of the calibre of arteries will be in health governed by the needs of the tissues to which they deliver blood. (See quotation from Beale, and reference to his views on reflex nervous actions affecting the vessels, August 15, 1867, p. 177.) If we are to suppose that blocking up of an artery leads to venous reflux, we may fairly conclude that its physiological closure by contraction will allow the same, and that patency next following (relaxation) will allow arterial afflux. Or, in other words, there will be in the units of the circulation a rhythmical action—practically a valvular one, as in the whole circulation. It is plain, however, that it will matter much whether the whole of the arteries of a region are contracted at once or one after another, especially in the case of the middle cerebral artery, a vessel which has little anastomosis.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LEEDS GENERAL INFIRMARY.

CASES OF SEVERE INJURY TO THE HEAD.

We are indebted to Mr. Charles Bradley, the House-Surgeon, for the following important cases, which illustrate the extreme difficulty attending the diagnosis and prognosis in cases of injury to the head:—

Case 1.—*Injury to the Head—Recovery—Permanent Deafness.*
(Under the care of Mr. NUNNELEY.)

Walter H., aged 26, a stonemason, living at Woodhouse, near Leeds, admitted October 10, 1868. Whilst working on the top of a three-story building, and raising a heavy piece of stone, he fell to the ground, owing to the tackle having given way and knocked him off. A man on the spot at the time says that the young man fell head foremost, and struck his right forehead against a projecting piece of iron, which had been inserted into a block of stone by which to raise it. He was brought in an unconscious state to the Infirmary. When seen he was sensible to pain and very restless. There is no paralysis; the right half of forehead is much swelled, as also is the temple of the same side; the right eye is swollen; there is bleeding from the nose, and every now and then the man coughs up blood, and when he does so blood is spirted out from a small wound situate about one inch and a half above right eyebrow. Some small portions of cerebral matter are also expelled when patient coughs; left pupil normal, right could not be seen. The wound is found to communicate with a comminuted depressed fracture of frontal bone. The patient's breathing is certainly not stertorous. After consultation it was decided not to interfere, and a pledget of lint soaked in blood was placed over wound. There was no bleeding from either ear, and no discharge appeared afterwards.

October 11.—Patient has passed a very restless night; has vomited several times a dark material, evidently blood; still insensible; pulse 64; catheter passed.

During two following days patient continued insensible; catheter had to be used; pulse slow and heavy. Calomel gr. ij. every four hours was given.

14th.—Bowels not moved. Ordered ol. croton. gutt. j.; bowels acted freely.

15th.—Lint removed from wound, which was found healed, and swelling of forehead much less. The patient is partially conscious. To take mist. albæ ℥j. 4tis horis.

Paralysis of muscles of right side of face gradually came on; patient could not whistle; swelling of right eye gradually subsided; vomiting disappeared, but persistent deafness was noticed as soon as patient recovered his consciousness. The young man from this point gradually recovered, the paralysis of right side of face remaining, as also the deafness, which is so decided that everything has to be written down on a slate. He reads books, and amuses the rest of the patients with his tales.

Made an out-patient December 15, at which time he could walk about without any unsteadiness (which there was when he first got up). His mental faculties seem in no way affected, but the total deafness remains.

Seen repeatedly since he went out; is stout and well, but cannot hear. When last seen—in February, 1869—was thinking of going back to his work.

Case 2.—*Injury to the Head—Partial Recovery—Death from Cerebral Abscess.*
(Under the care of Mr. WHEELHOUSE.)

Michael F., aged 40, a labourer, was admitted on the night of November 16, 1868, having been found by the police in an insensible condition in the street.

On admission the man was in a partially unconscious state, and evidently suffering from the combined effects of drink (of which he smelt strongly) and of an injury to his head. There was considerable swelling of left half of forehead. Eye was closed by swelling of lids, and there was a contused wound about one inch in length on the left eyebrow, which was, however, superficial, and did not extend down to the bone, and appeared to have been produced by falling upon the pavement. There was no injury elsewhere. Wound dressed.

November 17.—Patient quite sensible; thinks he was struck by somebody last night, but cannot remember; admits having taken freely of drink; swelling and blackness of forehead and left eye very marked. Ordered pulv. jalap. c. cal. gr. xv., and low diet.

18th.—Bowels have not acted; ordered mist. mag. co. ℥j. ter die; skin hot; tongue rather dry; pulse 100.

19th.—Bowels acted freely; swelling of forehead subsiding rapidly; patient asks to get up.

From this date patient improved gradually; the tongue, however, remaining somewhat dry in centre, with confined bowels and but little appetite. The man got so well that he was thought to be almost fit to discharge from Hospital.

November 26.—Patient seems heavy; does not sleep well at night, and frequently gets up; pulse full, rather slow; tongue dry in centre; appetite bad; an effervescing saline given every four hours, and pil. cal. c. col. gr. x. stat.

27th.—Patient rather more intelligent this morning; still complains of headache, and, though he has had a better night, yet the patients near him say he was very restless; loss of appetite still continues.

Patient remained much in the same unsatisfactory condition for the next few days; the wound was quite healed, and all discoloration about eye has disappeared, with the exception of slight blackness beneath left eye.

November 30.—Patient says he feels a little better this evening; seems rather delirious; has not had any rigors; tongue dry in centre.

December 1.—Early this morning patient was seized with rigors, which was quickly followed by an increasing comatose condition; when seen at 5 a.m. patient was convulsed, but right side was paralysed; stertorous condition of breathing; he attempts to answer questions, but cannot. This state soon gave way to one of complete coma, which remained up to the time of the man's death on December 2 at 3 p.m.

Post-mortem Examination.—Only marks externally are scar of wound in left eyebrow, and slight discoloration remaining beneath the eye. On removing soft structures from frontal bone, some remaining extravasation of blood over left half of frontal bone was noticed. No matter found; the pericranium stripped from the bone above the left eye rather more easily than natural, and showed the bone to have a greasy and slightly yellowish appearance; there was no fracture of the bone. Calvaria removed; dura mater corresponding to seat of injury congested, but healthy; vessels of surface of brain much congested; on removing brain some slight deposit of puriform lymph was seen at its base; at the left anterior lobe corresponding to injury the brain is soft and pulpy, and, on section, an abscess about size of walnut is discovered; substance of brain generally is softer than normal, and there is a good deal of turbid serum in ventricular space, with flakes of pus floating in it. In the posterior right lobe of cerebrum an abscess about size of nut was found. Other organs throughout body quite healthy.

It afterwards turned out that the man had been fighting with two young men, who struck him, causing him to fall heavily on his head in the paved roadway.

Case 3.—Injury to the Head—Recovery—Partial Deafness.

(Under the care of Mr. WHEELHOUSE.)

Charles S., aged 36, admitted October 23. Three days before, whilst raising some machinery to the third story of a mill, he fell to the ground from a height of thirty or forty feet, having overbalanced himself. He fell head foremost, and was carried home in an insensible condition; profuse bleeding from the right ear was noticed at the time.

When admitted, patient was sensible, but confused and slightly delirious; his right ear was full of dry blood; there was no discharge of watery fluid from the ear; no paralysis of face noticed; there was in addition fracture of the lower end of right radius, and very severe contusion of right knee and leg. The same night patient persisted in getting out of bed, and was violent when at all restrained. Ordered—mist. salin. eff. ʒj. 4tis horis, and pulv. jalap. c. cal. gr. xv.

24th.—Bowels not moved; pulse 108; skin hot; patient puts out his tongue when desired; it is rather dry. Castor oil ʒ ss. given, and at night, if restless, to have morph. inject. hypodermic. gr. ¼.

25th.—Had the injection of morphia; passed a very good night; bowels freely moved this morning; some drawing of left angle of mouth noticed; patient cannot whistle, and when he laughs on failing to do so, paralysis of right side of face is seen to be well marked.

Patient gradually convalesced; delirium passed off; the bruising of leg disappeared, but paralysis of face remained. He was made an out-patient December 20; continued to attend; the paralysis remained stationary for about three weeks, when it gradually passed off, and the man resumed his work at the end of January, saying "that he felt as well as ever he had done in his life." The hearing on right side was impaired, but still patient could hear loud conversation with right ear.

Remarks.—The three above-mentioned cases were in Hospital together, and it was particularly striking that in the two cases, where unfavourable prognoses were given, recovery ensued in each case, and yet, where the injury appeared but slight, a fatal issue should occur. The fatal case forcibly reminds us of the saying "that no injury to the head, however slight, should be made light of, and that the most severe injuries to the head are sometimes recovered from." It is curious that in Case 1 there should have been no external sign of fracture through the middle fossa of base of skull, as, from the deafness which has followed the accident, one would suppose that there was a fracture right across, or possibly a tearing of the nerves simply by *contre-coups*.(a) There was bleeding from the nose and down the pharynx, but this indicated some fracture through the anterior fossa of base. Another point worth mentioning is the simplicity of treatment adopted—viz., pad of lint placed over wound, and merely purgatives given. In Case 3 it is clear that the function of the facial nerve was interfered with in its passage through the petrous bone, but whether the paralysis supervened immediately on receipt of injury is not known, but it was not noticed for some days afterwards, leading one to suppose that a clot of blood gradually poured out was pressing on the nerve and so causing paralysis, or that some exudation of lymph had taken place from the fracture and produced the same effect; and one is strengthened in this opinion by the fact of the paralysis gradually disappearing, from which it would seem that absorption of the cause of pressure on the nerve gradually took place; whereas, had it been a fragment of the fractured bone which caused the pressure on the facial nerve, the paralysis would probably have been permanent.

LATERAL LITHOTOMY FOR MULBERRY CALCULUS —HÆMORRHAGE—RECOVERY.

(Under the care of Mr. HEY.)

[Reported by Mr. BRADLEY.]

Thomas G., aged 30, admitted January 4, 1869, with stone in the bladder. Lateral lithotomy was performed on January 7 in the ordinary way, excepting that the beaked knife was used, and afterwards a blunt gorget introduced into the bladder. An oxalate of lime calculus was removed after some little difficulty, caused by the forceps slipping off the round, hard, and spiculated calculus. The stone weighed 280 grs., and proved to be a very remarkable specimen of mulberry calculus, some of the spines being half an inch in length. There was some little bleeding during the operation, but before the patient's removal to bed it seemed to have quite stopped. Soon after being placed in bed the patient jumped up, in spite of the nurse, and strained over the night-stool, when a considerable gush of blood took place. This bleeding continued, every now and then stopping, and then the patient (who was a very unmanageable man) strained and started it afresh. After an hour had passed in this way, the patient was evidently becoming affected by the loss of blood, and it was also evident that blood was collecting in the bladder. His pulse began to flicker, and his hands became clammy and moist, and the restlessness became extreme. Mr. Hey determined to introduce a catheter down the urethra into the bladder, and then to plug the wound around it with strips of lint, a plan which he has adopted several times with the most satisfactory results. A No. 10 was introduced without difficulty, and tied in, and three strips of lint were then successively introduced up the wound so as to plug it effectually. The bleeding was arrested at once; some few clots of blood came through catheter; an opiate was given. Opiate repeated same evening, when urine was flowing freely through catheter.

One of the pieces of lint came away on the third day, and the others were removed the day following.

January 13.—Catheter taken out; urine passes freely through wound; patient cheerful, etc.

He gradually convalesced without any bad symptom, and was made an out-patient on February 19, when he passed all the urine naturally, the wound being all but healed. He has gained considerably in weight since the operation.

Remarks.—The plan of plugging here adopted is in no way a novel one, yet it is one not generally used, and, such being the case, I have thought the foregoing case an interesting one. I have seen this method tried once before in a case of Mr. Teale's, where the bleeding came on a few hours after the operation, with equally satisfactory result. It would seem to be particularly applicable in those cases where the hæmorrhage does not follow immediately at the time of operation, in which case the ordinary lithotomy tube wrapped with lint would doubtless be best; but when the bleeding comes on after some little time has elapsed, there is more danger in pushing a tube up the wound for fear of passing it between the bladder and rectum—an accident which I have myself witnessed.

COMPOUND COMMINUTED FRACTURE OF LEG TREATED BY CARBOLIC ACID—RECOVERY.

(Under the care of Mr. TEALE.)

[Reported by Mr. BRADLEY.]

John J., 31, admitted November 25, 1868, under the care of Mr. Teale. While working in a stone quarry, the man heard a loud report proceeding from a quarry on the opposite side of the road; he at once knew from experience that the noise was caused by the sudden snapping of the chain while very tense in drawing up a heavy block of stone. The patient tried to shelter himself behind a projection, but before he could do so he was struck on the outside of left leg by two links of the chain which had been thrown with tremendous force across the road. On admission there was a large lacerated contused wound over the middle of left fibula (like a cannon-shot injury), the fibula was smashed into small fragments of about three inches, and the tibia was broken transversely across. It was thought that the wound did not communicate with the fracture of the tibia.

The leg was placed on swing splint, and carbolic acid dressings applied. During the after progress of the case, some sloughing of the skin took place, but several portions which threatened to slough did not, and the sloughs assumed a leather-like appearance under the carbolic acid; the suppuration was not at all great, the sloughs seeming to form a protection for the parts underneath, and only separating very slowly. Several fragments of the fibula were thrown off, and eventually the wound quickly healed (when the carbolic acid was omitted) with ordinary red-wash dressing.

Union of the tibia gradually ensued, and the patient left the Hospital February 16 with the fracture of tibia firm, and the wound, which was at one time over three inches in diameter, all healed, with the exception of an ulcer about the size of a sixpenny piece. The interval in the fibula seemed to be filled up by a firm fibrous band.

Remarks.—The injury in this case was so severe that it was only after careful consultation that it was determined to try and save the leg. The carbolic acid dressings no doubt retarded suppuration, and diminished its extent when it did set in. It has been frequently noticed in this Hospital that if the carbolic acid dressings be continued in a healthy ulcerated wound the process of healing is very slow, and in this case this was very marked, for as soon as the carbolic acid was withdrawn

(a) The paralysis in this case was on the right side of face, the side affected by the injury (important fact; no explanation offered).

the wound cicatrised very rapidly. In speaking of the early treatment of severe compound fractures I may mention a plan in use here—viz., placing the limb on its outer side simply on a water pillow, without any splint; this treatment is also adopted in amputations of the leg with very great comfort to the patient. It is particularly useful in those cases in which the soft parts are damaged, and threaten to slough from the slightest pressure (as, for instance, when a railway wheel has passed over the limb). Mr. Wheelhouse has now a case of this kind in the Infirmary, where it was feared the integument would slough over the fibula; but by diffusing the pressure by means of a water-pillow placed under the leg, all danger from sloughing has now passed, and the case (a most severe one, which will probably be reported) promises to do well.

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Medical Times and Gazette.

SATURDAY, MARCH 6, 1869.

PROFESSOR HUXLEY ON THE PHYSICAL BASIS OF LIFE.

The theological world has been startled out of its sobriety by a lecture under this title delivered in Edinburgh one Sunday in November by Professor Huxley. The February number of the *Fortnightly Review*, in which it was published, has become famous. It has already passed through four editions, and, from the commotion the paper has excited, is not unlikely to pass through more. Let us see, then, what it is all about.

It is a paper on the subject of vital properties, in which the author maintains the intimate connexion between composition and properties, both in things which we call dead and in things which we call living. Briefly his argument runs thus:—

The simplest and most elementary form of living matter is that which we designate "protoplasm," the living unit by the aggregations and modifications of which all forms of animal and vegetable beings are constructed. It possesses, in common with all these more complex beings, three faculties which are directed (1) to the maintenance and development of the body, (2) to the effecting of transitory changes in the relative position of parts of the body, and (3) to the continuance of the species. Professor Huxley adds, "Even those manifestations of intellect, of feeling, and of will, which we rightly name the higher faculties, are not excluded from this classification, inasmuch as, *to every one but the subject of them*, they are known only as transitory changes in the relative positions of parts of the body." We have italicised a few words here because we shall have something to say about them presently. Agreeing in other faculties, the protoplasm of plants and animals differs in this one important particular—namely, "that plants can manufacture fresh protoplasm" (with its innate qualities) "out of mineral compounds, whereas animals are obliged to procure it ready made, and hence, in the long run, depend upon plants. . . . Protoplasm, simple or nucleated, is the formal basis of all life. . . . Thus," he sums up, "all living powers are cognate, and all living forms are fundamentally of one character. The researches of the chemist have revealed a no less striking uniformity of material composition in living matter." It is proteinaceous, or more or less albuminoid. "And now, what is the ultimate fate, and what the origin, of *the matter of life?*" (The italics again are ours.)

The author replies:—"All work implies waste, and the work of life results, directly or indirectly, in the waste of protoplasm." This waste, or loss by death of the protoplasm, and its removal in the form of carbonic acid, water, and urea (or ammonia), is restored, however, in man and animals by the absorption into the veins of dead and modified protoplasm derived from plants or other animals—whatever the modifications it may have undergone, they have not rendered it incompetent to resume its old functions as matter of life.

In seeking for the origin of protoplasm, we must turn to the vegetable world. The plant supplied with carbonic acid, water, and ammonia will "grow and multiply until it has increased a millionfold or a million-millionfold the quantity of protoplasm which it originally possessed." Nevertheless, supplied not with these compounds, but with their mere elements, the plant would die. "Plants are the accumulators of the power which animals distribute and disperse." These compounds are related to the protoplasm of the plant, as the protoplasm of the plant is to that of the animal. "These compounds, like the elementary bodies of which they are composed, *are lifeless*. But when brought together under certain conditions they give rise to the still more complex body, protoplasm, and this protoplasm exhibits the phenomena of life."

And now we come to the pith of Professor Huxley's discourse. Water exhibits certain *properties* or qualities very different from those of the elements of which it consists, and, we believe, though as yet we do not understand how it is so, that in some way they result from the properties of the component elements of the water. Thus one property is that of assuming a crystalline form at 32°. "We do not assume that a something called 'aquosity' entered into and took possession of the oxide of hydrogen as soon as it was formed, and then guided the aqueous particles to their places in the facets of the crystal. . . . What justification is there, then, for the assumption of the existence in the living matter of a something which has no representative or correlative in the not living matter which gave rise to it? What better philosophical status has 'vitality' than 'aquosity'?" The influence of pre-existing living matter is something quite unintelligible; but so also is the *modus operandi* of the electric spark, which occasions the union of oxygen and hydrogen with the assumption of new qualities in the compound. "If the properties of water may be properly said to result from the nature and disposition of its component molecules, I can find no intelligible ground for refusing to say that the properties of protoplasm result from the nature and disposition of its molecules." In other words, "all vital action may be said to be the result of the molecular forces of the protoplasm which displays it."

Professor Huxley then proceeds to point out that the terms of these propositions are distinctly materialistic, but adds:—"Nevertheless two things are certain—the one that I hold the statement to be substantially true; the other, that I, individually, am no materialist, but, on the contrary, believe materialism to involve grave philosophical error." And he then goes on to show the path by which he delivers himself, and by which others may find their way out of the materialistic slough. In his own words it is this:—"After all, what do we know of this terrible 'matter,' except as a name for an unknown and hypothetical cause of states of our own consciousness? And what do we know of that 'spirit' over whose threatened extinction by matter a great lamentation is arising, like that which was heard at the death of Pan, except that it is also a

name for an unknown and hypothetical cause or condition of states of consciousness? In other words, matter and spirit are but names for the *imaginary* substrata of groups of natural phenomena."

We confess that this path out of the difficulty is not that which we should take, although ours would be nearly parallel to it. Professor Huxley, in his repudiation of materialism, seems to us to take refuge in Berkeleyism and something more. We may be mistaken, but if we are we must lay our error upon his unfortunate use of the word "imaginary," for by its use he would seem to imply a doubt or a denial of the *reality* of the substratum of the phenomena both of matter and spirit. Is it literally true that man lives but "in a vain show?" It is to be observed that this lecture treats on subjects which lie on the borderland of physics and metaphysics. As a physiologist Professor Huxley is quite logical in representing the objective phenomena of Nature, with which he has alone here to do, by materialistic formulæ and symbols, but when he approaches the confines of her domain he should be especially careful not to ignore facts which are no less truths because they are subjective. It is quite true that we cannot embrace in our mental grasp the substratum either of matter or spirit; we know them only in and through their manifestations to our consciousness, the one indirectly by the medium of our senses, the other directly without their assistance. But have we any doubt in the world of the real existence of such a substratum? As readily should we doubt our own existence. Force, whether mechanical, chemical, or vital in its form of manifestation, is to be studied by the physicist, as Professor Huxley studies it, objectively as a quality implanted in matter by its Creator and varying in its mode of exhibition with the variations of molecular arrangement. But it is to be studied also as it is exhibited to our own consciousness alone, and then it must be studied subjectively. Attraction in its various forms is a quality which we must believe to be inherent in a material substratum. No less must we believe volition to be a quality inherent in a non-material substratum. In the non-material world volition stands alone as a force which we are free to exert in any direction we choose. Professor Huxley says, "Volition counts for something as a condition of the course of events." We should say it counts for a great deal. It is the link between the material and the immaterial—it is the force by which the non-material substratum of our nature operates through matter upon the material substratum of the physical universe. The theological mind is jealous as ever it was of the inferences of the physical philosopher. Honestly we believe that this jealousy is without just basis. But nevertheless the philosopher cannot be too cautious in his method of propounding his conclusions, lest he should stir up into a flame those slumbering embers of animosity which it is to the interest of humanity and religion should be quenched for ever. We regard the expression "matter of life" as thus unfortunate.

A FRENCHMAN'S VIEWS ON BEER.

Dr. Coulier has recently published an excellent monograph on beer(a) considered from a Medical point of view. In regarding beer therapeutically, we have to consider it in relation (1) to the amount of alcohol which it contains, (2) to its bitter and aromatic principles, and (3) to its nutritive substances.

Less rich in alcohol than even the poorest wines, it holds an intermediate place between the latter and purely watery drinks. It presents, according to its mode of preparation and composition, a continuous scale of more or less alcoholic drinks, from porter and ale down to small beer, containing little more than one per cent. of alcohol. Its bitter principles render it tonic and aperient; while the somnolence and heaviness that follow an over-allowance of this fluid are due to the action of the essential oil of hop. The hop belongs to the same family which yields the haschisch so much used in some parts of the East; its odorous and slightly poisonous properties must be taken into account in attempting to appreciate the hygienic influence of a drink which is usually taken in somewhat copious draughts. "Beer-drinkers," says Dr. Coulier, "like drunkards and opium-smokers, present a special and characteristic appearance; the effects, however, of this drink when taken in excess are far less serious." Our author holds—and we perfectly agree with him—that of all fermented drinks, beer is the one whose taste *se marie le plus agréablement* with the use of the pipe. Beer must be considered in the light of an alimentary drink. In every hundred parts of beer are five of extract containing a little nitrogenous assimilable matter and salts favourable to nutrition, but consisting mainly of respiratory food. Having thus briefly noticed the action of each of the principles entering into the composition of this drink, it is expedient to consider their combined effect. The most distinctive property of beer, says our author, is to excite an abundant diuresis; and, in illustration of this statement, he begs his readers *de jeter un coup d'œil au voisinage des brasseries allemandes, où les buveurs ne se dérangent guère que pour satisfaire un besoin sans cesse renouvelé.*

The special action which beer-drinking induces in persons suffering from an inflamed urethral mucous membrane affords evidence, as our author believes, of its unperceived, although not less real, action on that mucous membrane in a normal state. The excessive use of beer, especially by novices, will often excite a mild urethritis, which readily yields to treatment. Moreover, beer is known to exert a marked influence on the conjunctival mucous membrane, especially when there is chronic conjunctivitis. In consequence of the large quantity of water which it contains, beer is far less suitable than wine for keeping up the strength in cases of prolonged exertion—as, for example, when troops are marching and exposed to continuous muscular action.

Taken in moderation at meal times, beer is an excellent drink, whose action on the digestive process may be increased if necessary by a little wine. "If," says our author, "fermented drinks have become one of the necessities of civilisation, a prudent regard for health should make us as far as possible reduce the excitement which the alcohol occasions. In this respect beer presents a great advantage over wine. Thus a half-bottle of wine containing 12 per cent. of alcohol, which is the common allowance for an adult, contains 375 grammes of wine, and consequently 45 grammes of anhydrous alcohol. A bottle of beer containing 4 per cent. of alcohol is equally satisfying, and contains only 30 grammes of alcohol. Hence, supposing two meals are taken daily, the beer-drinker daily imbibes 30 grammes less of alcohol than the wine-drinker; and this difference amounts in the course of the year to nearly 11 kilogrammes, or 14 litres (equivalent to 24 lbs., or 3 gallons), of anhydrous alcohol. On the other hand, it may be urged against the use of beer that it excites interminable libations. It is impossible, says our author, for the confirmed beer-drinker to know when his thirst is extinguished; he sits persistently at his table drinking on till, by a wise regulation, the beer-houses are cleared at 11 p.m. by the police. To get completely drunk on ordinary beer (except on the powerful English ales) is almost an impossibility, the beer, at most, producing a heavy somnolence, followed by deep and prolonged sleep. While ordinary drunkenness occasions emaciation, the abuse of beer excites a tendency to fatness; but the fat that is produced is not of a healthy nature, but (as our author expresses it) it is a sort of passive obesity.

If any reader of these pages who combines a taste for beer with a fair amount of chemical knowledge would devote a summer's vacation to the investigation of the principal beers of Europe, he would be doing good scientific service in a very agreeable line of investigation. He should especially study the Bavarian beers, which he will meet with not only in Bavaria but in Wurtemburg and the Duchy of Baden, of which the

(a) Article *Bière* in Vol. IX. of the *Dictionnaire Encyclopédique des Sciences Médicales*, p. 868. Paris: Asselin. London: Williams and Norgate.

most celebrated are *Boek-bier* and *Salvator-bier*. In Belgium, he should devote especial attention to *Lambick*, *Faro*, *Bière de mars*, and *Vytzet*. Other Belgian beers that he might taste and analyse are Peeterman (brewed at Louvain) and Gulde-beer (brewed at Diest). Strasbourg, Lille, and Paris should be taken in his tour, and he must not neglect Austria, whose beers received special commendation from the Commissioners of the late Paris Exhibition, and one variety of which—that of M. Dreher—is now largely consumed in England.

Assuming that we have secured a thirsty soul who will undertake the suggested commission, let us venture to give him a hint or two as to his duties. We assume that, of course, he knows how to determine the specific gravity and the amount of alcohol in his samples. Besides this, it would be well if he could determine the percentage of nitrogen in the extract left on evaporation. In good Strasbourg beer made exclusively of malt and hops, Payen found that a litre, which corresponds to 1000 grammes of water, contained 0·81 of a gramme of nitrogen, corresponding to 5·26 grammes of albuminoid matters; it likewise contained 45 grammes of alcohol and 0·91 gramme of inorganic salts.

The extract yielded by evaporation is so complex as to present serious chemical difficulties. Sugar and dextrine, in varying proportions, contribute to its composition, the former communicating to the beer its sweet taste, while the latter communicates the property of not being dry to the mouth (*de ne pas être sèche à la bouche*)—an expression employed by beer-drinkers to signify that if, after having swallowed a draught of beer, the tongue is gently rubbed against the palate, there is a sensation of softness, as if gum-water had been taken. This quality is highly estimated by connaisseurs, and the excellent Austrian beers exhibited at Paris in 1867 possessed it in a high degree. In addition to the sugar and the dextrine, the following are enumerated by our own best chemists as ingredients of the extract:—(1) Tannic and gallic acids, (2) the bitter and resinous matters of the hop, (3) fatty matters, (4) ammoniacal and earthy salts, (5) lactates and free lactic acid, (6) acetates and free acetic acid, (7) pyrogenous products due to the coloured malt, (8) malates, (9) succinic acid, (10) glycerine, (11) sulphurous acid (if the beer has been sulphured), and (12) pyrogenous oils (when preserved in bottles whose corks are resined). For further chemical details our commissioner may study the special treatises of Mulder (translated into French) and Lacambre.

Lastly, he must be endowed with a good natural taste, so that, on swallowing each mouthful of beer, he may be able to isolate and successively examine the tastes of the various bodies entering into the composition of the fluid, such as—

1. The saccharine taste.
2. The acidulous taste, due to the carbonic acid.
3. The acid taste, due to the free acids and their acid salts.
4. The alcoholic taste.
5. The bitter taste of the hop. It is essential to be able to distinguish, by previous trials, between the bitter taste of the hop and the bitter tastes of substances used to replace it—often very difficult.
7. The special bouquet due to hops and malt.
8. Extraneous tastes and bouquets, as those of coriander, ginger, etc.

It is only by successively studying these different tastes in good beer that our commissioner can hope to be able to pronounce on the value of the many fluids which it will be his pleasant duty to investigate.

THE WEEK.

TOPICS OF THE DAY.

The next question of importance which will be discussed in the Council of the College of Surgeons is one on which there will be no division of opinion outside the College conclave. Mr. Curling has given notice of a motion to the effect that all candidates for the Membership who do not possess a diploma or licence in midwifery shall undergo an examination in midwifery at the College. We presume that it is the intention of the motion to except from further examination in obstetrics all candidates who have already passed such an examination in midwifery as is given by the Royal Colleges of Physicians and by the Apothecaries' Society, and that it is not intended merely to exclude the possessors of special diplomas in midwifery such as those granted by the College itself, by the Dublin Colleges of Physicians and Surgeons, or by the Rotunda and Coombe Hospitals. We suppose that it is intended by the proposer of the motion that the course which the College has so wisely taken with regard to Medicine should be followed in the case of midwifery, and that those of the candidates who have not given a public proof by examination at other examining boards of their fitness to engage in midwifery practice shall be required to do so at the College before receiving the diploma. If this be the aim and scope of Mr. Curling's motion, we sincerely hope that it will be carried. It will be allowed on all hands that on public grounds every Medical or Surgical Practitioner, whether he be in the habit of practising Obstetric Medicine or not, should, at least, be acquainted with its theory and practice. Although practice with a single diploma is happily becoming far less common than it was a few years ago, there is no doubt that still a large number of Medical students who go to the colonies or take situations as assistants or Surgeons to merchant vessels content themselves with obtaining the single diploma of the College. It requires no argument to prove that it will be for the advantage of such candidates, as well as for that of the public, that they should be obliged to pay some special attention to obstetric practice. We hope that if Mr. Curling's motion be accepted by the Council the principle embodied in it will be extended to the Fellowship examinations. The father of modern Surgery, Ambrose Paré, was the best practical accoucheur and improver of the art of midwifery of his time, and the Council of the College are well aware that the foremost provincial Surgeons, with scarcely an exception, engage in midwifery practice. The only objection which we can suppose urged against Mr. Curling's motion is that it will tend to diminish the number of candidates for the special licence in Midwifery of the College, and probably in time abolish that licence altogether. But even if this be the case, the Profession, we think, would regard the result with equanimity. One licence struck off schedule A of the Medical Act would not be any loss.

The Committee appointed by the Royal Medical and Chirurgical Society on the amalgamation of the Medical societies have delivered their report, and we may expect that a full discussion of the question will now take place. For ourselves, we cannot see any obstacle to the formation of an Academy of Medicine to which all the present Medical societies should be affiliated, except it be the narrow interests and jealousies of the societies themselves. If, as we believe, the public status of the Profession would be improved, the usefulness of the societies widened, and their prosperity increased, by being grouped together under one roof and mutually supporting, it seems a pity that any minor consideration should be allowed to interfere with a fair and liberal scheme of amalgamation. We believe that, were the societies united in supporting such a scheme, Government would lend its aid, and the result would be that the inauguration of the London Academy of Medicine would mark a fresh era in the history of the Medical sciences.

The annual meetings of the Medical and Chirurgical and Medical Societies have taken place during the past week. Mr. Solly, the hardworking and zealous President of the Medical and Chirurgical Society, who has been foremost in advocating the amalgamation scheme, is succeeded by Dr. Burrows, who will enjoy the double honour of presiding over the most important Medical Society of the metropolis and over the General

Medical Council of the three kingdoms. The general Practitioners who are Fellows of the Medical Society must feel complimented by the fact that, after the exceptionally brilliant Presidency of Dr. Richardson, a gentleman in general practice, Mr. Peter Marshall, has been elected to the chair. The award of the silver medal of the Society, for papers read before it, to Dr. Day, of Stafford, will not fail to be appreciated by the non-resident Fellows. Mr. Mason, on his retirement from the work and office of Secretary, takes the Society's other silver medal. He is succeeded in the Secretariat by Mr. Wickham Barnes.

The discussion on the question of Hospital administration, which was commenced at the meeting of the Metropolitan Counties Branch of the British Medical Association on Thursday last week, stands adjourned until Wednesday evening, March 17, when it will be resumed at the rooms of the Medical Society of London, George-street, Hanover-square. As far as the discussion has hitherto proceeded, it has failed, we think, to offer any satisfactory solution of the principal difficulties. Mr. Ernest Hart introduced the subject in a very sensible and temperate address, arranged under the following heads:—

"1. Whether any and what steps can be taken to diminish the abuse of Medical charities and to arrest the evils of gratuitous Medical service in Hospitals.

"2. Whether any and what steps can be taken to abolish the privileged system of admission of patients by governors' letters.

"3. Whether any and what steps can be taken to complete the special departments in the Hospitals with schools, and to discourage the multiplication of small and special Hospitals.

"4. Whether any and what steps can be taken to promote a uniform system and publication of Hospital accounts, and of the records of mortality and sickness in Hospitals."

He addressed himself to each of these questions. The plan he suggested to remedy the evils of gratuitous Medical service in Hospitals was to exclude from Hospital relief all persons of sufficient income to pay for Medical advice, and to encourage payments more or less, and probably varying, from those whose incomes were below the scale of exclusion. This system would lead to the payment of the Medical officers of Hospitals, and to the cultivation of habits of providence among artisans and other persons of that class, and the multiplication of provident Dispensaries outside the Hospitals. He advocated the rejection *in toto* of the system of governors' letters. The question of special Hospitals needed, he said, from both sides impartiality and good humour for its discussion, and that, whatever might ultimately be done, existing interests should be regarded. But he condemned the multiplication of these Hospitals as injurious to Medical instruction, leading to a multiplied expenditure, and impairing the tone of Medical ethics. He advocated a uniformity in the publication of accounts and in the records of sickness and mortality, and, in conclusion, he moved for the appointment of a committee to collect information and report. He added that he thought it would be necessary ultimately to apply to Government for a Royal Commission to inquire into the whole subject.

Now, if any plan could be devised by which all persons of sufficient income to pay for Medical advice could be excluded from Hospital relief, many of the evils of the present system would undoubtedly disappear. But how is this to be done? We should have but little faith in a system of district officers, assisted by visitors, such as Dr. Hawksley proposes; and to demand certificates, or to question persons presenting themselves for Hospital relief, or to admit or reject according to dress and appearance, would be simply to encourage fraud. Again, who is to say what is a sufficient income to pay for Medical advice? As to the proposal of small or varying payments from patients to remunerate the Medical officers, it would simply amount to the creation of a privileged class of Medical men to compete, on the vantage ground which a Hospital affords, with the general Practitioners of the neighbourhood for the practice amongst the lower middle classes. In the speeches which followed Mr. Hart's paper the subject was discussed by the majority perhaps rather from the position of the Hospital Physician or Surgeon than from that of the private Practitioner; but the speakers were unanimous as to the necessity of reform. We fear very much, however, as we said on a previous occasion, that any real reform must come from the public, and will not come from the Profession. A Royal Commission might be of use in collecting and publishing evidence, and by indicating the line in which alteration may be possible. The Medical Profession, indeed, are masters of the position, if only they would act with unanimity and with fair regard to the interests of all qualified Practitioners. But nothing but united action on the part of the whole Profession would suffice, whilst in the face of the existing system the hope of such action seems chimerical. Individual efforts are powerless, and would only probably recoil upon the heads of the rash reformers, who would find themselves simply excluded from the small chances of success which the present system affords.

The arguments for and against Mr. Gladstone's proposal to devote a large part of the property of the Irish Church to the purposes of lunatic asylums, asylums for the blind and imbecile, county asylums, and the training and maintenance of nurses, are of too political and ecclesiastical a nature to allow of their being discussed in a Medical journal. We would only notice, with regard to the last item we have mentioned—the training and maintenance of female nurses—that it is intended to supply an acknowledged deficiency in the Medical Poor-law Service. In the course of his speech on Monday night, Mr. Gladstone said:—

"There is a provision urgently needed in Ireland, and that is a supply of properly trained nurses for the use of paupers and for the poor who are above the paupers. The Irish Medical men are known for their skill, but they are scattered over the country much more thinly than in England. The unions are large, and the public Medical officer cannot be in two places at once. I am sorry to be informed upon good authority that the injuries to health, and even to life, which result from the want of skilled nurses, especially for women in labour, are grievous. The Poor-law guardians shrink from incurring the necessary expense, and make the requisite provision in very few cases; but for a sum of £15,000 nurses might be provided all over Ireland."

Now, it certainly seems to us that if the money of the Irish Church is to be applied for such purposes, it would be better to remedy the evil by increasing the number of Poor-law Medical officers and by paying them better than by creating an inferior order of female Medical Practitioners paid by the Government, for this seems to be the meaning of Mr. Gladstone's skilled nurses. Of course, we do not dispute the fact that good nursing would be a great boon to the pauper population of Ireland, but it should not be put in the place of scientific Medical treatment. The paucity of Dispensary Doctors in Ireland simply depends upon the inadequate pay they receive. The proper remedy is clearly to raise their pay and increase their numbers. The landlords are to be relieved of that portion of the county cess which has hitherto been applied to the maintenance of the county Infirmaries. We at least hope that the Medical men of Ireland will be relieved of some part of the burden of unrequited or badly requited labour which has been so long borne.

The friends of Sir Dominic Corrigan are sanguine as to his success at the coming election for Dublin. In fact, his opponents allow that, unless a very popular candidate present himself, Sir Dominic's return is certain.

Last week a deputation consisting of some of the leading Fellows of the Royal College of Physicians, the Medical Officer to the Privy Council, and others, headed by Sir Thomas Watson, had an interview with Mr. Lowe for the purpose of obtaining his consent to a distribution to every Medical Practitioner in the United Kingdom, at the public expense, of the New Nomenclature of Disease published by the College of Physicians.

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Sir Thomas Watson introduced the subject to Mr. Lowe in a speech of peculiar grace and fitness. In it he urged the gratuitous services rendered to the State by Medical men. He said:—

"The Medical Profession in this country, taken altogether, is a very needy profession. Most or many of the men who labour in it in the provinces have nothing whatever to spare; live a painful hand-to-mouth life; of very many of them it may be said, as was said of Robert Levett in the last century—

'The modest wants of every day
The toil of every day supplies.'

These men are nevertheless called upon for gratuitous service to the State. They furnish to the registrars-general, at the behest of the Government, certificates of death, which is ubiquitous as they themselves are; and they thus acquire, as we think and urge, something like a claim for the small boon which we are asking—not for ourselves personally or corporately, but for them, and through them for the nation. It is hard, sir, in our opinion, that these men, having no special interest in the matter, should be expected not merely to supply, at some expense of time and trouble to themselves, the requisite certificates, but to purchase at their own cost the means whereby alone they can make their returns complete or useful. It is an expense to which we, sir, the joint producers of the work, are not equal. We ask you to give this little boon to the civil servants of the Crown in the Medical Profession throughout these realms, as it has already been given to the servants of the Crown other than civil."

The grounds on which Sir Thomas based his petition are only too real. We regret to say that Medical men are not rich. But if justice were done them by the Government and the public—if, for instance, they were not obliged to give certificates gratuitously for the public good—there would be no occasion to petition the Chancellor of the Exchequer to present them with a book which is to be purchased for half a crown.

In consequence of the complaints that have been published as to the management of St. Luke's Hospital, the Committee resolved at their last meeting that a letter should be addressed to the Lord Chancellor, requesting him to cause an independent inquiry to be made as to the condition and management of the Hospital.

A man was convicted at Warwick last night for blinding the guard of a train by throwing a quantity of creosote in his eyes, stealing £65, and then making his escape by jumping off the train whilst it was in motion. The rate at which the train was travelling is not stated.

An inquiry into the death of the patient at the Worcester Infirmary from the administration by mistake of carbolic acid as an enema has taken place. The case seems to have been one of pure carelessness on the part of the dispenser, who, having neglected to make the prescription up on the day on which it was ordered, dispensed it on the following day from memory, and at haphazard put on the bottle the name of the deceased. At a special meeting of the governors a resolution was adopted, with but two dissentients, to the effect that the deceased patient's death had been caused by the gross negligence and misconduct of the dispenser, and recommending that he should be prosecuted for manslaughter. There can be no doubt, however, that the chief cause of the accident was the ambiguous meaning of the word "injection."

The *Birmingham Daily Post* of March 3 contains the termination of the correspondence in reference to Mr. John Clay and the reduction of the Poor-law Medical Officers of Birmingham. Dr. Rogers, the Chairman of the Poor-law Medical Officers' Association, writes to acknowledge, in handsome terms, that he has been misled in stating that the reduction of the parish Medical officers had been moved in committee by Mr. Clay, and expresses his sincere regret at having misinterpreted his action in the matter—an apology which Mr. Clay as frankly receives.

The Special Gas Committee appointed by the Court of Common Council have recommended that the salary of the Gas Examiner of the City of London shall be £500 per annum, and have submitted the names of Mr. Charles Heisch, F.C.S., and of Dr. John Whitmore as candidates for the appointment. The election of one of these candidates will take place at the next meeting of the Court.

A case of fatal poisoning by strychnine dispensed in mistake for sugar recently occurred at Gravesend. The deceased was a child of a year and nine months. It suffered from "teething." Its father went to a chemist named Rosseter, and procured two teething-powders, one of which was administered at bedtime. The child died at a quarter past one with the usual symptoms of poisoning by strychnia. It appeared that the bottle from which the poison had been dispensed was rightly labelled, but the word "strychnia" had been mistaken for "saccharum." The mistake was discovered soon after the father of the child had left the shop, but, as he was not known, it was impossible to trace him. Mr. Rosseter is reported to be duly registered.

GREENWICH HOSPITAL.

Last week we noticed Dr. Frederick J. Brown's pamphlet on "The Conduct of the Admiralty in reference to the Revenues of Greenwich Hospital." He shows how the funds that belong to distressed sailors have again begun to be diverted into the pockets of the superior officers of the navy by a government which obtained power in 1865 to correct the abuses of the Hospital, and "to provide for the better administration of its revenues." It is quite incomprehensible to us how the present Admiralty could so rapidly have fallen back into the old paths and have instituted a highly paid sinecure for the sole advantage of an admiral, whose class is already richly endowed out of the funds intended for the benefit of aged and diseased seamen; but the fact has been accomplished without a moment's delay. Dr. Brown has also shown that the Hospital duties have been performed without the appointment of an inspector-general, which was provided for three years since by an order in Council, not only to the injury of those officers, but to the deprivation of the sick of the experience of an officer of the highest Medical rank. On these facts he founds a tangible grievance of the Profession in the navy, since the inspectors-general are deprived not only of pensions like admirals, but of employment which Mr. Childers promised the House of Commons should not be taken away. There is a complete stagnation among the naval Medical officers of above twenty years' service, from there being so little chance of promotion for the staff Surgeons, owing to the small number of appointments in the higher ranks. This is becoming more and more felt, and loudly spoken of as destructive to zealous service. We can only look at this as a misfortune to a public service in which our Medical brethren have already too many grounds of complaint. We shall be surprised if the Government be able to explain this relative injustice, by showing a necessity for this new sinecure out of the funds of Greenwich Hospital for the benefit of the admirals, while, on the score of economy, they deprive the place of its due proportion of Medical men.

RECEPTION OF MEDICAL GRADUATES OF GLASGOW AND ABERDEEN BY THE LORD ADVOCATE.

On Wednesday afternoon a numerous and influential deputation of the Medical graduates of Glasgow and Aberdeen waited, by special invitation, on Mr. Moncreiff, Lord Advocate for Scotland and the joint representative of the two Universities. The deputation consisted of the following gentlemen:—Dr. Bryson (the Director-General of the Naval Medical Department), Dr. Stewart (late of Middlesex Hospital), Dr. Greenhow (of Middlesex Hospital), Dr. Silver (of Charing-cross Hospital), Dr. Murray (of Middlesex Hospital), Mr. Couper (of the London Hospital), Dr. Forbes Winslow, Dr. Murie, Dr. Winn, Dr. J. Ford Anderson, Dr. Webster (of Dulwich), Dr. O'Bryan, Dr. Ramsay, Dr. A. Simpson, Dr. Caskie, Dr. Sutherland, Dr. Maclean, Dr. Jephson, and Dr. Vinen. Of gentlemen graduates of other Universities there were present Dr. Sibson, Dr.

Tilbury Fox, Dr. Thompson Dixon, and Mr. Maerae Moir. His lordship explained that he had asked his Medical constituents to call upon him, first that he might thank them for the honour they had done him in returning him as their representative, and, secondly, that he might acquire a knowledge of what was specially wanted by Medical men. He had asked them to come, therefore, that he might obtain this knowledge, which he could not otherwise well obtain; and he hoped that whatever expressions fell from him might be understood as relating to himself alone, and not to the Government of which he was a member. Dr. Stewart then proceeded to lay before Mr. Moncreiff certain matters which had been arranged at a preliminary meeting. The first of these was a recommendation that a new Medical Act should he obtained as speedily as possible, and that this Act should give full powers to the Medical Council to enforce their decisions. A point specially insisted on was that the new Act should contain an effective penal clause which would enable the Council to deal with impostors; but there was some little difference of opinion as to whom the clause should be directed against, whether quacks of every description, or only against those who assumed Medical titles which they did not possess. It was also urged that there should be some provision made for the more direct representation of the general body of Medical Practitioners in the Medical Council. Dr. Silver suggested that the plan of electing the representatives of universities, not by the Senatus Academicus, but by the general body of the registered Medical graduates, might have this effect without increasing the numbers of the Council, already a somewhat unwieldy body. In the case of licensing bodies not being universities, the same thing might be done by the registered Fellows, Members, and Licentiates. Another matter to which attention was drawn was that, should the new Medical Act permit the more general recognition of foreign degrees, which it is understood is in contemplation, there ought to be some central examining board attached to the Medical Council, that the value of these qualifications may be fully tested prior to registration. Sympathising with their Medical brethren in Scotland, the meeting also urged on the Lord Advocate the propriety of doing away with the power of dismissing Poor-law Medical officers, now resting with the local Poor-law Boards, without the possibility of any appeal to the central authority. This, the Lord Advocate assured the meeting, had already been considered, and that his opinion was that steps should be taken to remedy the condition of affairs referred to. On another point laid before him Mr. Moncreiff was not equally explicit. The grievance of a penal clause in the Scotch Registration Act, there being at the same time no remuneration provided for the labour and trouble of filling up and signing death certificates, was urged, and a repeal of this clause, or a payment for the work done, was recommended. Mr. Moncreiff stated that he was now concerned in an inquiry into the whole matter of registration, and that he would take a future opportunity of laying the results of his investigations before his constituents. The meeting also urged on the Sanitary Commission and its extension to the whole kingdom. It has been in abeyance since the formation of the present Government, several of whose members were thus compelled to resign their seats on the Commission. It was also suggested that the appointment of Dr. Stewart, who had done such good work in the cause of sanitary science, to one of the seats thus vacated, would he acceptable to the whole Medical Profession. Dr. Winn suggested the propriety of doing away with the stamp duty leviable upon patent medicines as being a direct recognition of quackery. This point was warmly taken up by the meeting generally, and urged upon the Lord Advocate. After mutual expressions of goodwill on the part of constituents and representative, the meeting broke up.

By this act of courtesy, Mr. Moncreiff has done much to ingratiate himself with his Medical constituents. He has not bound himself to do anything, but when the time for action arrives, he will be expected to put himself on the side of Medical right, if not of Medical might, and he can rest assured that, if he do so, his deeds will not be forgotten should he again appear a candidate for the representation of Aberdeen and Glasgow.

THE CAUSE OF PNEUMONIC CREPITANT RALES.

Dr. Austin Flint, who is well known on both sides of the Atlantic as the author of an excellent text-book on the practice of Physic, and on the other side of the ocean as a most careful clinical teacher and auscultator, has contributed to the February number of the *New York Medical Journal* (which, by the bye, is rapidly assuming a high place in American literature) a valuable article on the above subject. The cause of the crepitant râle has long remained unsettled. Laennec likened it to the rubbing of a lock of hair against the ear, but attributed to it a moist origin in the bursting of minute air-bubbles. This theory has been generally maintained, although many years ago now a different notion was advanced by Dr. Carr in America, who attributed this peculiar sound to a partial adhesion of the walls of the air cells, owing to the glutinous plastic material by which they are covered in the early period of pneumonia. This adhesion would be destroyed by the introduction of air, which would also account for the sound being heard during inspiration only. This idea has now been adopted by Wintrich Skoda and other writers of eminence in Germany. The point to which, however, Dr. Flint drew special attention was that the sound might be exactly imitated artificially by a substance not long ago described in our columns—the so-called india-rubber sponge. If this be gently squeezed to express the air from its cells, and then to expand by its own elasticity, a sound exactly imitating a crepitant râle is produced, whilst if the cells be filled with fluid, a sub-crepitant or partly moist râle, such as that which follows minute crepitation in pneumonia, is thereby produced. Dr. Flint points out that this discovery may be utilised by enabling students to familiarise their ears with the peculiar characters of the two sounds.

OVER-TRAINING.

For some time past an interesting controversy has been going on in the columns of the *Times* respecting the influence of over-training. It had its origin in the training of racehorses, but has now assumed a more important aspect—the training of men. With regard to the first, it is contended on the one hand that what is generally considered "over-exertion" in the horse of two years old is neither injurious to the animal itself nor to its offspring. On the other, it is maintained that until the horse has attained maturity, all extraordinary calls upon its strength must tend to weakness and decay, and injure its offspring. Dr. Bence Jones took occasion some few days ago to address the editor of the *Times*, in a short but most important letter on the evils of "over-training" children. But his remarks had reference to the over-training of the intellect at the sacrifice of the bodily strength. Of course he has been answered, the answer being from the pen of a "Head Master," who could see no evil in the "prize system," or, in other words, in the over-exercise of the brain. He admits, however, that in an experience of thirty years—we suppose of *one* school—that he has known *one* instance in which disease was engendered by a spirit of competition. He speaks of the "experience" of Dr. Bence Jones as being confined to one particular school, or that he writes in ignorance of the subject. We venture to assert that the "experience" of Dr. Jones will be confirmed by the great majority of Medical Practitioners. Who amongst us has not seen over and over again the evils of the undue exertion of the intellectual faculties of children and those of riper years! How often has the student broken down in the very outset of life from this strain upon his mental powers! How many a man has sunk in the midst of a prosperous career from the fact of his physical strength succumbing to the strain upon his

mind! With all due deference to the "Head Master," we contend that the Physician is less likely than himself to write "in ignorance" on such a subject. Take the prizemen in our own Profession. In an experience of thirty years we can say that *many* cases have come to our knowledge in which prizemen have been broken down by paralysis or sunk into an early grave; and these not originally of weak constitution. The fact is that in the present day, in which there is so much competition and in which we live so "fast," the nervous system is overtaxed. Hence "nervous" diseases are more common than they formerly were. The Physician now constantly witnesses a train of symptoms which are mainly due to the "wear and tear" of life—to the over-exertion of the mental faculties. We think Dr. Jones's letter calculated to be of much service. It certainly demands the earnest attention of all who have the mental training of young persons under their guidance. These educators of youth should recollect that there is something more required in the "world's wide field of battle" than intellectual superiority. There must be physical strength to fight the many foes opposed to us. We venture to say that, for every one who sinks by the way from mere mental incapacity, twenty fail from want of bodily power. Hence the necessity of training young persons so that a fair balance of the intellectual and bodily powers may be kept up in the system. Common sense is at one with pathology in all the points which bear upon the subject of training, and notwithstanding all the arguments and "facts" which have been adduced to the contrary, common sense directs us not to "over-train."

AN AMERICAN'S OPINION OF OUR LUNATIC ASYLUM SYSTEM.

THE *American Journal of Insanity* for January of this year contains an article by Dr. Kellogg, detailing his visits to the principal lunatic asylums in Europe, and his remarks, if not altogether complimentary, are, we think, worthy of attention if on that very account. We have been so long accustomed to look on our system as perfection, that we cannot readily see the faults openly visible to others. Our article on this subject—which, by the bye, is quoted at full length by Dr. Kellogg—did some good in opening men's eyes to the folly of pursuing the non-restraint system to its extreme limits. On this subject Dr. Kellogg both makes and retails some most pungent remarks sufficient to show that the system is not an unmixed benefit.

THE CONVENT SQUABBLE.

"TELL it to your Physician," was the advice given to poor Smellfungus when he complained that all the world was conspiring against him. We could wish, for the sake of both parties to the case of Saurin *v.* Starr, that Sir Henry Cooper, or some other experienced and sagacious Physician, had been called in to advise and arrange matters at an early stage of the unpleasantness which has cast such a shadow over what was doubtless in effect a valuable charitable and religious institution. We lately published a paper in which were shown the ill effects on health and temper of well-meant but excessive fasting. To put up with petty annoyances and hardships without complaining; to observe rules of the most minute character, whose influence is felt night and day, without change or relaxation; to be confined to the same round of duties and the same faces; to exchange the recreations of an educated lady for the drudgery of the menial, may well require an amount of endurance which could not be exacted from a poor overworked, underfed, ill-clothed, and watchworn body. Change of air and scene, better diet, and a course of wine and tonics prescribed for Sister Scholastica in 1864, instead of a course of suspicion, watching, penance, and discipline, might have averted all the mischief. Ill-nourished brains are the ready nest and hatching-place of petty suspicions, jealousies, and rancour.

FROM ABROAD.—CORALLINE SOCK-POISONING—M. GUARDIA AND THE ACADÉMIE DE MÉDECINE—FUNCTIONS OF LEAVES.

M. TARDIEU, at the last meeting of the Académie de Médecine, read a note supplementary to his memoir on coralline poisoning. He says that since his former paper (*Medical Times and Gazette*, February 13) many new facts have come under his notice confirming his conclusions; but a great number of persons have also addressed him concerning cases of entirely a different nature, which he wishes to have properly explained. In spite of apparent analogies, these cases have quite a different origin from those of coralline poisoning, and must be carefully distinguished from them. Thus, a case is related in the *Gazette des Hôpitaux*, February 23, by Professor Viaud-Grandmarais, in which the mischief arose from the absorption of the colouring-matter of a flannel waistcoat; but in this case the colouring-matter was not coralline, but aniline. Now, aniline is prepared exclusively by the agency of arsenic acid, and, notwithstanding all purifications employed, the aniline of commerce almost always contains a certain portion of arsenic. It is to this substance we must attribute the accidents observed in workmen engaged in the manufacture of aniline; and it is highly probable that to it must be also attributed the local or general effects resulting from wearing in contact with the skin garments dyed with aniline. This therefore entirely differs from coralline, which exerts its own proper poisonous action. In order to distinguish whether the material is dyed by means of coralline, we have only to boil a small fragment for a short time in alcohol at 85°. The alcohol becomes of a bright red colour, and the tissue, almost deprived of colour, assumes an apricot-yellow tinge. The addition of ammonia or caustic potash to the alcoholic solution only renders its red colour brighter. This is the essential feature distinguishing the coralline from the aniline red; for if under these conditions the tissues had been dyed by this latter, the liquid would completely and rapidly lose its colour.

One of the ablest writers in that portion of the French Medical journals termed the "*feuilleton*" is M. Guardia, attached to the staff of the *Gazette Médicale*. Possessed of considerable erudition and critical power, and a lively style of expression, his writings on subjects connected with Medical history and organasition, the Medical politics of the day, as far as these are allowed by the press laws to be dealt with, are often very interesting and instructive. His criticisms are bold and incisive, and are sometimes characterised by a power of sarcasm which is somewhat dangerous in its manipulation. Among other bodies whose organisation and proceedings have come under his notice—we might almost say under his lash—is the Académie de Médecine. Like most corporate bodies, on several points it is open to amendment, and is somewhat susceptible at having this pointed out by the various organs of the Medical press, which is not held in the highest esteem within its walls. But M. Guardia's criticisms have been especially annoying, not only because they have been stinging, but that they come from one who is an officer of the Academy—namely, its librarian. Certainly it is something quite new to find one of the most pungent critics of an institution in the shape of one of its officials. Many members of the Academy had frequently expressed their dissatisfaction at this state of things without at all influencing the proceedings of their censor, when a *feuilleton* which appeared a week or two since brought matters to a crisis. It consisted in a running criticism on the position, services, and, as far as the Academy is concerned, the inutility of its "Free Associates," seemingly nearly resembling what we should term "honorary members," comprising among their number names so eminent as MM. Chevreul, Milne-Edwards, Littré, Husson, etc. Not only was the nature of the connexion of such men with the Academy entirely lost sight of, but they were attacked with personalities which can only be characterised as gross, and must have been highly offensive. Of this our readers may judge by a passage

or two from the article. Speaking of M. Chevreul, a name respected wherever science is known, he says:—"He seems to be possessed with an excessive desire of becoming a Senator; but we have said enough about him, since he forgets or seems to forget his title, or at least his duties, as an academician. Moreover, every one knows him as a chemist, and if they wish to judge of him as a writer they have only to open the *Journal des Savants* (alas! how fallen!), and they will find in almost every number his confused, diffused, and interminable articles." "Of M. Milne-Edwards we have little to say, for this naturalist, so much occupied, and so well provided for, makes but very rare appearances at the Academy. We only observe that this little man, so active and bustling, is also a personage, a power, a very incarnation of official science. Omnipotent at the Faculty of Sciences, of which he is the dean, very influential at the Institut, he is also one of the little kings at the Muséum, his power extending even to the School of Pharmacy. It is very singular that this *savant* has never essayed what his credit might do for him at the Académie de Médecine." And so on with the other members. It is not surprising that this style of writing on the part of one of its officials should have proved offensive to the Academy; and, at a meeting held to consider the matter, it was unanimously determined that M. Guardia should be dismissed from his office of librarian to the Academy. This has been represented as a harsh procedure, but we really do not see how, in respecting its dignity, the Academy could have done otherwise.

M. Boussingault, at the last meeting of the Académie des Sciences, gave an account of his recent researches on the functions of leaves. One object he has had in view has been the examination of the statement of De Saussure, that leaves continue to separate carbonic acid in the dark. The results he has arrived at completely negative the assertion. If a stick of phosphorus be introduced into an atmosphere of carbonic acid, no reaction whatever takes place; and M. Boussingault has in his laboratory a glass receptacle in which these substances have continued in contact during several years without any action having taken place either by day or night. But if into another receptacle, disposed in exactly the same manner, a green leaf be introduced, under the influence of light, dense vapours of hypophosphorous acid are at once formed. The leaf appropriates the carbon, and the liberated oxygen combines with the phosphorus. But if the same experiment be repeated at night, no action is produced, and not the slightest gleam is seen on the phosphorus. In diffused light, however feeble this may be, the leaves continue to perform their functions, and thus in tropical forests, into which light penetrates with such difficulty as to render reading at midday impossible, mosses and other plants exhibit the most luxuriant verdure. The action of leaves ceases immediately after sunset. Low temperatures do not present an obstacle to such action, for between zero and 2° C. they continue to reduce carbonic acid.

PARLIAMENTARY.—THE CONTAGIOUS DISEASES ACT—COMMITTEE ON GAS—CARRIAGES FOR FEVER PATIENTS.

On Saturday, February 25, in the House of Lords, Viscount Lifford asked whether it was the intention of the Government to propose the extension of the Contagious Diseases Act, 1866. He hoped they would have the courage to apply the Act to the City of London.

The Earl of Morley replied that the subject had been under the consideration of the Home Office, and that a Bill would shortly be introduced, based on the recommendations of the Select Committee.

In the House of Commons, a motion by Mr. T. Chambers, that the Imperial Gas Bill and the Bills of all other companies supplying the metropolis with gas be referred to the same committee, was agreed to.

Mr. Mitford asked whether the Government would propose to Parliament any extension of the Contagious Diseases Act, 1866, to places not mentioned in the first schedule of that Act.

Mr. Gladstone said the Government had under consideration the course they would take on the question, and in a short time he should be able to announce what they would do.

On Monday, in the House of Commons, Captain Dawson-Damer asked the Secretary of State for the Home Department whether there was any legislative provision that all fever patients should be conveyed to all fever Hospitals in carriages provided for the purpose by the Hospitals.

Mr. Bruce replied that the use of such carriages was not compulsory, but that by the Sanitary Act of 1866 nuisance authorities might provide and maintain carriages for the conveyance of fever patients.

LETTSOMIAN LECTURES

DELIVERED BEFORE THE MEDICAL SOCIETY OF LONDON IN 1869

By WILLIAM ADAMS, F.R.C.S.,

Surgeon to the Royal Orthopædic and Great Northern Hospitals, etc.

LECTURE II.

SUBACUTE AND CHRONIC RHEUMATIC AFFECTIONS OF THE JOINTS: THEIR PATHOLOGY AND TREATMENT.

THESE forms of rheumatic inflammation, Mr. Adams observed, most frequently occur in young adults free from gouty tendency. The knee-joint is generally affected, and the form of the swelling corresponding to the synovial sac is diagnostic; fluctuation is distinct; there is some increase of heat and a little pain, but no redness of the skin. They have no disposition to suppuration or ulceration, but generally terminate in resolution with slight stiffness of the joint, which is gradually removed by treatment. A very similar condition is occasionally met with in persons beyond the middle period of life who have suffered from gout or rheumatic gout.

Gonorrhœa also forms a complication of subacute synovitis, and though only one joint is generally affected, Mr. Adams has seen both knee-joints affected, and iritis, resembling the ordinary rheumatic form of this affection, occurring at the same time.

The diagnosis from strumous and syphilitic synovitis was then given, the latter affection being associated with periosteal inflammation of the articular extremities of the bone.

In the treatment of subacute and chronic rheumatic synovitis, Mr. Adams preferred a large blister dressed with strong mercurial ointment; together with iodide of potassium and bicarbonate of potash internally. The stiffness remaining in the joints may be removed by the use of the local steam bath, shampooing, and passive motion.

The next affection described was

CHRONIC RHEUMATIC INFLAMMATION OF THE JOINTS, NOT COMMENCING IN SYNOVITIS; CHRONIC ARTICULAR RHEUMATISM.

In this affection the ligaments of the joints are primarily and essentially affected, and it has a marked tendency to terminate in true bony anchylosis. In this respect it differs from *chronic rheumatic arthritis*, which Mr. Adams believes never terminates in true bony anchylosis; and from this affection it also differs in the absence of any enlargement of the articular extremities of the bones by osteophytes, or nodulated growths of bone developed in the articular cartilage.

The clinical history of this form of chronic rheumatic inflammation has not been fully described, but a few well-marked cases had fallen under Mr. Adams's observation in patients becoming gradually anchylosed in many articulations, and reduced to a most helpless condition, without presenting any of the ordinary symptoms of what is called rheumatic gout, or chronic rheumatic arthritis. The articulations of the vertebral column, as well as those of the knee- and hip-joints, are not unfrequently affected.

In the treatment of this affection Mr. Adams chiefly relies upon a combination of bicarbonate of potash with ammonia, and, when the urine is clear, commences the exhibition of sulphur externally and internally, a sulphur vapour bath being taken every day or every other day. He has also found great advantage from the use of dilute phosphoric acid, in doses of twenty or thirty drops three times a day. Locally, the use of turpentine liniment and flannel bandages was insisted upon.

The next affection described was

CHRONIC RHEUMATIC ARTHRITIS, RHEUMATOID ARTHRITIS, OR RHEUMATIC GOUT.

For our present knowledge of the pathology and clinical history of this affection, we are chiefly indebted to the labours

of Dr. R. Adams, of Dublin, Dr. R. W. Smith, and Mr. Colles, of Dublin, and of Mr. E. Canton, of London. The importance of this disease is increased by the fact that its effects have frequently been mistaken for the results of accident supposed to have been overlooked by the Surgeon, such as fracture of the neck of the thigh bone, shortening of the leg from bruise of the hip, and some cases of dislocation, and other obscure forms of injury. When fully developed, all the structures of the joint are involved, but the most important and characteristic structural changes occur in the articular cartilages and the bones.

In the articular cartilages two processes proceed simultaneously from the commencement of the disease—viz., one of fibrous degeneration occurring in their central portions, and leading to their complete removal; and the other a process of hypertrophy and ossification, proceeding at the margins and towards the circumference of the articular cartilages, leading to the enlargement and alteration in form of the bones, by the development of nodulated growths and ring-like layers of new bone at the margins of the articular surfaces. These changes had been first described by Mr. Adams in the 3rd vol. of the *Path. Soc. Trans.*, and were opposed to the views entertained by Rokitansky and other observers, who believed the enlargement of the bones to depend upon a process of inflammatory expansion described as osteoporosis followed by induration. Eburnation of the bone takes place where the cartilage is removed, and the surfaces are exposed to friction.

These changes were described in detail as affecting the ball and socket and the ginglymoid articulations. The fibrous structures, including the periosteum, capsular ligaments, intra-articular ligaments of the hip and knee, fibro-cartilages, capsular and intra-articular tendons, undergo various changes, some structures being destroyed by atrophy and fibrous degeneration, whilst ossification is proceeding in others.

In tracing the clinical history of this affection, Dr. Adams, of Dublin, believes it commences in chronic synovitis, but Mr. Adams considers this requires further confirmation; at least, cases have fallen under his observation showing that such is not invariably the case. This disease appears to be of more frequent occurrence in Ireland than in England, and still more frequently met with in Holland, so that exposure to cold and moisture, together with debility and other depressing influences, appear to act as exciting causes of this disease.

With regard to its termination, two pathological peculiarities are observed—one a remarkable indisposition to terminate in suppuration; and the other that it has no disposition to terminate in true bony anchylosis, motion being preserved by eburnation, but limited in severe cases by osseous growth from the margins of the articular cartilages and from the surrounding fibrous structures.

The treatment of this affection was considered to be very unsatisfactory, but Mr. Adams believes the evidence of the inflammatory nature of the affection at its commencement not sufficient to call for antiphlogistic treatment; where synovitis exists, either at the beginning or at a later stage, blisters may be serviceable, but he prefers the perpetual application of warmth and moisture, and, when applicable, the use of the local vapour bath. In the latter stages no local treatment is of use except warmth by flannel bandages.

Internally, Mr. Adams recommends the use of bicarbonate of potash and ammonia; and sometimes blue pill and colchicum when red sediment is deposited from the urine, or when the latter is turbid, but without phosphatic deposits. When the urine is clear, he advises the use of sulphur externally and internally, and also the free use of dilute phosphoric acid. Several patients under his care have benefited by resorting to the hot sulphur baths of Luchon, in the Pyrenees, where they pay great attention to shampooing and passive movements of the joints. The joints should be kept at rest only in the early stage, but when the articular cartilages are destroyed free motion must be encouraged, as promoting the process of eburnation and preseving useful motion in the joints.

Residence in a warmer climate during the winter months was also recommended where practicable.

Russian Losses at St. Sebastopol.—In an account just published by Professor Hubbenet, of the University of Kiew, it is stated that of 169,000 men who successively were employed in the defence of Sebastopol until November 1, 1855—that is, until typhus broke out in the Russian army—only 30,000, or less than a fifth, remained in health and intact. More than 76,000 were wounded, and 15,000 were killed; 46,000 fell ill, and of these 8500 died.—*Union Méd.*, February 27.

REVIEWS.

Electro-Physiology and Therapeutics; being a Study of the Electrical and other Physical Phenomena of the Muscular and other Systems during Health and Disease, including the Phenomena of the Electrical Fishes. By Charles E. Morgan, A.B., M.D. 8vo. Pp. xvi. and 714. 1868. New York: Wood and Co.

Die Elektricität in ihrer Anwendung auf praktische Medicin. Von Dr. Moritz Meyer. Dritte Auflage. 8vo. Pp. xx. and 423. 1868. Berlin: Hirschwald; London: Williams and Norgate.

Elektrotherapie. Von Dr. Moriz Benedikt. 8vo. Pp. xvi. and 485. 1868. Wien: Von Tendler; London: Williams and Norgate.

(*Concluded from page* 231.)

We now turn to the volumes of Benedikt and Meyer, which are of an essentially practical nature, and shall endeavour to extract from them some information as to the value which is attached to this therapeutic agent in Germany.

We shall not offer any remarks on the different kinds of apparatus that have been devised for therapeutic purposes further than to observe that Stöhrer's machines are just now the most popular, probably from their portability, than any others for obtaining induced or Faradic(a) currents. The subject is fully discussed in the fifth section of Meyer's book under the heads of—(1) Galvanic apparatus; (2) magneto-electric and volta-electric induction apparatus; and at the commencement of Benedikt's volume.

As there is neither a table of contents nor an index attached to Benedikt's book, it is only by going carefully through it that we find that it consists of sixteen chapters or sections, which vary in extent from less than three lines (viii.) to upwards of one hundred pages (xiv.).

The fourth chapter is headed "General Maxims in Electro-Therapeutic Methods," and contains many valuable practical hints, a few of which we shall notice.

The first condition of success in a case of neuralgia treated in this way is a very accurate diagnosis of the *locus morbi*.

With due precautions the brain may be advantageously submitted to electric treatment in certain affections. As a general rule the galvanic current alone should be used when the brain or spinal cord is to be treated; and great care must be taken that the strength of the current is not too great, and that the application is not too prolonged. The current must be passed longitudinally or transversely, according to the part to be acted on. If we wish to act on the convolutions of (say) the right side, we place the copper or positive pole on the upper part of the vertebral column, and the zinc or negative pole on the right side of the forehead. If the disease lies in the cerebellum or in the base of the brain, we transmit the current from one mastoid process to the other. Galvanisation of the sympathetic is, according to Benedikt, one of the most important applications where there are symptoms of intra-cranial disease, also in hysteria accompanied by spinal tenderness, in arthritis, saturnine intoxication, and progressive muscular atrophy. To pass the current from the lowest to the highest cervical ganglion, we place the positive pole on the manubrium of the sternum, and the negative under the angle of the jaw. None of these applications should be prolonged beyond half a minute, and a current from ten or twelve small Daniell's elements (or, in the case of the sympathetic, fifteen) is the strongest that should be used. Even with these precautions, vertigo and symptoms of congestion may ensue; and if the treatment is not stopped or modified, intense pain, convulsions, and cerebral hæmorrhage may occur. The treatment should be applied daily, if it seem to do good; but in some cases two or three sittings a week are all the patient can bear with advantage. In a subsequent part of the work (chapter xii. pp. 199—248), in which he treats of "Cerebral and Cerebellar Disease," he gives cases showing the importance of these modes of treatment, and similar evidence may be found in Meyer's work, pp. 314—325. Benedikt describes no fewer than four different modes of applying electricity to the spinal cord, for details regarding which we must refer to pp. 76, etc., of his book. The most important one, and that which he specially recommends in neuralgia and spasms, is the longitudinal method. A current from forty small Daniell's elements is sufficient. If the symptoms are merely those of depressed action, one of the other

(a) Such terms as Faradisation, Faradism, and Faradic current have nothing to recommend them, but they seem (thanks mainly to Duchenne) to be so generally used that it would be affectation not to employ them. The *induced* current is surely a preferable term.

methods must be applied, as by placing the positive pole over the medulla, while the negative pole is passed along the sides of the vertebral column in the diseased region.

As has been already remarked, the galvanic current alone should be applied to nervous centres, as the brain, spinal cord, and sympathetic; but if central affections are also treated peripherally, as in certain paralyses, then faradisation may be simultaneously used with benefit. In some cases (as, for instance, of hysterical paralysis, facial palsy, etc.) Benedikt has seen great benefit from an alternation of galvanism and faradisation. For peripheral affections the galvanic current has, as a general rule, the preference, although the induced current is usually sufficient in cases of peripheral paralyses, muscular atrophy, and anæsthesia. Moreover, in peripheral hyperæsthesia (as from rheumatism) and even in neuralgia, the Faradic (secondary) current is often of great service if no inflammation or congestion of the nerve is present.

As a general rule, a current so strong as to excite pain is not only unnecessary, but actually dangerous, almost the only exceptions being cases of hysterical paralysis with hyperæsthesia. Amongst the evil consequences resulting from painful currents Benedikt mentions general excitement, convulsions, muscular spasms, vertigo, pain, paralysis, effusion of blood into the brain, lungs, and rectum, and intense menorrhagia. Too strong currents applied to the face and head have led to falling out of the teeth and blindness; while in affections of the joints, inflammation and suppuration have been induced.

The electric current is contra-indicated when, in spite of all precautions, it cannot be endured in consequence of the irritable condition which it sets up, as in some cases of tabes and hysteria, in cerebral cases when congestion is excited, in inflammatory affections of the joints, when a weak current often increases the congestion and does not occasion even a momentary improvement.

We now arrive at the *special part* of Benedikt's volume, and it will save any reader who may wish to find out (in the absence of a table of contents or index) what it contains if we briefly state that chapter v. treats of "Neuralgia and Neuralgic Affections," chapter vi. of "the Anæsthesiæ," chapter vii. of "Motor Reflex Phenomena," chapter viii. of "Motor Paralyses," chapter ix. of "Disturbances of Co-ordination," chapter x. of "Trophic Disturbances," including certain forms of atrophy, and chapter xi. of "Reflex Neuroses." Chapter xii., which forms the beginning of "Neuroses in their Pathologico-anatomical Order," treats of "Diseases of the Cerebrum and Cerebellum," chapter xiii. of "Diseases of the Cranial Nerves," chapter xiv. of "Spinal Diseases," chapter xv. of "General Neuroses," and chapter xvi. of "Neuroses in Febrile Diseases, Cachectic States, and Intoxications."

To give our readers some idea of the mode in which he discusses the diseases of which he treats, we had intended to take hysteria as a specimen, but as he devotes upwards of forty pages to this disease we have barely space for even a brief abstract. He begins by describing it as "an affection in which all parts of the nervous system, from the central masses to the peripheral ends of the nerves, are in a state of unstable (*labilen*) equilibrium, ever ready to be disturbed by the slightest causes." It presents the most paradoxical combinations of symptoms, which might readily be regarded as indicative of serious cerebral disease, as, for example, neuro-retinitis, paralysis of the facial nerves and of the nerves supplying the muscles of the eye (occasioning double vision, etc.), and (although more rarely) blindness and deafness. A second characteristic of hysteria is "an abnormal relation of the various parts of the nervous system to one another," and this condition is manifested in the abnormal excitements, and too ready conduction of such excitements, which are so common in this disease. After noticing, in reference to this point, the experiments of Braid and Griesinger (without, however, mentioning Braid's name), he refers to a memoir published in 1866 by Lasègue, entitled *Des Catalepsies passagères*, in which that writer shows that in hysterical patients a cataleptic state may often be produced when the Physician closes the eyes with his hand, or even with a pocket handkerchief. Benedikt has repeatedly tried this experiment with success, and we may observe that nearly twenty years ago, when repeating and modifying Braid's experiments upon a very hysterical lady who was highly susceptible to (so-called) mesmeric influences, we obtained precisely the same results as those indicated by Lasègue. Indeed, whenever this lady felt restless and incapable of sleeping naturally, she used to be put to sleep in a few minutes by this means by a female relative.

The chapter concludes with fifteen pages devoted to what he terms the *casuistik*, and in which he relates the particulars of twenty cases of various forms of hysterical diseases treated by galvanism or faradisation, or both. The cases appended to each section or chapter constitute perhaps the most important part of the work to the reader who will diligently study and compare them; and when we add that these are 515 in number, and that all of them have been seen and reported by the author, some idea may be formed of the labour which the composition of such a work must have imposed upon him. It is worthy of observation that he totally rejects frictional or Franklinic electricity, which in this country has long been, and still is, used in some cases with advantage, and Meyer (on whose work we shall now offer a few remarks) observes that "it is *only* the English" who still employ electrical machines in Medical practice.

As Meyer's book has reached a third edition in less than fourteen years from its original publication, it must obviously have served to fill a blank in this department of Medicine. While Benedikt scarcely refers to a single writer besides Remak and Duchenne, Meyer's book is little more than a good compilation, with which the author's original observations are intermingled. He divides his volume into nine parts, some of which are subdivided into chapters. The first part is purely historical, and the second is devoted to the different forms of electricity, the Franklinic, the Galvanic, and the Faradic (as they have been classified by Mr. Radcliffe, of the Hospital for the Paralysed and Epileptic). The third and fourth parts treat respectively of the electro-motor properties of the animal body, and of the actions of the electric current on the organs and tissues of the animal body; the fifth describes the various kinds of apparatus for therapeutic purposes, while the sixth explains the methods to be pursued in the application of the Faradic and galvanic currents to various parts, as the skin, nerves, muscles of the eye and larynx, the brain, etc. The seventh part discusses the practical applications of electricity to anatomy, physiology, and pathology, and contains a good *résumé* of the investigations of Duchenne on the functions of various muscles and muscular groups, lately noticed in these pages. In the eighth part the value of electricity in relation to the diagnosis and prognosis of paralyses is duly considered, and numerous very instructive cases of his own and others are quoted in illustration of the application of this agent to paralytic affections of the brain, spinal cord, and sympathetic, and to nervous and muscular paralyses. The ninth part treats of electricity as a healing agent, and its various applications to Medicine, Midwifery, and Surgery, are very clearly described. Numerous cases illustrative of the utility of electricity in nervous diseases (as hyperæsthesiæ, anæsthesiæ, spasmodic affections, and paralyses) are recorded. As in Benedikt's work, here also the cases are extremely interesting. Of these, one hundred and twelve fell under Meyer's personal observation, and he has collected numerous other cases from the writings of Duchenne, Benedikt, Ziemssen, Drissen, Becquerel, Rosenthal, Schultz, etc., etc. Any one who will carefully analyse Benedikt's volume will rise from the task with the impression that with much labour he has acquired a good knowledge of electro-therapeutics; but with far less expenditure of time and brain an ordinary reader may find out from Meyer's clearly arranged volume, with its excellent table of contents and index, all that any Practitioner need know of the subject to which this article is devoted.

Dr. Robbs, of Stamford, has met with a serious accident whilst hunting. His horse, in taking a leap, slipped, threw its rider, and then rolled upon him, fracturing his collar bone.

Lu, a labourer, had an abscess in the abdomen on the right side, a little above Poupart's ligament. A year afterwards it broke, and for thirteen months he was confined to his kang. During twelve months of this period he never defecated, but during the thirteenth month he was assisted to his feet, and from this period he occasionally went to stool. For ten months he has been able to walk. His usual plan when troubled with indigestion was to introduce his hand and scoop out offending matters in a state, as he observed, very little altered from that in which he ate them. He took nourishment five times daily, and as often as he emptied himself he again filled himself. He always felt hungry. At each meal he consumed two catties of flour, five catties of bread, and two catties of sweet potatoes. For the last five or six months the opening has been large enough to introduce a probe. Wind and fæcal matter are still passed. When he goes to stool nothing passes from the opening, its edges during this act being contracted.—*The Sixth Annual Report of the Peking Hospital, by Dr. Dudgeon.*

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

March 1.

Several important changes have been recently made, or are in contemplation, in the working of some of the Medical institutions of this town. The first of these is the transfer of the entire parochial vaccination work from the hands of the twelve district Medical officers to those of three of their number elected by the guardians for this special duty. The change in question was made after the visit of the Medical deputation from the Privy Council Office, and through his suggestion; and one of the not least obvious advantages which will certainly accrue from it will be the keeping up of a constant supply of good and fresh lymph. The gentlemen elected to the post are required by the terms of their appointment to perform the vaccination in person, and not by deputy. There will now be no longer a valid excuse for private Practitioners deferring the performance of this act week after week on the ground of a deficiency of liquid vaccine matter, as from these three centres the supply will be great enough to meet all wants. When speaking of vaccination, it may not be out of place to mention that a substantial honorarium, in the shape of a cheque for a handsome sum, was forwarded a few days since from the Privy Council Office to Dr. Robert T. Lodge, of this town, for special proficiency in vaccination. This is part of a sum applied, on the recommendation of the Government Inspector, in particular cases, and is intended as an encouragement to the fuller carrying out of this important preventive operation.

A second most important, and not less important than advantageous, change is the amalgamation of the Lying-in Hospital with the Ladies' Charity. These two very useful charities, though closely allied in their scope and objects, have hitherto been quite distinct from each other, each being managed by its own committee and officers. On Saturday last, however, at the annual meeting of the friends of the former institution, under the presidency of Mr. S. R. Groves, M.P., the proposal was made, and at once acceded to, to amalgamate. The work of the Hospital was confined to the delivery of poor women within its own walls, the treatment of special cases in a ward appropriated to that purpose, the relief of out-patients who visited the Dispensary, and the training and certificating of nurses and midwives. There was no attendance on the poor at their own homes. This was the work marked out for itself by the Ladies' Charity, and nobly performed by it for many years. But there can be no doubt that the addition of this feature to the Hospital management will give it a completeness which it before wanted, while the cost of working the united institutions will be much less than that of the two when separate. A great desideratum will, moreover, be supplied by affording Medical students, of whom there are a good number in Liverpool, the opportunity of very efficient practical instruction in midwifery under skilled teachers. The indoor work of the Hospital, if it does not seem very large, affords a striking contrast in respect of mortality with some other kindred institutions, more especially with some of the large lying-in Hospitals of the Continent. Thus during last year there were 220 labours of all kinds, yet only three mothers died. In the light of this result, one is inclined to ask whether the extreme mortality usually attributed to the delivery of women in maternity Hospitals may not arise from some remediable cause. Of the labours four were twin cases; yet the deaths of children were but four, the number of still births being sixteen.

It is proposed, in pursuance of that system of sanitary improvement which has issued in such a largely increased measure of public health in Liverpool within the past two years, to apply for the sanction of the Town Council for a closer inspection of houses let in lodgings. The amount of crowding which actually prevails may be judged of when it is considered that one of the proposals is that no adult male shall have less than 300 cubic feet of air as his share of the sleeping apartment, when the house owns a separate day room, or less than 350 when it does not; yet to demand more than this would be a great practical hardship, not merely to those who let, but to the lodgers themselves, in the present deficient supply of house accommodation for our teeming poor.

The Registrar-General's Return for last week notices the deaths of two children at Deptford from "poisoning by morphia given in mistake for calomel."

GENERAL CORRESPONDENCE.

AN APPEAL TO THE BENEVOLENT.

Letter from Dr. G. E. Day.

[To the Editor of the Medical Times and Gazette.]

Sir,—Nearly a year ago (March 22, 1868) Dr. Levey, a St. Andrews graduate, died at Bailieborough, County Cavan, after a brief but severe illness. He is described in a local newspaper which records his death as "a man of rare abilities, of great Professional skill, and a very successful Practitioner," and I can personally bear testimony to his having passed a highly creditable examination for his Medical degree. The sale of his furniture, books, etc., barely met the demands for rent, servants' wages, etc., and he has left an only daughter, a grown-up young lady, totally unprovided for and without a relative in the world able to assist her. At present she is residing with some friends in the neighbourhood of Dublin, and is endeavouring to support herself by fancy work, crochet, etc.

If any of Dr. Levey's fellow-graduates or other members of the Profession feel inclined to send me any subscriptions on her behalf, by which she might purchase some light and suitable business, I shall be happy to receive them and to see, as far as it is in my power, that the money is judiciously expended. I am informed by a very eminent Dublin Surgeon, who knew her father very well, that Miss Levey would prove a useful and suitable companion to a lady. Should any of your readers be able to help her to obtain such a position, I shall be happy to place them in communication with her, and I think that this would be the most efficient kind of help that she could receive.

I am, &c. Geo. E. Day, M.D.,
late Professor of Medicine in the University of St. Andrews.

Furzewell-house, Torquay, February 27.

MR. R. B. CARTER'S OPERATIONS FOR MALIGNANT DISEASE OF THE EYE.

Letter from Mr. Carter.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have much pleasure in replying to the questions put to me by "A Surgeon" in the last number of your journal; and, although it would be sufficient to refer him to the original report of the case, I think the subject is important enough to justify me in trespassing upon your columns for the purpose of briefly repeating what has already appeared in detail.

The patient was a boy five years of age, and was brought to me in January, 1863, at the Kent County Ophthalmic Hospital at Maidstone. His parents had very recently discovered that he was blind of one eye, and that the pupil of this eye looked yellow. They took him to a general Hospital, where they were told that he had cataract, and that he must be brought back in the following summer for an operation with a needle. A few days afterwards I saw him.

The affected eye was then stone-blind, the globe very hard, the pupil widely dilated and fixed. The cornea and lens were perfectly transparent, and almost in contact, the lens and iris being pushed forwards by a mass of substance of a pale lemon-yellow colour, which filled the whole area of the pupil. There was no pain, and no vascular injection of the eyeball. Considering that the eye was certainly useless, and the disease probably malignant, I advised an immediate operation. On the next day but one I removed the globe; and, partly because I have no claim to any skill in microscopic examination, partly because I was leaving the town immediately, I handed it entire to Dr. Monckton, of Maidstone, who had been present. He thought the case so interesting that he not only made a very careful examination himself, but sent the specimen to Dr. George Johnson, of King's College. Both these gentlemen affirmed the disease to be unquestionable encephaloma, and Dr. Monckton's letter to me is quoted in my original account of the case. Such is the evidence which induces me to believe that I was dealing with malignant disease, and with that form of it which is now known as glioma retinæ.

With regard to the general question, I must venture to remind "A Surgeon" that ophthalmology has made progress since the date of the last English edition of Mackenzie's great work. Even in the supplement (1865) to the French edition the account of ocular encephaloma contains statements that the researches of Virchow and Von Graefe have disproved. In this account, however, while it is said that the return of en-

cephaloma is the rule, it is also said that Mr. Hulke has described three cases in which no return had occurred after the lapse of a considerable time. Similar examples have been recorded by others; and even one such would go far to prove that there is a stage in which glioma retinæ is still a local disease, and in which the prompt removal of the eyeball may save the patient from great suffering, and otherwise certain death. Indeed, I would go further, and would say that there is a preponderance of evidence in favour of the belief that, in cancer generally, the constitutional affection is consecutive to the primary growth. It is manifest that the formation of the eye would tend to limit, for a time, the extension of this primary growth, and also that it greatly facilitates its complete removal by the Surgeon.

I have lately seen a case of glioma retinæ in a little girl in whom the growth had already produced some pain, complete haziness of the cornea, injection of the conjunctiva, and distension of the veins of the sclerotic—in a word, a condition much resembling acute glaucoma. Two days after I saw it the eye was removed by my friend, Mr. Keddell, of Gloucester, and he will publish the result in due time. It is an interesting question whether the occurrence of this vascular disturbance would have any tendency to promote the return of the disease.

I am, &c. Robert Brudenell Carter.

Princes-street, Hanover-square, March 2.

PENSIONS FOR POOR-LAW MEDICAL OFFICERS.

Letter from Mr. W. Johnson.

[To the Editor of the Medical Times and Gazette.]

Sir,—As the Poor-law Medical Association are about to petition Parliament to redress their wrongs, I think that the most essential thing, and of greater value even than an increase of salary, will be the establishment of a pension paid entirely out of the civil fund, irrespective of age or private practice. This pension to commence after twenty years' service, and to be graduated up to thirty years, the recipients to be those at present employed, as well as future Medical officers, on resigning their appointments. This would cost the Government very little, and it would be some compensation to a man who had spent the best years of his life for a paltry remuneration, and had done much more work than either naval or military Medical men, who receive very good pensions after twenty years' service. I trust the Association will bear this in mind.

I am, &c.

London, February 24. W. Johnson.

SANITARY REPORTS FOR THE LIBRARY OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Letter from Dr. A. P. Stewart and Mr. C. Brooke.

[To the Editor of the Medical Times and Gazette.]

Sir,—We are sure we shall not request in vain your aid in furtherance of an important public object. Two years ago a paragraph in the annual report of the Royal Medical and Chirurgical Society invited the attention of its Fellows, and of the Medical Profession generally, to the propriety of preserving for future reference those sanitary reports of which many are now published annually throughout the kingdom. In consequence of this appeal, some valuable additions have been made to the Society's collection of sanitary documents. We refer especially to the entire series of reports on the sanitary condition of Leicester sent by Dr. John Barclay; the complete collection of the reports and tabular returns published by the Manchester and Salford Sanitary Association, presented on behalf of that most useful and public-spirited body by Dr. John Edward Morgan and Mr. Arthur Ransome; the collection, likewise complete, of the Northumberland and Durham Society's Reports on the Health and Meteorology of Newcastle and Gateshead, presented by Dr. George H. Philipson; and Dr. Buchanan Washbourn's reports, so far as they have appeared, on the sanitary condition of Gloucester. We may also mention that Mr. George J. Symons, the eminent meteorological observer, has furnished to the Society, from the commencement, his elaborate and comprehensive digest of the returns from many hundred stations of the rainfall in the British Isles. Dr. Gairdner has also presented some interesting and important documents relating to the health of Glasgow; and Mr. G. Rigden has sent reports and documents of various kinds regarding the sanitary condition of Canterbury between 1854 and 1867.

But with this list we have nearly exhausted our acquisitions in this department of Medical literature. With the exception of the collected reports of Mr. Simon, and those of his successor, Dr. Letheby, on the City of London, and the series of reports from the parishes of St. George, Hanover-square, St. James, and St. Marylebone, contributed by Dr. Druitt, Dr. Lankester, Dr. Dundas Thomson, and Dr. Whitmore, the Society does not possess one complete set of the Reports of the Metropolitan Officers of Health, or even a single report from the great majority of them. In like manner, with the exception of the three reports for the years 1865, 1866, and 1867, presented by Dr. Druitt, the library contains none of the justly celebrated series of Reports on the Sanitary Condition of Liverpool, commenced twenty-one years ago by Dr. Duncan, and now so ably continued by Dr. Trench. We are aware that the whole of Dr. Duncan's and some of the earlier of Dr. Trench's reports are out of print; but if these lines should meet the eye of any one who may happen to have a duplicate series, or who, like Dr. Barclay, of Leicester, feels that his one series would be of greater service to the community in the Medico-Chirurgical library than in his own possession, this great gap in our list of official hygienic documents may be speedily filled up. But, whether by gift or purchase, at least one complete set of the Liverpool reports from 1848 to the present time, including the Report of the Mortality Sub-Committee in 1866, should by all means be secured, and carefully preserved for general reference in our great Medical library. The same remarks apply to the model reports of Dr. Littlejohn on the health of Edinburgh and the condition of its poor; and to those of Mr. Dyke on the state, past and present, of Merthyr-Tydfil. Our appeal, in short, is to all Medical Officers of Health and others throughout the kingdom for complete sets of sanitary reports, and a regular continuance, as they appear from time to time, of these publications, which, if addressed to the Honorary Librarians of the Royal Medical and Chirurgical Society, 53, Berners-street, W., will be preserved with the care which their value and importance as historical documents demand.

We are, &c.

A. P. Stewart.

February 24. Charles Brooke.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Monday, March 1, 1869.

Samuel Solly, F.R.S., President, in the Chair.

Present fifty-four Fellows.

On taking the chair, the President nominated Dr. Begley and Mr. John Croft scrutineers, and declared the ballot open for one hour.

Abstract of the Receipts and Payments of the Royal Medical and Chirurgical Society for the Year ending December 31, 1868.—Receipts: Subscriptions, fees, etc., £1102 16s. 6d.; *Transactions*, etc., £81 9s. 4d.; house rent, etc., £187 10s.; interest, £92 8s. 7d.; total ordinary income for 1868, £1464 4s. 5d.; amount of stock standing in the names of the trustees, Jan. 1, 1868, £3000; purchase of stock, £400; total stock, £3100. Payments: House rent, taxes, etc., £276 5s.; library, £294 6s. 8d.; *Transactions* and *Proceedings*, £261 18s.

The Auditors' report having been read, its adoption was moved by Dr. Webster. He congratulated the Society on its favourable financial position, but asked leave to say something on the expenditure. A very large sum was spent on foreign literature, both books and journals, and in this respect the collection, as well as the Society, was unique, as far as Europe was concerned, and he thought that the Society was to be congratulated on such a position.

Mr. Charles Hawkins seconded the motion. The large receipts, he said, were quite satisfactory, the small expenditure not so much so. The library especially was as yet far from what it should be. They depended, in fact, too much on authors for the presentation of their works; they should have every book—even some non-Medical—which a man might want in the course of his researches. He was no friend to the accumulating of money for those who might come after them. The mere balance in favour of the Society was not its great feature. Some time ago he had stated that there was in the library no complete set of the *Philosophical Transactions*, and this was still the case. He thought they might also do well to enlarge their rooms.

Dr. A. P. Stewart defended the management of the library. When he entered office as librarian, the Council was extremely

critical as to the works chosen, and the librarians were correspondingly cautious. Now the Council encouraged the spending of money in this way, and it would be good if Mr. Hawkins or any other would lend their aid to the Council in the matter. He had never heard about the absence of the *Philosophical Transactions*. With regard to other than purely Medical books, there were many published which might be admirable, especially works on natural history; but there was a limit even to shelf room. If it was the wish of the Society that such works should be purchased, let it be intimated; but the librarians would not be justified in purchasing them without such an intimation.

Mr. Curling did not agree with Mr. Hawkins as to the way in which they should spend their money. Last year £400 worth of stock had been purchased, but their fee was high, and many young men were kept from joining their Society by this high fee. It would be better to lower the subscription and have such men Fellows than to fund their money.

Mr. Partridge hoped the Society would not listen to this proposition. If they compared their subscription with what was paid to general libraries only a few years back, there would be found little reason for complaint were it on these grounds alone. But, as they had *Transactions* and *Proceedings*, they really paid as their subscription only two guineas. If the number of members were too greatly extended, there would be a want of facilities which they now possessed.

The report of the President and Council was then read. It alluded to their large annual income (now larger than ever), the great number of Fellows (667, or 26 more than last year), to the purchase of £400 stock (the total belonging to the Society now amounting to £3400), to the changes in the by-laws of the Society, and to the Society's interference with the threatened alterations in the adjoining house. The Society has at present one scientific Committee on the Value of Electricity as a Remedial Agent; and a Committee appointed to consider the proposed amalgamation of the Societies was now prepared to lay its report before the Council, after which, if approved, it would be laid before a general meeting of the Fellows. It was announced that Dr. Stewart was at work on a general index of the last seventeen volumes of their *Transactions* after the plan adopted by Dr. Heunen, which it was hoped would be ready for distribution before next annual meeting. The photographic collection, which had been superintended by Dr. Wright, had lost its prime mover, but Dr. Arthur Farre had offered to take it in charge.

Dr. Greenhow proposed the adoption of the report and a special vote of thanks to Dr. Stewart. He objected to the general library system, but would rather aim at making the library the best Medical library in the kingdom.

Dr. Broadbent seconded. He was glad to hear that the report of the Committee on the Amalgamation of the Societies was about to be made public.

Mr. C. Hawkins took an extended view of what a Medical library should be. It should contain every work a Medical man could want in the course of his researches.

Dr. Webster thought it should rather be extended in its foreign department. Italian literature especially was undergoing a revival, and many Italian journals were now published which deserved notice. He would prefer this; ordinary libraries might provide the other.

Dr. Stewart said that if Dr. Webster or any other Fellow knew of any good book he had only to put it down in the book set apart for that purpose, and he would be doing a good service.

The President corroborated Dr. Stewart. Deficiencies of the kind alluded to rested with the Fellows rather than the office-bearers. He thought they could not spend their money better.

Mr. De Meric said that, with regard to journals, there was a preponderance of German works to the detriment of the periodicals of other nations. If the matter was investigated, it would be found that the list might be much cut down, and works of other nations substituted.

The President then proceeded to address the meeting on the occasion of his leaving the chair. He thanked all for their kindness and courtesy to him while in the chair. He alluded to the cares such an office implied, fears lest a good paper should give rise to no debate, and so on. On this head he had little to complain of; everything had gone on well. On one paper, not perhaps strictly practical in itself, a most practical and important discussion, extending over two evenings, had followed. He thanked the officers for their services, especially Mr. Wheatley, the Under-Secretary of the Society. He was not sorry that his two years of office were over, for if the honour was great the labour was so also. He had not seen his dream as to the amalgamation of the Societies come to pass, but his distinguished successor in that chair would be more likely to succeed than he could himself. Dr. Burrows's position, not dependent on his position as President of the Medical Council alone, but also on his researches as a physiologist and his experience as a Physician, gave him weight with all men. He could not enter into details as to the amalgamation scheme, as it had yet to be submitted to the new Council, but they would be specially called together to consider the whole matter. The Committee had worked hard, and had met twelve times. The proposed changes included a change of name and a change of house. The scheme was really due to Dr. Pitman. When it was proposed they would see that it was an honest one. He had attained the honour of being President at rather an early age, having early joined the Society, and he would urge on the various school *attachés* the importance of joining early. The present volume of *Transactions* he thought scarcely up to their ancient character, perhaps owing to the rejection of two valuable papers. He then proceeded to give some interesting details as to the lives of the members they had lost in the past year. He noticed Mr. Hodgson, Dr. Wright, Dr. Phillips of Coventry, Dr. Colbourn of Chippenham, Dr. Bowen, Carlo Matteucci of Pisa, Dr. W. Mackenzie of Glasgow, Dr. Brown of Windsor, Dr. T. Hillier, Dr. Pidduck, and Mr. Wardrop. He also alluded to Dr. Elliotson, who, though at the time of his death not a Fellow, yet had once occupied the Presidential chair of the Society.

Dr. Robert Lee then proposed a special vote of thanks to Mr. Solly for his conduct during his occupation of the Presidency. Thirty years ago Dr. Lee became Secretary to the Society, and it was then apparently at its last gasp; no discussion was allowed, and there were no papers to discuss. There was no paper he could face the Society with, so he had to write one himself, and his various papers were thus produced. He had even been warned by Mr. Arnott against joining the Society. He vehemently opposed amalgamation. The Society would stand or fall by its *Transactions*, not by the number of its members. It should be a select society, and he was opposed to lowering the franchise, so to speak. They should try to get the best men to work.

Mr. Spencer Wells was delighted to second Dr. Lee's motion. They had often met in opposition, but had always remained good personal friends. Young men should be encouraged, and he hoped to see both the President and Dr. Lee often there to give them countenance.

Mr. Dixon then proposed a vote of thanks to Dr. Pitman, the retiring treasurer, and Dr. Stewart, the retiring librarian, as well as other retiring members of Council. Both, he knew, had wished to retire years ago, and had only consented to retain office at the special request of the Council.

Mr. Callender seconded. He alluded to the many works of reference Dr. Stewart had been instrumental in procuring.

The President finally alluded to the importance of retaining the services of a certain number of men on the Council, as they thus became authorities as to laws and usages which would otherwise have remained unknown to the rest of the Council. He had found this in his own experience.

At ten minutes past nine the Scrutineers retired to examine the lists, and on their return the President announced the result of the ballot for officers and Council for 1869-70 as follows (those gentlemen to whose names an asterisk is prefixed not having been on the Council or not having filled the same office last year):—*President:* *George Burrows, M.D., F.R.S. *Vice-Presidents:* Henry William Fuller, M.D., Edward Meryon, M.D., *Henry Hancock, Henry Lee. *Treasurers:* *Patrick Black, M.D., Charles Hewitt Moore. *Secretaries:* William Ogle, M.D., George Green Gascoyen. *Librarians:* *Thomas King Chambers, M.D., Charles Brooke, F.R.S. *Other Members of Council:* *John Hall Davis, M.D., *Samuel Osborne Habershon, M.D., *Thomas Bevill Peacock, M.D., Henry Hyde Salter, M.D., F.R.S., *John Burdon Sanderson, M.D., F.R.S., Bernard Edward Brodhurst, John Cooper Forster, John Gregory Forbes, *Timothy Holmes, *Sir Henry Thompson.

The meeting then adjourned.

An Entire Male-Catheter lost in the Bladder.—Mr. Hutchinson performed lithotomy at the London Hospital on Wednesday in a case which is possibly unique. The patient, a labouring man, stated that whilst drunk he had lost a No. 10 flexible catheter, and that he believed that he had passed it into his bladder. His story seemed almost incredible, but the operation proved it to be quite correct. The catheter, a No. 10 with a large mount at the end, was removed whole. The exact manner of its introduction is not known, but possibly the man had employed the stylet to push it down.

NEW BOOKS, WITH SHORT CRITIQUES.

On the Prevention of Excessive Infant Mortality. By M. A. B.

*** This is a really useful and instructive little pamphlet from the prolific pen of Mrs. Baines, in which she points out with much truth and force the causes of excessive infant mortality, and the remedies for this serious social evil.

On Long, Short, and Weak Sight; and their Treatment by the Scientific Use of Spectacles. By J. Soelberg Wells, Professor of Ophthalmology in King's College, London, etc., etc. Third Edition. London: John Churchill and Sons. Pp. 248.

*** Mr. Soelberg Wells has subjected this edition of his valuable work to careful revision, and has brought it thoroughly up to the present level of Ophthalmic Medicine. He has added articles on the properties of optical lenses and on spectacles. He has added considerably to the chapters on hypermetropia and astigmatism, especially as to the different modes of diagnosing the latter.

The Modified Examination of the Pharmaceutical Society. A Guide to the Principal Points in Prescriptions, Dispensing, Materia Medica, and Pharmacy. By F. Harwood Lescher. London: Churchill. Pp. 70.

*** The pharmaceutical student will find this a good and valuable guide, and an extremely useful companion.

Etude sur les Maladies Eteintes et les Maladies Nouvelles. Par Charles Anglada, Professeur de Pathologie Médicale à la Faculté de Montpellier, etc.

A Study on Extinct and New Diseases. By Charles Anglada, Professor of Medicine in the Faculty of Montpellier, etc. Paris: Baillière. Pp. 646.

*** A good many years ago Charles Anglada came before the Medical world as editor of a treatise, really his father's, on general toxicology. Since that time he has continued the consistent advocate of those vitalistic doctrines for which the Montpellier Faculty of Medicine has long been famous. M. Anglada is an intense admirer of the history of Medicine, and not unjustly rebukes those who would wantonly reject the fruits of hundreds of years passed in careful and even painful observation for the crude results of a few later years; and he has set himself the task of following up the history of certain diseases, some of which are now unknown to us, and some of which were unknown to our forefathers. Here are some of the diseases with which he deals:—The plague of Athens, the Antonine plague, the epidemic in the reign of Gallus, the Eastern plague, the gangrenous disease of the middle ages, the black death, the sweating sickness, syphilis, and cholera morbus.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, February 25, 1869:—

Cæsar, Arthur, Tower Hamlets Dispensary.
Drury, Charles Dennis Hill, Newcastle-on-Tyne.
Hugo, Edward Henry, Brompton, Kent.
Smith, James Freeman, Martin, near Sleaford.

The following gentlemen also, on the same day, passed their First Examination:—

Button, Horace Gooch, Guy's Hospital.
Kingsford, Percival, Guy's Hospital.
Warner, Francis, King's College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BURMAN, J. WILKIE, M.B. Edin., L.R.C.S.E., late Resident Clinical Clerk at the West Riding Asylum, Wakefield.—Assistant Medical Officer to the Devon County Lunatic Asylum, Exminster.

CAMPBELL, ROBERT LYONS, M.D., F.R.C.S.—Surgeon to Stourbridge Dispensary.

DUCKWORTH, DYCE, M.D.—Assistant-Physician to St. Bartholomew's Hospital.

NORTH, W. J., M.R.C.S., L.S.A.—Junior House-Surgeon to the Sheffield Public Hospital and Dispensary.

TAYLOR, JNO. R. ALGERNON, M.R.C.S., L.S.A.—Senior House-Surgeon to the Sheffield Public Hospital and Dispensary.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—The following appointments have been made:—Dr. Alexander Yule, Assistant-Surgeon to the *Vindictive;* and John Mulvany, Assistant-Surgeon, additional, to the *St. Vincent;* W. Blake, Surgeon to the *Duke of Wellington;* Daniel R. Alcock, Assistant-Surgeon to the *Duke of Wellington.*

WAR OFFICE.—The following appointments have been made:—43rd Foot.—Staff Surgeon Thomas Egerton Hale, M.D., to be Surgeon, *vice* Augustus Frederick Turner, who exchanges.

MEDICAL DEPARTMENT.—Surgeon Augustus Frederick Turner, from 43rd Foot, to be Staff Surgeon, *vice* Thomas Egerton Hale, M.D., who exchanges.

BIRTHS.

ARMITAGE.—On February 24, at 33, Cambridge-square, Hyde-park, the wife of T. R. Armitage, M.D., of a daughter.

NORTON.—On February 28, at Rye House, Putney-hill, the wife of S. Norton, M.D., of a son.

WYNDOWE.—On February 1, at Hyderabad, Deccan, East Indies, the wife of S. Jardine Wyndowe, M.D., Residency Surgeon, of a daughter.

MARRIAGES.

CHARLES—RUNDALL.—On January 30, at St. John's Church, Calcutta, Thomas Edmonston Charles, M.D., eldest son of the Rev. James Charles, D.D., of Kirkeowan Manse, Wigtonshire, to Ada Henrietta, eldest daughter of Colonel F. H. Rundall, R.E.

HAYNE—COLLINS.—On February 25, at the Parish Church, Southfleet, Frederick Greaves Hayne, M.R.C.S.E., eldest surviving son of the Rev. T. Hayne, vicar of Rastrick, Yorkshire, to Mary Anne, only daughter of the late J. W. Collins, Esq., of Northfleet, Kent.

DEATHS.

BRAYTON, DR., at the house of his father, Aitbank, near Whitehaven, on the 20th inst., aged 34.

EVERETT, BENJAMIN GEORGE, Surgeon, of Ditchling, Sussex, on March 2, aged 31.

ILOTT, NELLIE, daughter of Dr. Edward Ilott, at Bromley, Kent, on February 20, suddenly, and without pain, aged 5 years.

MAYNE, T. H., M.R.C.S.E., Surgeon to the Burra Burra Mines, Koringa, South Australia, on board the *Yalala*, off Gravesend, on the 16th inst., aged 40.

STEEL, J. S., M.R.C.S.E., of Salford, Lancashire, on the 20th inst., aged 44.

TWEED, JOHN JAMES, Esq., M.R.C.S., late of Alfred-place, Bedford-square, at 1, St. Mark's-road, Notting-hill, on February 27, aged 80.

WOLFE—HALL.—At Montrose, on March 2, J. R. Wolfe, Esq., M.D., F.R.C.S.E., of Glasgow, to Mary Jane, second daughter of George Hall, Esq., merchant, formerly Provost of Montrose.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BRADFORD INFIRMARY AND DISPENSARY.—Two Physicians; must be graduates in Medicine of one of the Universities of the United Kingdom, or Fellows or Members of one of the Colleges of Physicians, and be registered under the Medical Act. Diplomas and Testimonials to Mr. Chas. Woodcock, Secretary, Sun-bridge, Bradford, on or before April 15. Election on May 5.

BRADFORD INFIRMARY AND DISPENSARY.—Two Resident Medical Officers; one to attend to the patients in the Hospital, and the other to visit those belonging to the Dispensary department. Candidates must have both Medical and Surgical qualifications. Applications and testimonials to Mr. Chas. Woodcock, Sun-bridge, Bradford, on or before March 16. Election on April 6. Candidates must state for which of the situations they apply.

CHORLTON UNION.—Assistant Resident Medical Officer. Applications accompanied by testimonials and statements of qualification, to W. N. Edgill, Esq., Chorlton Union Offices, All Saints, Manchester, not later than 9.30 a.m. on Monday, March 8, marked "Medical Officer."

CLEOBURY MORTIMER UNION.—Medical Officer; must be registered under the Medical Act, 1858, and possess the qualifications prescribed by the orders of the Poor-law Board. Applications, stating age and qualifications, and enclosing testimonials, to Adam P. Trow, Esq., Cleobury Mortimer, on or before March 6. Election on March 15.

GREENOCK INFIRMARY.—Resident House-Surgeon. Applications and certificates of qualifications to George Williamson, Esq., Secretary, Greenock, on or before March 6.

HOLBEACH UNION.—Medical Officer. Testimonials and applications to E. G. Ayliffe, Esq., Holbeach, on or before March 12, from whom further information may be obtained. Election on March 15.

HOSPITAL FOR SICK CHILDREN.—Assistant-Physician; must be F. or M.R.C.P.L. Applications and testimonials to S. Whitford, Esq., Secretary, 49, Great Ormond-street, on or before March 10.

HOSPITAL FOR SICK CHILDREN.—Surgeon-Dentist; must be F. or M.R.C.S.E. Applications and testimonials to S. Whitford, Esq., Secretary, 49, Great Ormond-street, on or before March 10.

ISLINGTON DISPENSARY.—Surgeon; must be F. or M.R.C.S., and not a Practitioner of Midwifery or Pharmacy. Qualifications must be produced at the meeting of the Medical Council, to be held at the Dispensary on March 25, at half-past seven o'clock p.m. Election on March 30, at the same hour.

LURGAN UNION.—Medical officer for the Moyntagh sub-district of the Lurgan Poor-law Union; candidates must be legally qualified. Applications and testimonials to J. Hancock, Esq., the Manor House, Lurgan, Co. Armagh, on or before April 9, at 10 o'clock a.m. The election will take place at 3 p.m. on the same day. Residence within the district of the Union will be required.

MIDDLESEX HOSPITAL.—Physician's Assistant; must hold some qualification, and be prepared to become a Medical pupil of the Hospital. Applications to be made in writing to the Secretary at the Hospital, on or before March 31. Candidates must attend for examination before the Medical Committee on April 3. The successful candidate will be required to enter upon his duties on April 5.

NEWPORT UNION, COUNTY MAYO, IRELAND.—Medical Officer for the Achill Dispensary District, comprising the electoral divisions of Ballyeroy, north and south, and the townlands of Cartron, Cuillalorghan, Cushlecka, Dooghheg, Owenduff, and Tonregee, east and west. Candidates must be legally qualified. Applications and testimonials to C. C. Boycott, Esq., Corrymore, Doogort, Achill, Newport, on or before April 6, the day of election. Personal attendance on the day of election will be necessary.

Royal South Hants Infirmary, Southampton.—Dispenser. Further information may be obtained of the Honorary Secretary, J. Reeve Shorto, Esq.

St. Luke's Hospital for Lunatics.—Resident Medical Superintendent; must be F. or M.R.C.S.E. and L.S.A., unmarried, and under 25 years of age. Applications and testimonials to the Treasurer on or before March 17. Election on March 19. Any further information may be obtained from Mr. Owthwaite, Secretary, at the Hospital, between 11 a.m. and 3 p.m.

Sunderland Infirmary.—House-Surgeon; must possess both Medical and Surgical qualifications, and be registered. Testimonials and diplomas to the Secretary, on or before May 1. Election on May 10.

Swaffham Union.—Medical Officer for the district comprising the parishes of East and West Bradenham. Candidates must be duly qualified according to the general orders of the Poor-law Board. Diplomas and testimonials to Robt. Sewell, Esq., Swaffham, on or before March 6. The duties will commence on March 26.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Great Ouseburn Union.—Mr. John F. Boyes has resigned the Boroughbridge District; area 4325; population 1754; salary £25 per annum.

Halifax Union.—The appointment to the Workhouse is vacant; salary £130 per annum.

Holyhead Union.—Mr. Wm. Walthew has resigned the Holyhead District; area 7362; population 9235; salary £60 per annum.

APPOINTMENTS.

Belper Union.—Henry Brietzcke, M.R.C.S.E., L.R.C.P., to the Markeaton District.

Henley Union.—Joseph Brown, M.B. Edin., C.M. Edin., to the Nettlebed District.

Malmesbury Union.—Richard Kinneir, L.R.C.P. Edin., M.R.C.S.E., to the Second District and the Workhouse.

Tenterden Union.—John Chapman, M.R.C.S.E., L.S.A., to the Biddenden District.

Royal Institution of Great Britain.—At the general monthly meeting, held Monday, March 1, Sir Henry Holland, President, in the chair, the following were elected members of the Royal Institution:—Peter Allen, M.D.; Frederic Kett Barclay, Esq.; Mrs. Bowie; Thomas Boycott, M.D., F.L.S.; Henry Chester, Esq.; Professor A. H. Church, M.A.; Charles Cogswell, M.D.; Mrs. Charles Crokat; Edward Dent, Esq.; William Gardiner, Esq.; Gilbert Finlay Girdwood, Esq.; Walter Henty, Esq.; Charles Latham, Esq.; John Macdougall, Esq.; Edward Moberly, jun., Esq.; Robert Palmer, Esq.; Rev. George Charles Pearson, M.A.; Alfred Rowlls Rowlls, Esq.; Archibald Travers, Esq.; Alfred Wills, Esq. F. Leighton, Esq., was admitted a member of the Royal Institution. The special thanks of the members were returned for the additions to "the Donation Fund for the Promotion of Experimental Researches." The presents received since the last meeting were laid on the table, and the thanks of the members returned for the same.

Odontological Society of Great Britain.—At the ordinary monthly meeting on Monday last, H. J. Barrett, Esq., President, in the chair, a paper was read by Mr. Turner "On Chlorætherine as an Anæsthetic in Dental Surgery." A discussion ensued, in which Messrs. Brain, Sercombe, Sewill, Vasey, Coleman, Ibbetson, Coles, Turner, and Browne took part. The general opinion seemed to be that the anæsthesic was a valuable one in cases in which total insensibility was hardly necessary, and fatal risks not warranted by the nature of the operation. Mr. Sercombe and Mr. Brown both claimed the merit of inventors. The other business of the meeting was the acceptance of presents and the enrolment of new members.

Medical Benevolent Fund.—Twenty-one applications for assistance were received at the February meeting of the Committee, most of the cases being of a very distressing character, and £135 was dispensed in grants for their relief. One poor woman (the widow of a L.R.C.S.) applied for help to get a sewing machine. She has been left with two young children, and can earn but little at her needle, having lost the top of the forefinger of her right hand from whitlow. Her only means is the little she thus earns, with a scanty dole from the parish. She was granted £10. Two orphan sisters, daughters of M.R.C.S. and L.S.A., a very respectable country Practitioner, applied. The mother, a most industrious woman, obtained an appointment, and has supported herself and family for ten years since his death. She is now dead, and one sister is obliged to leave her situation as governess to nurse the other, who is a great invalid. They were voted £10. We give these cases as samples, and they are but average ones; and we would urge upon our brethren who have not already subscribed to the fund to do so at once, and assist in relieving the many urgent and distressing cases with which the Committee have to deal month after month throughout the year. The Treasurer (Dr. Hare) announced a legacy of £300, duty free, from the late Mr. Bairstow, of Preston; and Mr. Bush handed in a donation of £5 5s. from the Clapham Medical Book Society, for which the Committee desire to express their thanks.

Poor-law Medical Service.—*Bethnal-green.*—Mr. Burrows was reappointed as Vaccination Inspector for six months. *Marylebone.*—The Committee appointed to consider the salaries of the Medical officers reported that they found the average remuneration per case was—in the Christ Church district, 1s.; Rectory, 10¼d.; St. John's, 1s. 2½d.; St. Mary's, 1s. 2¾d.; All Souls, 3s. 0¼d. The Committee recommended, and the guardians resolved, that the present salaries of £200 and £170 for the first two districts should be raised to £230 and £220 respectively; that the salaries of £120 and £100 for the next two should remain the same. In the case of All Souls district the Committee advised a reduction, but the guardians resolved, with only two dissentients, that the salary of a faithful officer in his declining years should remain untouched. *Shoreditch.*—Dr. Wallace applied for an increase of salary in consequence of a great increase of work, his present remuneration not averaging more than 7¼d. per case. The application was referred to the Infirmary Committee. *Islington.*—The Poor-law Board have approved of the increase of salary from £30 to £40, granted by the guardians to Dr. Cotton, Medical officer of the schools. Mr. Cufflin gave notice of motion for rescinding the resolution by which the guardians expressed their opinion in favour of appointing one vaccinator for the whole parish. A gratuity of £20 was granted to Dr. Ede, in consideration of ill-health brought on by extra services.

The Case of Mutilation.—The unfortunate man who was so vilely mutilated by his wife last week is, we hear, in a fair way towards recovery. We learn from Mr. Cortis, House-Surgeon at Guy's Hospital, that the wretched creature was induced by his wife to go upstairs with her, and that the latter, after tying his hands behind him, proceeded to cut off his scrotum from behind forwards. On his admission into the Hospital it was found that he had lost one testicle entirely, that the other was exposed and was seen hanging by the cord, whilst the entire penis was denuded of skin, merely a fringe remaining round the glans. The hæmorrhage at the time of admission was inconsiderable. Mutilated as he is, the essentials of virility are not lost.

Criminal Poisoning.—M. Chevalier furnishes a table indicating the various substances which have been employed for the purpose of poisoning in the cases which have led to criminal proceedings in France during the ten years 1855-65. The total number of cases is 494, and the following is the list of the respective articles employed, twenty-nine in number:—Arsenic, 135 times; phosphorus, 180; verdigris, 15; sulphuric acid, 22; sulphate of copper, 83; nux vomica, 1; mercurial ointment, 1; cantharides, 10; glass in powder, 2; sulphate of iron, 3; colchicum, 1; Fioraventi balsam, 1; hellebore, 6; tartar emetic, 2; laudanum, 6; carbonic acid, 1; *eau sédative*, 2; ammonia, 3; hydrochloric acid, 4; strychnia, 5; syrup of poppies, 1; mercury, 2; morphia, 1; potash, 1; digitaline, 2; nicotine, 1; prussic acid, 1; croton oil, 1; antimony, 1; total, 494.—*Chimie Méd.*, January.

Dr. Diplock, in a letter to the *Globe*, complains that Dr. Hardwicke, who was his opponent in the election of Coroner for West Middlesex, has not stated the case fairly with regard to the disputed election. He says:—"As to the corruption charged, I am informed by my solicitor this imputation was withdrawn in court in the first instance. The votes complained of as 'bogus votes' were sanctioned by Mr. Hardwicke until he found I had gained the election. He was the first to address the watermen, whose support I did not solicit until afterwards. As to non-residents, I know some voted for him, though living out of the district, and I am assured some others voted three times for him. The graveholders' votes he always upheld previous to the announcement of the result of the election, and this by circulars and by personal representation, as many of my friends can avouch, and numbers voted for him."

Epidemic Diarrhœa, Scarlatina, and Hooping-Cough.—The deaths from these three diseases amounted to no less than 272, or more than a quarter of the whole mortality, and as in neither a good water supply nor sewerage is the town deficient, the great majority of these deaths clearly must depend on the confined or tainted air of the poorer neighbourhoods and dwellings. The main poisoners of the atmosphere are undoubtedly the immense storage of human excrement in

middens, of animal excrement in dunghills and dungpits, and such refuse and dung as are constantly collecting and decaying on the surface of streets and passages. Of the 7580 privies used by the population about 4250 are on the modern water-closet system, which effectually does its work of at once sending its deposits beyond the limits of the district; the remaining 3330 are on the old midden system, which stores up its animal refuse day by day to fester and putrefy for months before removal takes place. It is calculated that in these 3330 midden privies there is no less than 20,000 lbs. of solid and fluid excrement, exclusive of other refuse, deposited daily, and that there is always stored up in these constructions the enormous amount of 1,800,000 lbs. of this worst of putrid matters, not massed in one single receptacle, disinfected and ventilated by all the aids of modern science, but elaborately scattered amongst the people, so as to generate gases of corruption throughout every part of the town, viciously placed close to the habitation of the family, and often adjoining the very door and windows of the dwelling. The mischief is, however, not confined to the nearest residents, for by the action of winds and a well-known law of gases, the putrid emanations diffuse themselves rapidly and equally into the neighbouring air, and combine to form that compound of town atmosphere which is breathed alike by rich and poor, thus bringing home to the former the mischief engendered amongst the homes of the latter. The persistent abatement of this gigantic midden nuisance by conversion of the remaining privies into waterclosets: the adoption of some scheme for the daily or weekly removal of ashes and other house refuse; the abolition of dung pits; a more effectual surface cleansing, especially in hot weather, and the complete removal of street sweepings, which always contain much animal and organic refuse, are the remedies thus clearly indicated by the mortality lessons of the year.—*From Dr. Baylis's Report on the Health of Birkenhead in* 1868.

This year, as in former years, the number of beggars has been very great, chiefly with syphilitic condylomata, scabies, psoriasis, ulcers, and carbuncles. They almost invariably ascribe their affections to the House of Refuge outside the Chang-yih-men, where during the winter months upwards of a thousand are huddled closely together on hot kangs, often as many as forty on one bed. Each room has two such earthen beds, with sufficient space in the centre to admit of ingress and egress, a raised fireplace for supplying warm water and standing room for the overseer. The recumbent position is unattainable. The beggars sit naked with their knees drawn up, each bolstering the other. Whatever contagious or infectious diseases are brought in or are there generated, soon spread and involve all. The condylomata or cauliflower excrescences are sometimes numerous and of large dimensions round the arms, in the perinæum, and on the genitals. But when the whole body is so attacked, the armpits and inner aspect of the arms, the scalps, eyebrows, etc., the appearance baffles description.—*The Sixth Annual Report of the Peking Hospital, by Dr. Dudgeon.*

Composition and Quality of the Metropolitan Waters in February, 1869.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	20·93	0·153	0·210	0·010	14·6	3·8
West Middlesex	21·57	0·107	0·244	0·001	14·9	4·1
Southwark & Vauxhall	22·13	0·190	0·240	0·008	14·9	4·8
Chelsea	21·97	0·157	0·372	0·010	14·8	4·6
Lambeth	20·00	0·217	0·498	0·006	13·8	4·0
Other Companies.						
Kent	27·73	0·060	0·375	0·002	19·9	5·9
New River	21·77	0·060	0·225	0·001	14·9	3·8
East London	25·40	0·123	0·336	0·002	16·0	4·6

The Grand Junction, the Southwark and Vauxhall, the Chelsea, and the Lambeth Companies' waters were turbid when drawn from the mains, but the others were perfectly bright.

According to the returns supplied by the Companies to the Association, the quantity of water supplied to the metropolis in the month of January last was 91,578,341 gallons. This is at the rate of 199 gallons per house, or 28·9 gallons per head of the population.

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

A Scottish Definition of Drunkenness.—In the Duke of Argyll's speech in the House of Lords last week, on the Government measure for promoting education in Scotland, he said, in reference to the dismissal of bad teachers:—"All previous Acts of Parliament have been practically useless in this respect. No doubt if a man is guilty of positive immorality, or leads an immoral life, that can be proved; but in Scotland it is exceedingly difficult to prove drunkenness. (A laugh.) The difficulty of getting evidence on that point is almost insuperable. A great many witnesses, if asked whether they ever saw the master drunk, will say 'no,' but they will qualify it sometimes with such explanations as 'Ye wad ha' kenned that he'd been tasting,' which means, probably, that he was dead drunk, and hardly able to lie on the floor without holding on. (Laughter.)"

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

M.B.—A student must matriculate before he can compete for honours.

Student.—The case of Sarah Thomas, whose upper maxillæ were cut out by Mr. Liston, will be found in that Surgeon's "Operative Surgery."

A Poor Man.—The case can be treated at any one of the Hospitals. We do not recommend particular institutions.

Victim.—His name was erased from the Medical Register some time since. There is no law to prevent him styling himself Doctor notwithstanding.

Vaccinator.—Lymph can be procured at the National Vaccine Institution, Russell-place, Fitzroy-square.

A Metropolitan Student.—The information you desire will be found in our advertising columns.

A French Colonel's Definition of a Decorated Doctor.—"Un pequin qui se fait couvrir de décorations sans avoir jamais risqué que la peau d'autrui."

Erinensis.—Stokes's "Life of Petrie" in our next. Our esteemed contributor to whose care we committed the work seems enamoured of his task, if we may judge by the long time he is enjoying himself over it.

Dr McM.—Myersback was a notorious quack; the celebrated Dr. Lettsom had the credit of ridding society of the impostor, but not until he had done considerable mischief, after which he returned to Germany with a splendid fortune.

Verax.—If a witness before the coroner swears that he is a qualified Medical Practitioner and is not so, he can be prosecuted for perjury. The coroner should satisfy himself, before receiving Medical evidence, that the witness is registered. The coroner can refuse payment of the fee unless satisfactory proof be given that the witness is duly qualified.

M.D.—When a scandal in which a Medical man is concerned has any bearings on Professional conduct—as, for instance, a charge of neglect, malpraxis, etc.—it is our place to notice it; but not the misfortunes or delinquencies which may befall Medical men equally with other persons in their private life.

Arterial Drainage.—There is a very able article in the *Lincoln Chronicle* of the 20th ult on this subject. The chief object of the writer is to show the importance, for the complete drainage of a low-lying level district, of the main carrier, the direction it takes, the volume of water it can utter, and the care bestowed on its construction.

Sigma.—The anecdote is related of Abernethy. When canvassing for the office of Assistant-Surgeon to St. Bartholomew's Hospital, he called on one of the governors, who was a grocer. This personage was fussy and patronising. Abernethy soon found he was not over-friendly to him. The grocer said: "So, young man, you have called, I suppose, for my vote and interest." "No," said Abernethy, "I want a penn'orth of figs; be quick and put them into paper."

Dr. Barr Meadows.—In some instances where a new professorship has been founded at Oxford or Cambridge, the authorities have conferred on the founder the office of first professor. Such a transaction can in no fair sense be regarded as a purchase. We have no objection to publish Dr. Barr Meadows' statement that he is "one of the very few doubly qualified Practitioners" in dermatology, and that it is not he who has offered £5000 to the Royal College of Surgeons for the foundation of a professorship.

A Man of the World.—We fully agree with our correspondent, but could not publish his jocose letter without laying ourselves open to the charge of the same offence against good taste as, we think, was committed by our contemporary, who must have been for once oblivious—*aliquando bonus dormitat Homerus.* There is an untranslatable passage in the "Colloquia Erasmi" which should serve as a rule in all such matters. He is speaking of salutations. "Urbanitatis est salutare obvios, aut eos qui nos adeunt, aut quos adimus ipsi. Item operis aliquid agentes, cænantes, oscitantes, singultientes, sternutantes, tussientes. *In ructu crepituve ventris salutare hominis est plus satis urbani. Sed incivilius etiam eum salutare qui reddit urinam aut alvum exonerat.*" We will let "A Man

of the World" judge whether our contemporary comes under the head of the *plus satis urbani* or of the *inciviliores*.

Mr. W. F. Murray (Forfar) has forwarded to us the following letter from one of the advertising fraternity. It was sent to a youth 19 years of age who was foolish enough to send a guinea for advice. Who can wonder at cases of suicide or insanity amongst a certain class of young men, when the advice they receive is like the following? Exposure is the only means at present of reaching such offenders as the writer of this letter. The amended Medical Act must contain a clause to meet such cases:—

"11, Charlotte-street, Bedford-square, W.C., London,
February 6, 1869.

"Dear Sir,—I have to acknowledge the receipt of your favour with enclosure. Before advising fully, I have again gone into your case, and am decidedly of opinion that the principal seat of disease is in the seminal vessels, which have become greatly relaxed in their tone and power of retention. There appears to be also a slight affection of the kidneys. I am of opinion that the semen passes constantly away in the urine, and the result of this drain on the constitution must be obvious when I inform you that the loss of one drop of semen is equal to forty drops of blood. This vital waste is not only capable of causing all the symptoms you detail, but so great is the sympathy existing between the brain and the generative functions that, if this drain of the most vital of all your secretions be not immediately arrested, your whole system must suffer very serious derangement, whilst the organs of generation themselves will become vitiated, and relapse into a state of utter impotency. This must necessarily destroy all desire for sexual intercourse, with entire loss of erectile power, withering and wasting of the penis, as well as complete deprivation of all muscular energy; and, in addition, affections of the head and insanity are among the direst results of such a state; and, though you do not complain of such, you have still too much reason to fear their appearance. Severe as is the injury already inflicted, it is most fortunate you have applied for relief before that injury had progressed from stage to stage until a cure would be impossible. I advise local and constitutional treatment; and you must consequently wear the "French Self-adjusting Curative," with which shall be forwarded the other restoratives and adjuncts on receipt of remittance as per annexed statement. I am, dear Sir, yours faithfully,

"C. A. Hammond, M.D."

First-class curative	...	...	...	...	£2	2
Restorative essence	...	...	...	...	1	1
Astringent lotion	...	...	...	...	1	1
Usual fee...	...	...	...	...	1	1
Total	...	...	...	...	£5	5
Balance ...	...	...	...	...	£4	4

A Colloquy on Hospitals.(a)—Liberty or Centralisation?

We commend this extract to the attention of our readers, as it shows the Hospital question in a nutshell:—

Parisian: A hundred Hospitals! let us ask, as practical men, what must be the result of such a reduplication of institutions? Multiplied establishments with their waste—here a quarter of the town rich in relief; there, bare destitution. Let us suppose, on the other hand, that a grand administrative system gathers up these scattered threads, and concentrates these aberrant forces; place at the top of the pyramid a man vigilant, active, economical; order would soon reign, and, with order, all the benefits of unity—a hierarchy of Physicians, regular clinics, organised instruction, a central purse, a central pharmacy, bakery, butchery, tapissery, laundry—in a word, a real empire of charity, with its chief, its officers, and its subjects. This is no dream; this ideal is the real in a country at the head of civilisation. Thanks to the marvellous power of centralisation, I affirm that it would be possible, with a smaller number of Hospitals and a vigorous administration, to double the number of your beds, without spending one dollar the more.

Yankee: No doubt. But with the Hospitals, dear Doctor, why not put all your factories, foundries, and great commercial establishments into central hands? With central factories, shops, and office, and a hierarchy of engineers under a chief, you might double production at a reduced cost.

Parisian: The system does not suit manufactures.

Yankee: Must not centralisation bring with it economy of force, regularity of production, and organisation of labour?

Parisian: Perhaps; but then you lose the master's eye, the effort of the individual, private interest, and free competition—all necessary to success in trade.

Yankee: 'Tis the same with charity. *Private interest, individual effort, and free competition*, all the motive forces of trade, are those of charity. This, too, needs all the impulse that only can come from liberty. Centralisation would do the thing cheaply, doubtless; but it would destroy the free action of individuals, who wish to do what they like with their own, and would convert voluntary contributions into an odious tax.

The Medical Charities of Brighton and the Brighton Hospital for Sick Children.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I am well acquainted with the opinion generally entertained by the Profession in Brighton regarding the newly established Children's Hospital, and I have no hesitation in asserting my belief that, putting its staff out of the calculation, not one in ten but considers it a mischievous superfluity. I question whether even all of the Medical men whose names figure on its prospectus are unqualified advocates of its claims, for one at least has stated that his name appeared therein without his authority.

Perhaps, Sir, you are not fully aware of the extent to which the abuse of Medical charity is carried in this "London by the sea." Brighton, I assure you, closely emulates its great prototype in the race of Professional prostitution and pauperisation. Although we have not such poverty-stricken districts here as you have in London, and although the proportion of persons who can afford to pay a Doctor is much greater, yet, I believe, not much short of one-half of the population is attended by the so-called Medical charities and by the Poor-law Medical Service. It is so much the custom to seek gratuitous aid in sickness that well-to-do tradespeople have no modesty or hesitation in availing themselves thereof for themselves, wives, children, assistants, and servants. Employers subscribe systematically, that they may be able to give "letters" to their *employés*. If an operation should be required in a family where a few guineas could easily be paid to a Surgeon, it is said, "Why turn your house into an Hospital, and pay Doctor and nurse, when all of the best quality can be had gratis through the simple process of begging an order for the Hospital?" If a gentleman's or lodging-house keeper's servant be sick, there are the Medical staffs of the Hospital and Dispensary anxiously waiting to relieve him free of cost to him or to his master. Servants, I believe, in Brighton scarcely ever pay or are paid for during sickness, except it be in the shape of a subscription on the part of the master to the Hospital or Dispensary, although the Provident Dispensary is ready to attend them for 5s. each per annum. In case of an accident a private Practitioner scarcely ever gets the case. The other day a maid-servant, who fell from a window the outside of which she was cleaning, was picked up on the pavement outside her master's house, in one of the best streets of the town, a cab was hailed, and she was forthwith deported to the Hospital. Even if a gentleman slips down in the street, the Hospital runs so in everybody's head that ten to one the first passer-by or policeman puts him into a cab before he has time to say that he lives a few doors off, and sends him to the Hospital. And so on *ad infinitum*. I have mentioned the Hospital as the ordinary receptacle of such cases, as from its receiving in-patients its operations are more obvious; but I believe abuses of a similar description are equally rampant at the Dispensary. In fact, the Profession of this wealthy and luxurious town is yearly defrauded of thousands on thousands of pounds by the indiscriminate application of gratuitous Medical relief at our Hospital and Dispensary alone. Medical men on the committees of these charities have repeatedly drawn attention to such abuses and tried to narrow the portals so as to exclude improper cases, but their laudable efforts have ever been without effect; for, even if there have not been men on the various staffs who care more about attending gratuitously the stratum of society whose recommendations to the feeing class will be efficacious than about attending the comparatively uninfluential poor, there has always been a preponderance of lay members who care not how the Profession is fleeced if their own and their friends' pockets are saved.

But the Medical promoters of Hospitals for their own aggrandisement, who care not how the general interests of the Profession are sacrificed if their own pre-eminence in the eyes of the public, with the resulting emoluments, can be secured, and their equally selfish extra-professional allies have driven their Hospital Juggernauts over the necks of the rest of the Profession long enough; and at last, and quite late enough, a strenuous effort is being made by the unselfish *attachés* of Medical charities, and by the long-suffering, though much complaining, general Practitioners, to deliver the Profession from such intolerable thraldom and injustice. And is this a time, Sir, to be starting fresh Hospitals in a town so overstocked with quasi-Medical charities as Brighton is? It is true that there was no "Hospital for Sick Children," *eo nomine*, in the town prior to the establishment of the one under discussion; but we had a superabundance of all sorts of institutions adapted to the relief of sick children. I will enumerate a few of the most prominent of them. The Hospital has beds for children which are unoccupied, and its staff gladly attends any number as out-patients; the Dispensary staff attends an enormous number at the Institution itself and at their homes; the Poor-law Medical Officers attend a very great number; and, if these charities are not extensive enough to relieve all except those who can afford to pay the Doctor in the ordinary way, there is the Brighton and Hove Provident Dispensary, where, for the insignificant disbursement of one halfpenny per week, attendance and medicine for each child can be obtained. Surely, with such elaborate, if not redundant, arrangements for the Medical relief of sick children of the poorer classes, there can be no need for an institution purposing to attend them as out-patients or at their homes. The question, then, only remains—Is an Hospital for the reception and treatment of sick children within its walls required in Brighton? To this question I, and the many who think with me, say No; and for two amongst many reasons:—1st. An Hospital for the *interne* treatment of diseases of sick children is not required in Brighton, because there are unoccupied beds for children at the General Hospital. 2nd. Such an Hospital is not required because it is a moot-question whether its possible advantages would not be more than counterbalanced by its inevitable dangers. The first reason is conclusive in itself, so I will only say a word or two in elucidation of the second.

I know that there are many of the first men of the Profession who advocate Hospitals for sick children, but I humbly and with diffidence confess that I have never been able to reach the stand-point from which they appear to view the subject. We know very well that most of the diseases of children are of a highly contagious or infectious nature, and I am at a loss to understand by what precautions or arrangements the spread of such diseases is to be prevented within the walls, or how a child that has been cured of some non-contagious disease is to be prevented from carrying the germs of a contagious disease to its home; for even if contagious cases be excluded by the rules, they must be expected to escape detection sometimes, and even their being brought to the Hospital to be diagnosed must be fraught with danger to others. We are told by a most eminent authority that general Hospitals are a mistake, because of their tendency to produce contamination; Lying-in Hospitals are generally acknowledged to be a mistake for the same reason; *à fortiori* children's Hospitals must be a mistake, for the diseases of young children are proportionately much more contagious than those of adolescents or of adults, and children are much more susceptible to contagious influence. I have heard an Hospital for Sick Children designated "An Institution for the Propagation of Contagious Diseases amongst Children." Perhaps this is too severe, but I cannot help thinking that there may be some truth in it. In any case, as the *Brighton Daily News* of December 7, 1868, announced that up to that time "one little patient had been treated for an affection of the eyes, and discharged cured," no great harm can as yet have been done by the Brighton Hospital for Sick Children, although I am told that the Doctors' carriages often stop the way in the Western-road.

I am, &c. A General Practitioner.

Notes of a Case of Morbid Adhesion of the Placenta to the Uterus.

By A. S. G. Jayakar, L.R.C.P., L.M., F.R.M.S. Lond. (Bombay).

The following case is reported on account of its interest in a pathological point of view. It indicates how the placenta may be diseased and become firmly adherent to the uterus without the general system partaking in any way in the mischief. It also strongly exhibits that power in Nature with which she contends against premature decay and degenerations. Although

(a) We extract and abridge this from a very clever book—"Paris en Amérique," par le Docteur René Lefebvre, etc., etc. 13e édition. Paris: Charpentier, 1865, p. 302.

the placenta was undergoing rapid degeneration, a sufficient extent of its uterine surface was left healthy to carry on its function as the principal nutritive agent of the fœtus.

I was sent for at 4 a.m. on October 27, 1868, to attend upon Mrs. W. in her first labour. The pains were said to have commenced more than twelve hours previously. When I first saw her, she had feeble bearing-down pains recurring at long intervals. Pulse was 100, and of a good volume. The membranes were ruptured, the waters had escaped, and the head of the fœtus was low down in the pelvis, nearly resting upon the perineum. The labour was described to have made no progress for the last three hours. Fœtal heart-sounds and placental bruit were distinctly audible, but feeble. At 10 a.m., the head not having made any progress since my first visit, I administered some ergot with sp. chloroformi, when the pains began to improve, and she was delivered of a healthy full-grown living child in about two hours. The uterus not seeming to contract, though firm pressure was applied to the uterine region, the cord was tied and cut, and two more doses of ergot administered at the interval of fifteen minutes each. There was no return of pains, and at 2 p.m., the attempt to draw the placenta out by gently pulling the funis having failed, I introduced my right hand into the uterine cavity, and slowly removed the placenta, which was firmly adherent to the uterus. Immediately on its escape the uterus contracted regularly under pressure. It was then examined carefully and found entire. Scattered over its surface were discovered a number of small nodules each about the size of a pea, evidently of a cretaceous nature, being gritty to the feel, and more or less of a chalky consistency. On placing the substance under the microscope and magnifying it to 250 diameters, it was found to consist of meshes of fine fibres enclosing within the interspaces numerous fine granules of earthy matter.

The lady was in very good health till her confinement. She had an abortion two years ago, the result of a horsefall.

COMMUNICATIONS have been received from—

Mr. C. F. Maunder; Dr. Duckworth; Dr. Oldfield; Mr. W. F. Murray; Dr. MacCormack; Mr. E. B. Adams; Dr. J. B. Maurice; A General Practitioner; Dr. Felce; Dr. Barr Meadows; Mr. J. A. Richardson; Dr. Diplock; Dr. Phillips; Dr. Stewart; Mr. Badoke; Mr. John Holm; Dr. Willoughby Arding; Mr. Fox; Vulcan; Mr. R. B. Carter; Mr. Poole; Dr. Blake; Mr. Agranon Taylor; Dr. Charles Taylor; Mr. Jabez Hogg; Dr. Day; Dr. C. A. Gordon; Dr. J. Stephens; Mr. J. Chatto; Dr. Lionel S. Beale; Mr. A. Bauce; Mr. Jonathan Hutchinson.

BOOKS RECEIVED—

On the Prevention of Excessive Infant Mortality, by M. A. B.—Bible Animals, part 15—Pharmaceutical Journal, March—Rymer on the Use of Nitrous Oxide—Report of Sanitary Condition of Birkenhead—The Sanitary Record, March—The Practitioner, March—American Journal of Medical Sciences, January—Phillipps on Horse and Man—Edinburgh Medical Journal, March—Chicago Medical Times, February—Monthly Microscopical Journal, March—Edwards on Use of Fuel in Cooking—Canada Medical Journal, February.

NEWSPAPERS RECEIVED—

Melbourne Evening Star—Melbourne Age—Manchester Daily Examiner and Times—The Queen's Messenger—Birmingham Daily Post—L'Union Médicale—Gazette des Hôpitaux—Medical Press and Circular.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, February 27, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1868.)	Births Registered during the week ending Feb. 27.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Feb. 27.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3170754	40·7	2223	1462	1419	52·4	32·0	40·9	0·70	71
Bristol (City)	169423	36·1	128	76	*69	54·3	26·9	41·9	0·54	55
Birmingham (Boro')	360846	46·1	266	175	144	53·6	33·2	42·3	0·32	32
Liverpool (Boro')	509052	99·7	372	295	250	...	...	...	...	...
Manchester (City)	370892	82·7	266	210	*206	53·2	33·0	42·1	0·92	93
Salford Borough)	119350	23·1	97	60	69	53·0	31·2	42·2	1·03	104
Sheffield (Borough)	239752	10·5	182	126	145	53·0	33·5	41·0	0·24	24
Bradford (Borough)	138522	21·0	76	71	61	54·0	34·8	42·2	0·21	21
Leeds (Borough)	253110	11·7	165	129	129	54·0	36·0	44·2	0·22	22
Hull (Borough)	126682	35·6	62	59	64	49·0	28·0	38·4	0·31	31
Newstl-on-Tyne, do.	130503	24·3	105	69	68	49·0	31·0	39·2	0·05	5
Edinburgh (City)	178002	40·2	124	86	111	50·7	32·0	41·2	0·60	61
Glasgow (City)	458937	90·6	351	268	352	57·5	31·6	42·7	1·82	184
Dnblin, City and some suburbs)	320762	32·9	173	158	180	53·8	31·7	44·0	0·44	44
Total of 14 large Towns	6546587	35·5	4590	3244	3267 Week ending Feb. 20.	57·5	26·9	41·7	0·57	38
	(1863)				Week ending Feb. 20.					
Vienna (City)	560000	...	...	...	408	...	...	45·5	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·924 in. The barometrical reading decreased from 30·18 in. on Tuesday, February 23, to 29·72 in. on Thursday, February 25. The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 27, 1869.

BIRTHS.

Births of Boys, 1153; Girls, 1070; Total, 2223.
Average of 10 corresponding weeks, 1858-67, 2096·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	709	710	1419
Average of the ten years 1858-67	735·1	705·5	1440·6
Average corrected to increased population	...	...	1585
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	1	2	11	1	8	5	2	...
North	618210	1	1	5	3	14	25	...	...
Central	378758	...	1	6	...	5	2	...	...
East	571158	...	4	17	2	11	17	2	...
South	773173	...	4	4	1	12	15	5	...
Total	2803889	2	12	43	7	50	64	9	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·924 in.
Mean temperature	40·9
Highest point of thermometer	52·4
Lowest point of thermometer	32·0
Mean dew-point temperature	35·6
General direction of wind	Variable.
Whole amount of rain in the week	0·70

APPOINTMENTS FOR THE WEEK.

March 6. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Royal Institution, 3 p.m. Prof. Odling, "Hydrogen and its Analogues."

8. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London, 5 p.m. Anniversary. Oration by Sir Duncan Gibb, Bart., at the Albion Tavern, Aldersgate-street.

Royal College of Surgeons of England, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

9. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Ethnological Society, 8 p.m. Meeting.

Royal Institution, 3 p.m. Rev. F. W. Farrar, "On Comparative Philology."

Royal Medical and Chirurgical Society, 8 p.m. Dr. Sansom "On some new Double Salts of Carbolic Acid as Agents in the Treatment of Disease." Dr. Kelly "On Hydatid Cysts," or Dr. Hillier "On Congenital Hydronephrosis."

10. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Epidemiological Society, 8 p.m. Inspector-General Lawson, "On the Influence of Febrile Epidemics in Limiting the Spread of Cholera."

Hunterian Society (Meeting of Council, 7½ p.m.), 8 p.m. Dr. Moxon, "On a Case of Tetany." Mr. Bryant, "On some points in the Treatment of Diseases of the Joints;" and other communications.

Royal College of Surgeons of England, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

Royal College of Physicians, 5 p.m. Croonian Lectures—"Regarding certain Effects of Modifications of Nerve-Influence in Disease," by Dr. John W. Ogle.

11. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Moorfields Opthalmic Hospital, 8½ p.m. Mr. Hutchinson, "On the Malignant Diseases of the Eyelids and Eye."

Royal Institution, 3 p.m. Dr. H. Power, "On the Eye."

12. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Clinical Society, 8½ p.m. Report on Dr. Day's case. Mr. Barwell, "Pyæmia Fatal by Coma." Dr. Julius Pollock, "Typhoid Fever Treatment by Blistering;" and other papers.

Royal Institution, 8 p.m. Prof. Abel, "On Naval and Military Applications of Electricity."

Royal College of Surgeons of England, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

Royal College of Physicians, 5 p.m. Lumleian Lectures—"On Diseases of the Serous Membranes and some of their Results," by Dr. Barker.

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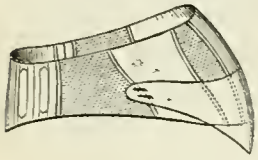

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THE SILVER MEDAL, PARIS, 1867.

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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

Hysteria.

This term is used very widely and vaguely by some, and in a very restricted manner by others. A too narrow definition would make it inapplicable to many cases which must be called by the name, and a too wide one would not only be meaningless, but harmful, by including many instances of nervous disorders of a totally different character. It can only be by a discussion of various examples of the affection that we can obtain a tolerably correct idea of what we intend by the term. When we use the expression hysteria, we mean a nervous disorder, one in which the nervous system is deranged without the existence of any organic disease. It is a disorder occurring in those who possess a more than usually impressionable constitution, and in whom also there is not that equilibrium between the nervous and other parts of the organisation which we find in the most perfect frames. When I say the nervous system, I speak of it as a whole; for not only may there be perversions of the functions of the body, but the whole mental and moral capacities are often changed. Thus some persons, with a less susceptible nervous system, may, from mere want of any force of character, be a constant prey to unpleasant circumstances operating upon them, whilst others of a far more highly organised constitution may, by superior mental vigour, be able to withstand the effect of impressions which would otherwise cause great disturbance in the system. Thus that condition of system which tends, in some instances, to produce what we call hysteria is common to the human race. I look upon it as merely the extreme development of a disturbance to which nearly all men and women are liable. There are few men who will not own to their "good days" and their "bad days," referring to those times when the mastery of their will is so great that no obstacles in their path could fail to be overcome by it, and then to those occasions when they are borne down or almost driven to despair by trifling misfortunes. Their will is then less powerful, and you will find that a want of will is one of the most marked features in hysteria.

It follows from what I have said that I do not consider the disease peculiar to women, and therefore, of necessity, uterine; but owing to woman's organisation, the complaint is far more common in the female sex. A current opinion once existed that hysteria was due immediately to a disordered condition of the uterus—an idea dating back to the time of Aristotle, who spoke of the womb travelling through the body, and so giving rise to the hundred ailments to which hysterical women are liable. Some modern writers have not yet surrendered the opinion, and have even gone so far as to declare that the hysterical fit is none other than the counterfeit of the sexual act. Knowing how intimately a woman's constitution is bound up with all that relates to the more special functions of her sex, and how, therefore, of necessity all violent impressions made on her nervous system would in very many cases have reference to these peculiarities, we can feel no surprise that uterine troubles and hysteria are often intimately associated. I would say that after admitting this we must renounce the doctrine of hysteria as a uterine disorder, and say rather that it is owing to constitutional peculiarities, and sometimes to circumstances of an altogether temporary or accidental kind.

Look around amongst your own friends and acquaintances, and consider their different organisations. Two patients have the same complaint or meet with a similar accident. The one will aid the Doctor in every possible way to promote his recovery; he would, if need be, rouse himself from his bed, and say, as Ligarius did to Brutus—

> "By all the gods that Romans bow before,
> I here discard my sickness;"

whilst the other will nurse his complaint, and even speak of it when every trace of it has gone. Such a reflection as this will give you some insight into nervous affections. Indeed, the great occupation of Medical men throughout the day in the investigation of their cases is to put the true interpretation on the symptom of pain—whether it refer to an organic disease, whether it be a mere functional disorder, and, if the latter, whether it be of the kind denominated hysterical. I do not mean that such an analysis is to prove the existence of hysteria or not, and that all pains which have no organic seat are hysterical, and that in hysteria no real pains exist. This is a mistake sometimes made, and which I would warn you against.

The so-called fit of hysterics is due to a violent perturbation of the whole nervous system; an emotion upsets the equilibrium, and we witness the phenomena of laughing, crying, choking, etc. This may be easily induced in a highly impressionable person, whilst a more powerful cause is necessary in the stronger-nerved and stronger-minded. If a man have undergone great bodily fatigue, and his mind have been at the same time harassed so that exhaustion of his nervous system results, he may be thrown into a state very like that of an hysterical woman. I have more than once seen a man under these circumstances give way to his feelings and play the part of a woman. It was reported that a well-known member of Parliament of strong and sturdy frame became hysterical as he stood over the grave of his friend Cobden. Some months ago I received an urgent message to visit a gentleman a short distance from town; when I arrived at his house he was sitting in his parlour and not looking ill. I expressed some little vexation at being summoned so hastily. He said he was now much better, and commenced explaining to me the reason of the summons, when he began to cry; presently the crying reached the stage of sobbing; this became louder and louder and more violent until it changed into a laugh, which he was totally unable to suppress, and I became a witness of the most marked attack of hysterics that I had ever seen in either sex. He presently fell back in his chair quite exhausted. He was a man 30 years of age, with a large black beard, and had as manly an appearance as you would wish to see. His wife then told me that he had been speculating, that he was a ruined man, and would have to leave his house and family. He had returned home that evening shortly before I was sent for, and the thought of the prospect before him was more than he could bear, and thus the cause of the attack. Whilst she was relating this he grew calm, and then commenced to talk to me, saying how foolish he was, but could not refrain from referring to the circumstances of his misfortune. He had not proceeded far when he was again overcome; another laugh commenced, and then he broke out into such a loud and involuntary fit of laughter that the noise could be heard throughout the whole house. It only ended with his utter exhaustion, when I left the place. I saw him a few days afterwards, and he was pretty well. This gentleman simply had an hysterical attack from a violent emotion; but sometimes we meet with hysteria in men in the more chronic and ordinary form. About three years ago I had a young man in the Hospital for several months, in whom existed all the symptoms of hysteria in a woman—such as headache, pleurodynia, palpitation, choking sensation in the throat, and, on several occasions, fits, for which the dresser was called to him; these fits were exactly of the hysteric kind. I mention these cases to prove to you, as they do to me, that hysteria is certainly not necessarily a uterine disorder.

I might state that my great authority on this subject has always been the celebrated Sydenham, for I consider that his epistle on hysteria contains more correct knowledge on this disease than most of the treatises which have been subsequently written. This acute observer believed that it might exist in both sexes. The following is an extract from his writings:—

"Very few women, which sex is the half of grown people, are quite free from every assault of the disease, excepting those who being accustomed to labour and live hardly; yea, many men that live sedentary lives and are wont to study hard are afflicted with the same disease. It must be confessed that women are much more inclined to this disease than men, not because the womb is more faulty than any other region of the body, but for reasons to be shown hereafter. The origin and antecedent cause of this ataxy is a weak constitution of the said spirits, whether it be natural or adventitious, for which reason they are easily dissipated upon any occasion, and their system soon broke. Wherefore this disease seizes many more women than men, because kind Nature has bestowed on them a more delicate and fine habit of body, having designed them only for an easy life, and to perform the tender offices of love; but she gave to men robust bodies, that they might be able to delve and manure the earth, to kill wild beasts for food, and the like."

Hysteria, then, occurs more frequently in women, but not dependent necessarily upon any uterine disorder. In three well-known cases of my own, where the patients were bedridden for years and subsequently recovered the use of their limbs, there was not the slightest irregularity of the uterine

functions. When, however, you remember that some work or employment devolves upon all mankind, and if women cannot perform the tasks which Sydenham prescribes for men, and there may be no opportunity of undertaking the offices which more especially belong to them, such as the rearing of children, domestic avocations, and the like, then, Nature having no outlet for the superfluous energies, the whole system becomes disordered, and the hysteric symptoms we witness are simply the exponents of a wish unexpressed or a want unfulfilled. In this case every organ of the body may suffer, and, amongst the rest, the uterus. The latter may erroneously be seized upon as the seat of trouble, and, being assiduously treated by the Medical man, the nervous disorder become more deeply rooted, the real cause being overlooked, and a subjective ailment converted into a real one. I have seen so many instances of this that I can speak very confidently as to its truth.

If the nervous system is unduly excited, a perturbation of the whole system must ensue; now the superfluous forces thus produced would be got rid of by a person of energy in some occupation, and thus we find that where such nervous forces are operating to the discomfort of the patient a want of mental vigour is often the cause. Thus the hysterical condition not only varies with the degree of susceptibility of the nervous system, but is intimately connected with the powers of mind. Indeed, if you placed the strong-minded and the weak-minded at the ends of the scale, you would be separating at the same time in great part the hysterical from the converse. At the one extremity there would be the person who would fall a prey to every untoward circumstance, and be the victim of any one who chose to play upon his fancy; at the other end would be an Alexander the Great or Napoleon I., who would subject all mankind to their rule. Look at a case practically; a young woman has a pain in her leg, she wishes to be up and doing, get well as soon as she can, and forget her ailment. Another one of a different temperament is pleased with the sympathy of kind friends, dwells upon her trouble, talks about it, so that she probably exaggerates her suffering, and does not admit that she is recovering. Such an example is daily occurring to us in those cases where we say "the patient does not make the best of it." A third woman would not only exaggerate her troubles, but would fail to admit that she was well when the complaint had entirely left her. Now, if a woman states she has a pain when it does not exist, we are in possession of a case which exhibits one form of hysteria, and then we arrive at a still further stage by supposing the case of a patient who might be suffering from a visible malady, such as a swelling of the leg, and who had actually recovered, and yet perpetuated the condition by means of a ligature. We should then have a fictitious disease, and witness a variety of hysteria not uncommon. From the simple exaggeration of a symptom to the artificial production of disease there is but a degree.

You see how the desire for sympathy, or that feeling which many possess of taking a prominent place in the hearts of kind friends, will prompt many a woman to pretend to be ill when she has no ailment whatever, and, in a further stage of this morbid state, to actually manufacture a disease. We thus see not only every real disorder simulated, but other various remarkable conditions produced. If the pretended complaint resemble a real one, we have often a considerable difficulty in distinguishing the genuine from the counterfeit, but in many cases the mere oddity of the disorder serves to mark it. The strangest vagaries of human nature which we perhaps ever witness are those which occur in young females in the early stages of womanhood; the whole nervous system, including the mental and moral nature, becomes so perverted that no circumstance of the most extraordinary nature may not then happen. The girl may not only present in her physical nature all the strangest maladies that can be conceived, but there may occur such aberrations of the mental and moral feelings that every one but the Medical attendant would attribute her acts to wickedness rather than madness. Under such circumstances the behaviour is like that of one "possessed of a devil," for the acts are not those of an ordinary criminal who has an object in his wicked deeds, but are often purposeless, or for the simple love of mischief. Thus I have heard Medical men generally unravel those marvellous ghost stories which we are constantly reading in our newspapers by the discovery of a young girl in connexion with them. When you see a paragraph headed "extraordinary occurrence," and you read how every night loud rapping is heard in some part of the house, or how the rooms are being constantly set on fire, or how all the sheets in the house are devoured by rats, you may be quite sure that there is a young girl on the premises. When a few years ago the whole country was shocked by the news of the murder of a little boy in the middle of the night whilst surrounded by members of his own family, the event was enveloped in the darkest mystery, seeing that the crime was of so extraordinary a character, and was wanting in all those objects for its commission which are usual in similar deeds. No adult, and especially no man in his senses, commits a crime except to attain some end; and therefore the very purposelessness of the act (except, perhaps, for revenge) convinced me that it was perpetrated by a young woman. I felt quite sure in my own mind as to the real criminal, who even afterwards, on her own confession, was considered by many incapable of such a deed. The public press then learned what Medical men had long known as to the extraordinary vagaries which may occur in the female sex at a particular period of life; and although it is not pleasant to refer to a crime almost forgotten, yet, as it points a moral, I will read how a daily paper commented upon the case, and afforded an explanation of the dreadful occurrence to its readers:—"Hard physiologists and shrewd observers give an answer that will shock the tender mind. From twelve or fourteen to eighteen or twenty is that period of life in which the tide of natural affection runs the lowest, leaving the body and intellect unfettered and unweakened in the work of development, and leaving the heart itself open for the strong passions and overwhelming preferences that will then seize it. Youth, it must be confessed, does not feel much, and, sad to say, it is the softer sex especially which is said to go through a period of almost utter heartlessness. Girls, it is said, are harder and more selfish till the master passion takes them. In the want of active employment there is that peculiar brooding, imaginative, inventive tendency found in many young girls. In these cases the dream seems to grow, and become an inner life unchecked by social feeling and by outward occupation, till a mere idea equally causeless and wicked fills the soul and masters the very act." I mention this case not because the young lady was hysterical, but because the same causes are in operation which prompted to this deed as to those which are less frightful but far more common; indeed, in some instances the feigning to be ill is combined with actual wrongdoing, as seen in a case which was published some years ago under the name of the "Female Jesuit."

I have already said that it is difficult to give a definition of hysteria, much less to strictly state its pathology. I think, however, as bearing upon the proper method of cure, we may comment upon the fact, of which there can be little doubt, that the nervous centres are constantly producing forces which are correlated to the other forces in nature, and that in one case there may be an absence of sufficient force generated, whilst in another there is an excess, and it requires an outlet. Thus, when it is asserted that work is a necessity of man's nature, and every being should have an object to fulfil, it is merely stating a physiological doctrine. If the brain centre be compared to so many galvanic batteries always at work, we can understand how, with half a million of women in the country unmated, a large amount of superfluous force is either running to waste, or doing mischief either to the producers of it or to others. If the energies are not used for the more direct purposes to which they are intended, they may find a very appropriate outlet in good actions towards the poor and helpless, or even in assisting the parish clergyman in his duties, no matter whether the aid afforded be of a substantial or a frivolous kind. Better than doing nothing and becoming a prey to one's own feelings, is riding, walking, or performing the routine of fashionable life. Let none of these measures be adopted, and the fire produced within will be gradually consuming the vitals; the force therein generated, if not escaping, will disturb the whole organisation of the body. You may see in our wards hysterical women of all kinds—one with a dreadful pain in the epigastrium, another with a palpitation, a third with constant sickness, and you look to see what organ is diseased, but you find none; the machinery is good, but it is working irregularly; it is the engine with the flywheel gone, or it is deficiently supplied with steam, or perhaps oversupplied, and, having no work to keep it in regular action, it is acting disorderly. Those persons who are fulfilling their objects in life are like so many locomotives dragging their trains hither and thither with a regular and fixed purpose, but there are others who, doing nothing, are not like so many dead engines, but rather a number of locomotives running here and there without guidance, without a destination, injuring all with whom they come in contact, and much more themselves.

If women are not fulfilling the objects which more especially are provided for them, they should have a pursuit, and thus you can well understand the case of a young lady who had long been bedridden, and had so many ailments and Doctors to see

her that her life was despaired of, and yet speedily got well when her elder sister was married, and she became manageress of her father's house. The menial duties imposed upon the inmates of monasteries and nunneries are the means by which the "nerves" are kept under, but even then human nature will sometimes exhibit its traits. Without offering an opinion upon the merits of mortifying the flesh as these people do, they are still human beings, and therefore you need not be surprised to hear that I have seen during the past year both a priest and a nun in whom I believe all their bodily troubles would have been dissipated if they had been leading the life of other mortals. Spite of all measures taken to preserve the nervous system from excitement, and to employ all the energies, it is a fact that some of the most extraordinary nervous complaints to which humankind is liable have broken out in religious houses. It was in these that St. Vitus's dance and St. John's dance, etc., spread until these disorders became epidemic. This reminds me how complaints of this kind are contagious, and how women can possess a control over themselves or not, just as the fashion sways them. This was remarked on in a magazine I was lately reading with respect to fainting. "Ladies do not faint now-a-days—at least but rarely. If one can trust a certain mass of evidence, oral and written, syncope at the end of the last century, and up to the thirty-fifth year of this, was a habit with ladies. A story without a swoon was impossible until lately. Let us thank heaven comfortably that our mothers, wives, and daughters have given up the evil habit of becoming cataleptic at the occurrence of anything in the least surprising."

(To be continued.)

ORIGINAL COMMUNICATIONS.

THE THEORY AND THE METHOD OF THE CURE OF ANEURISM.

By C. F. MAUNDER, F.R.C.S.,
Surgeon to the London Hospital.

It appears that an aneurism depends for its cure upon the filling and contraction of its cavity by fibrine deposited from the blood, and also that this deposition is aided and accelerated by means which retard the circulation of this fluid through the sac, and by the inherent tendency of the blood to deposit this material under favourable circumstances. The natural means which favour fibrination are a want of elasticity in the arteries and an uneven surface, both of which conditions are met with in morbid states of the vessels commonly associated with aneurism; also a languid circulation. Taking, therefore, the teachings of nature as our guide, it remains for us to inquire by what method, if any, our art can aid to promote a more rapid cure than the former unassisted can effect.

In discussing this question, it will be well to select for illustration the most common form of Surgical aneurism—the popliteal. We will accept, then, that an aneurism may be cured by the gradual filling of the sac by layers of fibrine laid one upon the other, as a decorator puts on his coats of paint, until in time the cavity is filled, the channel of the artery is closed, and the current of the blood is diverted. To this end, besides the low tone of the circulation and the inherent power of the blood to deposit fibrine, various conditions tend—certain physical states of the sac, of the contained clot, of the diseased artery, and of the surrounding structures. But, unfortunately, supposing one or more of these favouring conditions to be present, it cannot be recognised so as to be made available to the exclusion of art. The Surgeon, therefore, steps in, puts his patient to bed in order to calm the vascular system generally, and either orders a good diet with excess of meat, with the hope, as he thinks, of increasing the quantity of fibrine in the blood, or puts him on unstimulating and farinaceous food with a similar object. He may also prescribe drugs supposed to have either a sedative effect upon the heart, or which tend to coagulation of the blood, or even to venesection. But he places most reliance upon mechanical treatment, in the shape of compression or ligature. If, then, the theory be correct, and I believe it is, for those cases which get well spontaneously, as well as for the majority of those which we are called upon to treat, it is still our duty to devise, if possible, a more rapid means of cure. I believe this may be found, and, indeed, has been found and acted upon, in instances of aneurism in the lower extremity, and these have been published from time to time in the journals, but I doubt if the value of the treatment has been fully recognised. I allude to continuous compression for many hours. Doubtless the ligature is the most expeditious method, but few prudent Surgeons resort to it until compression fails.

Now what is the explanation of the cure of popliteal aneurism either by continuous compression obstructing completely the flow of blood through the feeding artery, or by ligature? No doubt, slowness of movement of the blood in the sac, amounting often to complete stagnation, and so to coagulation. Such, I think, can be the only conclusion to which we can arrive on witnessing the cure by deligation of the supplying trunk. When the cure of popliteal aneurism by intermittent pressure on the femoral artery was reintroduced by our Irish brethren, it was taught (and is widely credited at the present moment) that a complete obstruction to the passage of the blood through this vessel is not essential to, but rather retards, the cure. With this opinion I am both at variance and of accord—at variance because continuous pressure is as nearly allied as can be to the all-sufficient ligature, and of accord because very many cases are cured by the intermittent method; but it is the least expeditious, and I believe that the most ready means of insuring coagulation in the sac of a popliteal aneurism is to cut off all supply of blood on its proximal side. In this way, if the aneurism be of comparatively recent date and the collateral circulation not freely established, almost if not perfect repose is given to the blood below the point of compression, and, indeed, for a time the artery itself and the sac may, I think, contain not arterial but venous blood, regurgitation of this latter taking place by reason of the temporary removal of the *vis a tergo*. That venous blood does regurgitate through an artery if this latter vessel be opened, in the groin for example, below a point of compression, I have verified absolutely in a case of accidental wound of the superficial femoral artery, in which venous blood flowed freely from the distal portion of the vessel. As another means of retarding the whole mass of the blood in a limb, and so favouring coagulation, we must not forget the unintentional, but almost certain, partial obstruction of the chief and adjacent vein—femoral for example—when compression is resorted to by tourniquet.

The mode of treatment which I advocate for the cure of popliteal aneurism and all other suitable cases is moderate compression, alternating with relaxation, say for a fortnight, with a view, if thought desirable, of promoting a more free collateral circulation in the limb, and at the expiration of this time continuous compression, either digital or instrumental (completely obstructing the artery), maintained, under chloroform if necessary, for a period of from six to twelve hours, or even longer, assisted by a tourniquet on the distal side of the sac if the first attempt failed, as it might do, probably owing to the vascular state of the limb often brought about by the very means employed for the cure—too prolonged alternate compression and relaxation. Thus, although in practice generally I strongly advocate a close imitation of natural processes, yet in this instance I make an exception so far as to increase the rate of progress towards cure, and believe that much time, anxiety, and discomfort will be saved thereby. Doubtless there are cases in which the rapid cure of aneurism is undesirable—in persons whose arteries are manifestly much diseased or whose age renders degeneration probable: also instances of marked venous obstruction, in which, under such circumstances, gangrene would be likely to ensue.

THE THEORY OF A PARASITIC ORIGIN OF DISEASE.

By JABEZ HOGG,
Assistant-Surgeon to the Royal Westminster Ophthalmic Hospital, etc.

In August, 1832, Professor Owen, while engaged in the dissection of a flamingo at the Zoological Gardens, observed the inner surface of the ramifications of its bronchial tubes covered over with a green vegetable mould or mucor. This important observation was made within twenty-four hours after the death of the bird, and Owen remarked of this interesting discovery, "It would appear that internal parasites are not exclusively derived from the animal kingdom, but that there are entophyta as well as entozoa." Three years later M. Bassi, of Lodi, and then M. Bassano, of Milan, described another disease of the kind seen affecting silkworms. This he called *muscardini*. Subsequently Fuchs and Langenbeck, of Göttingen, after

having instituted many similar investigations, came to the conclusion that such vegetations show themselves "in every variety of cutaneous scrofula." Schönlein did not go so far as these observers, but another, M. Meynier, of Orleans, went even farther, and boldly stated that warts are fungi of the order gymnospermia, that lepra and psoriasis are varieties of lichens and mosses, and pulmonary tubercle a variety of lycoperdon.

During the cholera visitation of 1849 a fungoid theory of the disease was freely canvassed, and gained a certain amount of credence; but this, after more careful and extended microscopic examination, was soon abandoned. Nevertheless, in subsequent epidemic visitations it was revived and put forth with such an amount of confidence that Dr. Hassall was requested by the Board of Health to investigate the truth of such statements, and in 1854 he made an examination of twenty-five specimens of rice-water evacuations, but "in none could discover either sporules or any species of fungus." In some, however, which were kept a few days, "myriads of vibriones were developed." Pacini's investigations gave somewhat similar results, and he concluded that these "vibriones constitute cholera contagium." Thus the fungoid theory has at one time been believed to be a fact, and again fallen into the oblivion to which it should be consigned. Once more it has returned to us, and this time through a German simultaneously with an American source. Dr. Salisbury, in the *American Journal of Medical Science*, describes a whole batch of vegetable parasitic growths, and asserts that they are developed in the epithelial cells of the body, many of them in the urinary organs, etc. He illustrates his paper with no less a number than thirty-four woodcuts of microscopic fungi, to all of which he gives appropriate names, such as *Torula catarrhalis*, *Zymotosis gracilis*, *Penicillium pruriosum*, etc.; but, on making a careful examination of the drawings, any one may convince himself that they are merely slight variations of the oïdial form of a well-known fungus, *Penicillium glaucum*. The author's imagination has, indeed, conjured up species and varieties in every hole and corner of the body, and in direct antagonism to the teachings of modern science.

The cholera contagium of Professor Hallier is believed by this learned botanist to be quite a new species of fungus, found only in cholera patients before as well as after death. He gravely tells us that in all his examinations and experimental researches he has "taken every care to prevent the accidental entrance of atmospheric germs." This, of course, can only be taken for what it is worth, and when it is remembered that minute particles of matter are constantly floating about in every breath of air that moves over the surface of the earth, it may readily be imagined how difficult it is to keep any substance or liquid free from seeds or atoms of organised matter. The sunbeam discloses to us a mass of moving matter, and it is not too much to suppose that some portions may consist of organised germs, and which it would be quite impossible to exclude from the most carefully closed vessel. Who could hope to exclude particles which are only made apparent to the sense of smell by a keenly sensitive Schneiderian membrane? The exquisitely minute odour of flowers pervading the air during our summer months, or the impalpable material from a grain of musk, who could detect without the delicate sense of smell? Indeed, without it should we not be inclined to deny the very existence of odours. As yet the skill of the optician has failed to make any portion of a perfume palpable to the sense of sight. Can it then be a matter of much surprise that particles so minute as the spores of fungi find their way into the mouth, pass along the mucous passages, some yards in extent, and at length find some spot in a sufficiently low state of vitality to feed upon, just as life is ebbing away. Some observers deny the possibility of this, and affirm that our atmosphere is not so charged with particles of matter organic and inorganic. If this be so, why take trouble to exclude them from their experiments by the use of "isolating apparatus," etc.? The precaution taken to exclude and destroy organic particles is an *à priori* admission that some such disturbing element has an existence, and is regarded, therefore, with a wise apprehension.

Professor Hallier admits, with increased care in the filtration of the air, he has since obtained a modification only of previously repeated results. It is quite clear, then, that we cannot exclude atoms of matter, nor can we eliminate them should they become mixed up in our experiments. What, then, is new or true in Professor Hallier's statement regarding the cholera fungus? He simply tells us he has examined twenty-two specimens of cholera evacuations a reasonable time before and after the death of certain patients suffering from cholera disease, in all of which he has detected "a fine fungiform matter floating, spore cysts, and minute micrococcus cells, which attach themselves to remnants of vegetable food, epithelial scales, and oil globules." Torula-like bodies were also found, which grew rapidly "at the expense of a nitrogenous organic substance which they attack." Such bodies, when transferred to sugar solutions, grew rapidly, and, as we should expect, he perceived other forms "resembling the *Oidium lactis* and *Penicillium glaucum*." Muscular tissue, he adds, when immersed in sugar solution, speedily produced similar forms of fungus, and the tissue ultimately became decomposed. Is there, then, anything proven even by such experiments and examinations? Is it not rather, as I have already stated, an additional proof that the spores of fungi find their way everywhere, and that the conditions of growth appear, even by Hallier's showing, to be due not merely to a higher temperature, but also to a copious supply of "nitrogenous with some hydrocarbonaceous nutriment, associated with a considerable amount of moisture?" I do not mean to deny the probable influence exercised by minute organic particles mixing with the air we breathe in the *summum malum* of human ills; but what I contend for is simply this fact, that as yet it has not been demonstrated that such bodies hold any precise relation to any particular form of disease. It has been repeatedly shown since Boehm's experiments in 1838, that fungoid bodies are a constant accompaniment with the debris of starch granules, epithelial scales, etc., and that these will be found in abundance throughout the extent of the intestinal track so soon after death that they may appear to have grown or commenced growth before death. So much remains to be accomplished in this difficult inquiry before it can be said that cholera or any other form of disease has its origin in a peculiar fungoid growth, that, if we are not more cautious, we shall find the cholera contagium what Block has aptly described it to be—"the infusorial chaos of the intestines." With Dr. Thudichum I quite agree that "microscopic fungi hold but a small relation to great pathological processes in the human body."

1, Bedford-square.

ON THE EARLY PROGRESS OF ARMY SANITATION IN INDIA.

By C. A. GORDON, M.D., C.B.,
Deputy Inspector-General of Hospitals.

(*Continued from page* 194.)

On the March and by River Route.

The reports from which I have already so freely quoted contain many evidences of the attention early bestowed by our army Medical officers in India on the movements of troops by land. In 1831 we find that Dr. Burke recorded his belief that "the high health of the different corps in their several marches hitherto has been very gratifying," and in his enumeration of the arrangements enforced for the preservation of health under such circumstances, he mentioned that when on the line of march the men reached their ground every morning at or about sunrise; that before starting the rule was to give to each a cup of hot coffee, chocolate, or gruel, if these were procurable. If the men happened to be exposed to heavy rain, some commanding officers allowed them to have a small quantity of spirits, either pure or diluted with water. They were prevented from remaining in wet clothes, and were made to rub themselves dry as soon after reaching camp as practicable.(a) Spirits were, however, given under regimental restriction, and only from the canteen, the civil authorities having in those days been required to order the liquor shops along the route to be closed.(b) Unfortunately, as we elsewhere observe, this regulation subsequently fell into disuse.

But then, as in more recent times, there were circumstances affecting troops on the march in India that can only be realised by persons actually acquainted with the country. Thus it is recorded by the Inspector-General that, during the march of the Buffs to Berhampore in 1833,(c) there was a constant source of annoyance in not being able to procure fresh bullocks and hackeries to replace those that had become unserviceable; that the civil authorities promised well, but seldom gave any help in supplying the wants of the troops on the way; that blame was also to be attributed to the collectors for the bad state of the roads, which appeared to have undergone no repairs for a long

(a) Reports for 1831, p. 462; 1833, p. 281.
(b) Report for 1830, page 306.
(c) Report, page 280.

period, although, according to Dr. Burke, their condition had been represented to the proper authorities.

In that year Dr. Burke, fully aware of the necessity which existed for a code of rules for the guidance of Medical officers on the line of march, drew up a series of instructions for their guidance. These rules received the authority of the Commander-in-Chief, and comprised the following, of which it is only deemed necessary here to give a summary, namely(d) :—

1. To avoid exposure of the men to the sun, they ought to begin the march so as to reach their new ground not later than a quarter of an hour after sunrise.

2. Before beginning the march each soldier ought to have a cup of hot tea or coffee. The men of the 26th Regiment had a cup of hot congee water (rice gruel), and with good result.

3. They should have a comfortable breakfast prepared for them on, or as soon as possible after, arriving at their new encampment.

4. If the march exceed ten miles in length, the men should be halted halfway, and if possible have some hot coffee. This would be more necessary if there be rain or moisture.

5. On arriving wet, they should change their wet clothes, and for this purpose should carry a complete suit in their knapsacks and havresacs.

6. The encamping ground, the choice of which has been too much left to the Honourable Company's Quartermaster-General's Department hitherto, should be as distant as possible from the sources of malaria, and as high and dry as possible.

7. Straw to be supplied sufficient in quantity and quality to insure the men's sleeping as dry and comfortable as possible.

8. That each soldier be furnished with an oil-cloth cover to put under their guddrey.(e)

9. The men to sleep in long cotton night or sleeping gowns, with one of which each man to be provided, and which was done from the canteen funds at a trifling cost.

10. Care to be taken that men do not sleep outside the tents, the doors of which to be always to windward of anything like swamps.

11. That the men wear flannel vests, or at least flannel belts.

12. The men on duty to wear their great coats.

13. That roll calls be dispensed with as much as possible, which would tend not to disturb the men who might be disposed to sleep or rest.

14. Peons to be employed to prevent the introduction of spirits and straggling.

15. The men to drink water from the Puckalie(f) only which accompanies each company, and no man to quit the ranks without leave, on a slip of paper, from the officer of the company.

16. The men to be allowed to halt for five or six minutes twice or thrice during the march, according to its length and nature.

17. A non-commissioned officer to be placed to report to the Surgeon any man whom he may observe during the day to visit the necessary more than twice, or who may appear to be sick. This is to guard against cholera principally.

18. No bathing to take place except under the superintendence of a Medical officer.

19. The Medical officer on the line of march to inspect the men frequently for ophthalmia, syphilis, ulcers, and also as to their general appearance.

20. There being a doolie and bearers allowed for every ten or twenty men, the sick will be conveyed in them, and placed in tents on their arrival at their new encampment. The sick on the march are to be treated as in cantonments.

21. All casualties and extraordinary circumstances affecting the health and comfort of the soldier on the march to be daily reported to the Inspector-General of Hospitals, according to the form furnished.

To those of my readers who have themselves served in India, or who have had the advantage of reading what has of late years been written on the subject of the proper period of the day for commencing a march, it will sound strange that in 1834 some Medical officers advocated the plan of marching in the evening. Among those who did so was Dr. Macqueen, of the Buffs, of whom it may fairly be said that, if in this particular respect his views were peculiar, they were in the great majority characterised by a soundness which justly commanded great weight among his Professional brethren. He opposed the system of marching in the early morning on the ground that more accidents, as well as attacks of constitutional diseases, occurred while travelling before daylight than afterwards, and that the men were often rendered uncomfortable by having to wait a considerable time for breakfast after their day's journey.(g) It must be observed with reference to these objections that the first and last, if they exist at all in reality, do so to a very inconsiderable extent, and that by a little management both could be further lessened. As to the second cause of objection, it is difficult to understand in what manner the early morning march could produce constitutional diseases that would not be equally done by the march at any other period of the day. But there were not only theoretical objections against the plan proposed by Dr. Macqueen; there were practical ones. The instances had already become too numerous of evil results by exposure to the sun from beginning the march at a late hour in the day to justify a continuance of the plan. It was accordingly abandoned.

The marches to which the preceding remarks have reference were performed during the colder months, and under circumstances such as ordinarily attend the movements of troops in India. I will now add a brief mention of the conditions attendant on a march during the hot season, at a time indeed when the fatigue and sufferings of the soldiers from the high temperature are such that they cannot be realised from a mere description of them. They can be so only from personal experience, but, being so, can never be forgotten. When, in 1847, the rebellion of the Sikhs openly manifested itself at Mooltan, troops were immediately despatched from different stations to that place, some being transported by river, others proceeding by land. This had to be effected during the very hottest period of the year, when, as we learn from the reports of that campaign, the thermometer stood at 120° Fahr. in the men's tents during the day, and the heat, as the sun declined, was overpowering. During the march under such circumstances, "every measure of precaution that could be was taken to guard the men against solar influence. They marched at midnight, lightly clothed and without stocks. The tents, which preceded them, were pitched for their reception on arrival at the new encamping ground, and breakfast ready. Bhesties with water attended on the line of march, and baths were in general use in the hospital tents."(h) Notwithstanding all precautions, however, many deaths occurred from heat apoplexy. "Until 12 o'clock in the day," so wrote Dr. Stewart, of the 14th Light Dragoons, "no case was admitted into hospital; but from that time until late in the evening the admissions were continual." With all precautions it is not possible under such circumstances to avoid the occurrence of many casualties. Men, lightly clothed as they were, then as on more recent occasions had water thrown over their head and body whenever they could obtain an opportunity, and then resumed their places in the column. And yet the number of casualties was always great from the effects of exposure to heat, and sheer fatigue.

To persons unacquainted with Indian arrangements the statement must sound strange that the transport by river of soldiers from Calcutta to a distance of six or eight hundred miles inland by river route was, until a very recent date, attended with far more risk by disease and accident than the sea voyage from England to that place; yet such was actually the case. The description of vessels in which they were conveyed at the time to which these notes refer consisted of boats, loosely put together, made of very flimsy materials, and often with planks half decayed by age. The liability of fleets composed of such materials to be ravaged by hurricanes was great. Moreover, from the low slimy banks of the river, and even from the higher ones of soft alluvium at which the boats had nightly for several weeks consecutively to be moored, cholera too often broke out, sweeping through the troops and followers with terrible severity.

The first account of a journey of this nature that we have access to describes one which occurred in 1829. We learn that on that occasion "the fleet of native-made boats proceeded to progress favourably until opposite the village of Buxar on September 3." Here their troubles began. It is evident from what follows that the troops were exposed to one of the storms which at that season of the year are in India of very frequent occurrence, and that the remaining portion of their journey was attended by a succession of mishaps. "One of the hospital boats, and that the store-boat, was lost, and all those in rear, consisting of troop-and commissariat-boats, took flight and crossed over" from the side on which they were to the village of Buxar, the other boats remaining upon the opposite. Soon the wind changed round to the west, and between the fleet of boats, divided as it was, communication could only be kept up

(d) Report 1833, page 215.

(e) Dr. Burke adds, "But this the Commander-in-Chief objected to on account of the expense."

(f) Water carrier.

(g) Report, 1834-5, p. 50.

(h) Report for 1847-8.

by means of *dinghies*. Thus the fleet continued its journey, that portion of it which had separated itself from the rest, containing sixteen ordinary troop-boats, in addition to those conveying sick men. On reaching a place called Nudjeefghur, about twelve miles below Cawnpore, the officer commanding determined to cross over to the right bank—that portion which had hitherto, since leaving Buxar, remained on the left. In the opinion of the Medical officer, the nature of the country on the right was such that exposure to the emanations therefrom was, in his view, calculated to act injuriously upon the other portion of the troops, as it is fair to presume he had observed to be the case on those who had already been subjected to their influence. "The Medical officer," we are informed, (i) "waited upon him and explained the nature of the country," expressing his opinion that if the commanding officer persisted in this measure, unless a fair wind sprang up, which could scarcely be expected, the consequences might be serious from exposure on an extensive jungle which, as he said, must still be saturated by the recent rain, and from which malaria would be eliminated.

We are unfortunately left uninformed as to the circumstances which induced this Medical officer himself to remain on a side of the river where his men were thus exposed, instead of crossing over to the opposite, as well as of those that led the commandant to cross over to one against which the above objections were urged. It is recorded, however, that, heedless of this advice, the fleet was moved, and that, from rapid currents and adverse winds, the troops who had been already on the right bank, as well as those newly crossed over, were exposed for the seven following days to the noxious atmosphere of the extensive jungle in question, and that as a result "few men of the detachment escaped fever, and the mortality was unusually high."

The next occasion on which we meet with an instance of the special dangers to which troops travelling by river were exposed occurred subsequent to the one just described, a detachment of invalids *en route* from the upper provinces to Calcutta being the sufferers. We learn that during the night between October 31 and November 1, 1831, when the fleet of boats conveying them had reached a place called Seekree Gullee, it was overtaken by a severe storm. During its continuance thirteen of the boats in which the men were accommodated were driven on shore, broken, or swamped. The whole of the invalids, as well as their wives and children, escaped as best they could from the boats to take refuge on the bank, drenched as they were with wet, and without the means of obtaining more than a very insufficient covering and shelter, or of lighting a fire. Thus they remained till November 7, when, new boats having been obtained in lieu of those that had been lost, and those repaired that admitted of being so, the journey was resumed. It is curious to observe, however, that in the account of the occurrence from which I quote (k) there is an absence of all remark as to the extent of injury to health and life that such continued exposure and hardships must have occasioned among those who had to undergo them. Probably the occurrence was looked upon as a mere matter of course, and unavoidable.

Great as had been the injury to health and loss to life on these occasions, they were nothing to the occurrences which took place towards the autumn of 1842, when large bodies of our soldiers were proceeding in country boats towards their stations in the interior of the country. From the reports we gather the following particulars, which are of such a nature as to need but little comment.

On June 17, 1842, the 50th Regiment began its journey from Chinsurah to Cawnpore by river boats. The weather at the time was favourable, yet many of the boats, probably on account of their own unfitness and that of their crews, soon afterwards drifted, sank, or were dismasted, the men, women, and children in them being exposed in a state of nudity to the weather, without food or a change of clothes. On August 22 the fleet was dispersed by a gale of wind, which wrecked and bilged many of the boats. A succession of squalls seemed to attend their voyage up the river, in which many lives were lost. Fever and dysentery appeared, and added to their sufferings; and, on November 14, the regiment reached its destination, having, in its voyage of sixteen weeks' duration, sustained a loss of life nearly equal to what would at the time have been expected during twelve months of a sickly season. (l)

The history of the voyage of the 62nd Regiment up the Ganges is far more melancholy than even that of the 50th. "On September 6, at half-past 2 a.m., there arose suddenly a terrific squall, accompanied with thunder and lightning, which, snapping the ropes that connected the boats to the shore, drove them with their miserable inmates, the majority asleep, into the middle of the stream, where nearly one-half were upset, and sixty-two persons, men, women, and children, with two officers, perished. The hospital boats, with their respective patients, books, instruments, and medicines, were all lost. Many men were cast on shore along the river for thirty miles. Some who had no clothing suffered dreadfully from the sun and from the wet and exposure, and sickness broke out among the survivors, although, as is stated, not to the extent that might have been anticipated." (m)

The 9th Lancers arrived at Calentta on September 25, 1842, from England, and were ordered to proceed by the river Ganges to Cawnpore, a distance of 628 miles. They lost no fewer than seventy-nine men in the short space of three months, and Dr. Wood, the Surgeon of the regiment, in his reports on the occurrence, lays blame upon the arrangements made by the authorities in sending troops by water, when they might have detained the regiment at Dum Dum until the season should admit of their marching; as also in having hurried their embarkation on board river boats without due attention having been paid to actual necessaries. Many of the boats were of an inferior description; the hospital boats and equipments were inefficient, and, as a result, this regiment, landing in excellent health, lost more lives on one river trip than it would have done in a sanguinary battle. (n)

From these short extracts it will appear that while, in the two first instances recorded, the elements were in a great measure to be charged with the damage and loss incurred, there was in the third an evident want of care in the original arrangements for the journey on which the troops were about to start—a want of care which, according to the report from which I quote, must remain chargeable to the officers who, under the East India Company, were entrusted with the details of executing those arrangements. I may add that since 1860 the river route has been abandoned, all troops being conveyed by railway.

(To be continued.)

(i) Report, 1829, p. 33.
(k) Report, 1831, page 463.
(l) Report, 1843.
(m) Report, 1842.
(n) Report, 1843.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

CHOREA—TREATMENT OF SEVERE CASES.

(Under the care of Dr. LANGDON DOWN.)

Dr. Langdon Down has been trying various Medical agents in the treatment of chorea. He has found bromide of potassium useful in a few cases; these have been usually females, but in a far larger number it has not been attended by any positive results. In the greater number of slight cases he finds arsenic, in the form of Fowler's solution, the most useful. Dr. Down gives the solution in small doses at first, and rapidly increases it until slight toxical effects are produced. He then diminishes the dose, and continues it until the choreic symptoms have disappeared. In severe cases Dr. Down has found no treatment yield equal results to that of the exhibition of strychnia as recommended by Tronsseau. He finds, however, that it is not needful to push the remedy to the extent advised by Trousseau, but to continue it for some little time after the symptoms have disappeared. The following cases illustrate very well the results of Dr. Down's practice:—

Case 1.—Wm. A. H., aged 8, admitted August 11, 1868, under care of Dr. Down, for very violent choreic movements of all his muscles (head, trunk, and limbs), so violent that he was obliged to have a special bed made up on the floor. His father was prematurely old and intemperate. The movements came on ten days before his admission. Two or three days before that he had accidentally set fire to his brother's clothes in playing with sealing-wax. No history of acute rheumatism could be elicited. Had been fairly healthy till the chorea commenced. Was very thin, frightened, shy, and anæmic. Systolic bruit most marked at apex; also heard at base slightly, but not at angle of scapula. Ordered liq. strychniæ (= $\frac{1}{4}$gr.) ter die.

He improved much, and was nearly well on September 1,

but, the strychnine being left off, he had a relapse. The strychnine was resumed on September 9, and recovery then became uninterrupted. His urine was throughout of high sp. gr. (when it could be collected, as at first he had incontinence, or rather choreic micturition). Dr. Woodman, the Resident Medical officer, failed to discover any inosite, but there was urea in the proportion of 5 grains to the ounce. From the circumstance stated above, it was impossible to estimate the daily urea. The incontinence was cured, and the urine became normal as he recovered. He gained flesh, and the cardiac bruit quite disappeared.

Case 2.—Jemima C., aged 9, admitted August 18, 1868, under Dr. Down's care. Fair hair, eyes, etc. Thin and anæmic. Father gouty. For four years past has had "fits" of momentary unconsciousness, screaming, and strabismus (the screaming probably came first), especially whenever she cut a tooth. The chorea is said to have come on after sitting in the sun. (The weather was then excessively hot.) This patient had also thread-worms. The movements were bilateral, affected nearly all her muscles, and were often very violent, so that she could not be kept in an ordinary bed. The first sound of her heart was prolonged, but there was no bruit. Her urine was of 1020 sp. gr., contained a trace of albumen, and some epithelial casts. Ordered $\frac{1}{4}$ grain strychniæ ter die.

By August 28 she was so much better that she could be left safely to herself.

In the first week of September she left off the medicine for a few days, and had a relapse. On its resumption she rapidly improved, and was quite well by September 20.

MARGARET-STREET INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST.

CASE OF RHEUMATIC FEVER—PERICARDITIS—STOMATITIS—PROFUSE HÆMORRHAGE FROM THE INTESTINES AND FROM THE UTERUS—RECOVERY.

(Under the care of Dr. OPPERT.)

E. S., 19, sempstress, pale, of very dark and sallow complexion, languid and weak, has been several times during the last two years under treatment at the Infirmary, as an out-patient, for catarrh and gastrodynia. She has a swelling of the left breast, which was caused by a blow two years ago, and diminished a little in size under the use of iodide of potassium. The menses are regular. The father is dead; the mother suffers from bleeding piles.

On September 14, 1868, a new series of graver symptoms made its appearance. The patient, now confined to her bed, had a weak pulse of 120; the skin was soft and warm, the urine turbid, brown, and slightly alkaline, owing to previous alkaline treatment. She had pain in her back, limbs, and the scrobiculus cordis. She had suffered very rarely from palpitation of the heart previously, and had it now to a slight degree only. The ictus cordis was found weak; percussion showed slight dulness in the region between the second and third rib, close to the sternum. The limits of the dull sound to the left could not be clearly defined, owing to the large mamma. There was no swelling or pulsation of the veins of the neck with the diastole. The sounds of the heart were normal, but weak near the apex, normal over the aorta; no sounds were heard over the pulmonalis, but a loud blowing single friction-sound in its stead, commencing with the systole, but lasting longer.

The lungs, which could only be examined in front, did not offer any abnormity. Respirations 28; tongue white and pasty; bowels confined; slight headache. The liver was found enlarged, the margin extending beyond the false ribs near the umbilical line to the extent of nearly an inch. She slept badly. Treatment—Sodæ bicarbon. gr. xv. ex infuso quass. quater die; pil. saponis co. gr. v. nocte. Lemonade for a drink.

17th.—Pulse 110; right wrist considerably swelled, much pain; sleeps better by taking the pills; debility and helplessness increased. Instead of a single friction-sound, a double one was heard, without pressure of the stethoscope, at the same place where the single one was previously, and for two inches and a half lower down the sternum. The place had been purposely marked with nitrate of silver. There was also a very slight thrill (*frémissement cataire*) between the second and third rib, half an inch to the left of the sternum. Tinct. digitalis ♏ vj. were added to the mixture four times a day. Cotton wool externally.

21st.—Pain and swelling had left the right wrist; the left one was now affected. Pulse 112. The mouth was sore; several aphthous ulcers had appeared at the tongue and lower lip. Appetite none, thirst increased. Began to lose blood with her motions last night, which still continued. Ordered tannin gr. iij. in mist. cretæ ʒj. quater die, and as a drink potassæ chlorat. gr. xl. in mist. menth. ʒiv.; two tablespoonfuls to be taken with water between the doses of the mixture. She lost more blood during the day; it was to a great extent fluid and bright, but also coagulated and not digested. In the evening she had a violent fit of shivering, with trembling all over, lasting for more than half an hour, followed by heat and profuse perspiration.

22nd.—Pulse 120, much weaker. Urine dark, no albumen. Debility extreme; had fainted several times. The friction-sound has completely disappeared; the heart-sounds very weak, but clear. The sores of the mouth a little better. Lost a little more blood in the course of the day, and had a rigor of less intensity. To continue the tannin mixture, and take small quantities of brandy five or six times a day. Beef-tea as much as she was able to take without vomiting.

23rd.—Another motion containing blood. She looked pale and exhausted, having already lost more than three pints of blood. Ordered tinct. ferri perchloridi ʒss., infusi quass. ʒxij., tinct. aurant. ʒiij.; a tablespoonful to be taken every two hours. Eggs beaten up with brandy.

24th.—One motion this morning, contained a little clotted blood. Pulse 112, weak; but patient felt a little stronger. The sores of the mouth were healed.

26th.—Had again three motions, with a loss of two pints more of blood. Pulse 104, weak; urine clear, pale. No murmur was heard at the heart. A sore threatened to form on the sacrum. Percussion over the liver showed its size slightly decreased.

28th.—Pulse 110, weak; patient coughed a little. The treatment of the 23rd to be continued.

29th.—Seen by Dr. Cholmeley in consultation. Had a relapse of the bleeding, lost again a pint of blood. Was ordered to take the steel mixture every hour, but had soon to discontinue owing to sickness. The bleeding, however stopped.

October 1.—Pulse 108, still weak, but patient had recovered strength to a considerable extent. The face, though pale, looked contented. She had pain in the right knee. The heart sounds were weak, but clear. She was able to sit up, and for the first time auscultation and percussion could be performed at the back; nothing was abnormal excepting more dulness at the lower part of the lung than usual, which could be referred to the enlarged liver. Ten grains of quinine were added to the mixture, an ounce of which was now taken three times a day; a belladonna plaster to the epigastric region, pil. saponis co. gr. ijss. nocte maneque.

From this time the patient gradually improved up to October 7, when she had an attack of jaundice and sickness. The skin became yellow, as also the white of the eyes, the bowels being confined. This lasted two days, after which a motion with blood was passed, and the skin recovered its normal colour. The recovery, however, was not much retarded by this.

A week later (October 14) the patient had still slight pains in the back and a pulse of 100, but much stronger. On October 17 the patient left her bed. She continued to improve.

Remarks by Dr. Oppert.—This was a first attack of rheumatic fever of no great acuteness, with pericarditis of a moderate extent, causing most likely fibrinous exudation. The variation of the murmurs from a single one to a double one was remarkable, as confirmatory of the diagnosis, and the marking of the place with nitrate of silver where the murmur was first heard turned out very useful, and may be recommended. The most dangerous of the many complications of the already serious malady were the profuse hæmorrhages from the bowels, which brought the patient near to the brink of death. The loss of blood from which she recovered amounted to more than six pints during a week's time, and she was already reduced in strength previously. The source of the bleeding could not be satisfactorily stated. To explain it we may refer to the hereditary disposition, the mother having bleeding piles, and to the liver affection. This organ was certainly enlarged and congested, and became reduced in size after the bleeding; the jaundice pointed also to congestion and obstruction, the improvement being coincident with the bleeding. The coincidence of the friction-sound disappearing with the first commencement of the hæmorrhage was also remarkable, as the murmur was to be expected to last longer, because slight dulness was present over the pulmonary

artery. Those in favour of bleeding in pericarditis might make something out of the case. The rigors were owing to inanition, as they supervened after the hæmorrhage had lasted several hours. Respecting the treatment, opium had a good effect in the beginning; the tincture of perchloride of iron had certainly the merit of keeping up the strength of the patient, who could neither digest much food nor take much stimulants, and it stopped the bleeding effectually. The potassæ chloras did good service, as usual, for the diphtheritic affection.

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Medical Times and Gazette.

SATURDAY, MARCH 13, 1869.

DR. BARNES'S LECTURES ON OBSTETRIC OPERATIONS.

In the *Medical Times and Gazette* of last week was published the last of a series of lectures by Dr. Barnes on "Obstetric Operations," the first of which appeared in our journal of July 6, 1867. We may fairly congratulate ourselves upon having been the means of conveying to the Profession such a large amount of original and practical teaching. Most English works upon this subject have been written so long since, and the views set forth in them have been so much improved upon, that the want of such lectures as these has been for some time manifest; indeed, we may consider these as the first published which have entered fully upon the uses of instruments, their *modus operandi*, and the importance of good models—subjects which form the foundation of good operative midwifery. Here, all the instruments and accessories which can possibly be required are enumerated as components of "the obstetric bag," with which one is fully prepared for any emergency that may occur. Dr. Barnes has been particularly careful in his choice of instruments. Every accoucheur has some pet fancy. The varieties of forceps are legion, each bearing the name of its inventor; but Dr. Barnes shows that he is in no way bigoted. He claims no particular merit for his own, but gives the palm to Simpson and Robertson, pointing out most carefully the essential conditions to be contended for in the choice. He shows that the forceps is a lever and a compressor as well as a tractor. In order to fully explain this, he has recourse to a large number of diagrams, each one drawn by himself from actual observation and practical experience. By the aid of diagrams, too, he points out how the lever is a *lever*, and not, as it is so commonly imagined to be, a tractor. The advantages of the long double-curved forceps in adaptation to Carus's curve are clearly demonstrated, and the mode of applying the instrument is minutely shown, two cherished English ideas being exploded—viz., that it is necessary to drag the patient over the edge of the bed and to use three hands to hold the blades—a fact of manifest importance to a country Practitioner. It is also clearly shown how the curved long forceps is qualified to take up the head at any point below the brim, and therefore quite capable of taking the place of the short forceps. This entirely dispenses with the idea that the short forceps is essential for application to a head at the outlet. Dr. Barnes explains, too, of what assistance external abdominal manipulation is, combined with the ordinary application of the forceps, and in turning, a method rarely practised up to the present time. A cause of arrest of the head in first labours is illustrated in diagrams, showing the successive obstacles presented by the anterior or "uterine valve" and the posterior or "perineal valve." The vivid description of this must at once strike every accoucheur as a frequent occurrence with primiparæ. The influence of leverage and "friction"—a force generally unnoticed in obstetrics—in producing face presentations, and how these forces can be brought into use to correct the fault they have produced, is clearly shown.

Dr. Barnes classifies carefully the degrees of contraction of the pelvis with relation to the various operations required to be performed. The use of the forceps in minor pelvic contraction, and of the alternative operation of turning, is discussed with great care and accuracy of illustration. The mechanism of labour in contraction from projecting promontory is reduced to a clear expression by Dr. Barnes's description of the "curve of the false promontory," which, in this kind of labour, is shown to be the equivalent of Carus's curve in natural labour. In order to dilate the os uteri in cases of rigidity of the cervix, Dr. Barnes invented the well-known hydrostatic dilator which bears his own name; the uses of this he has fully described, and its mode of action he has clearly demonstrated by the aid of a diagram. This simple instrument overcomes one of the greatest difficulties with which the obstetric Practitioner has had to contend, in a large number of cases answering that purpose for which, without it, the knife must have been resorted to. The mechanism of spontaneous version and evolution is handled with more care than has hitherto been bestowed upon it, and by the aid of no less than fifteen diagrams this difficult problem has been rendered comparatively simple. Dr. Barnes has demonstrated how a dead child alters these conditions; the knowledge of this mechanism is then applied to the elucidation of the laws of artificial version and artificial evolution, and out of it is evolved the "bipolar method of turning." Dr. Barnes states that the history of the method, the steps by which this the greatest improvement in the operation has been brought to its actual perfection, deserve to be carefully recorded. This he has thoroughly carried out, taking care that not one link in the chain shall be wanting. The manner in which the operation for the delivery of difficult breech-presentations and the liberation of the arms in breech-first labours is described, is especially worthy of notice, the diagrams illustrating each step being so carefully executed as to render the mode of treatment perfectly clear. A very original method is described of procuring induction of labour; in this case the value of the dilating caoutchouc bags is pre-eminently manifest. By the aid of these it is shown how the length of time from the commencement of the induction to the termination of the labour is almost completely under the control of the operator, and that, in an urgent case, the whole proceeding can be completed in the space of an hour. In order to understand the phenomena of labour, natural or artificial, one must have a knowledge of the laws of mechanics. This Dr. Barnes has taken care to enforce, and no one can read his lectures attentively without at once understanding the mechanical principles upon which every movement takes place, and without seeing how wonderfully Nature has constructed her machinery. We have had occasion constantly to refer to the value of the diagrams, and we cannot dilate too much upon their worth, each one being to the point, and drawn by the author himself from actual observation (with the exception of one copied from Scanzoni for the sake of showing that he and many who follow him are wrong in the operation of turning).

Perhaps the most important point in operative midwifery is the choice of the operation to be performed; in these lectures the logical and ethical reasoning as applied to the selection of the operations of forceps, turning, craniotomy, Cæsarian section, and premature induction of labour, renders this a perfectly straightforward task. Indeed, the lectures throughout have been written so clearly that the reader can find no difficulty in following Dr. Barnes through every step he has taken.

STOKES'S LIFE OF PETRIE.(a)

This is not a Medical book in any sense, yet there are many reasons why it should be brought emphatically before the Medical Profession. The *Medical Times and Gazette*, showing, as in a glass, "the very form and body of the age" Medical, claims the privilege of showing what manner of men our greatest Physicians are; and this not only as regards their Professional and public life, but also the recreations of their privacy and employments of their leisure. Proud as we may be of the science and practical skill of a Regius Professor of Physic, as displayed in his contributions to the "Cyclopædia of Practical Medicine," our pride is enhanced when we find him versed in the science of humanity in its widest aspect, and contributing to that larger circle of literature which deals with the history, sentiments, and moral nature of man. Heaven forbid that the character of the learned and accomplished Physician should ever be exchanged for that of the mere pathologist and Practitioner! That evil day, however, has not come yet. We have Simpson supreme in Scottish Archæology; Billing writing on Antique Gems; Sir H. Holland famous for his contributions to the highest class of criticism; Fayrer, as President of the Asiatic Society of Bengal, discoursing on the philology, archæology, and natural history of India; at least two eminent Hospital Surgeons and one Regius Professor of Physic distinguished as artists; one eminent Physician whose marvellous skill in physical diagnosis has not prevented his becoming one of the highest authorities on Faïence and Majolica; another who revels in geology; and, without reckoning the Physicians who are eminent in microscopy, botany, chemistry, political economy, and other sciences allied to Medicine, we may boast that the race of scholarly and accomplished Physicians is not extinct, and may thank Dr. Stokes not merely for the philosophical biography before us, but for the encouragement which he gives to the younger Physicians to let, as of old, their special technical studies be crowned with a wider study of humanity. Dr. Stokes is indeed fortunate in his subject. George Petrie, the artist, was a man whose studious and blameless career and lifelong devotion to art would win the interest of every reader, even had his biographer not seized as he has done the higher relations of art and archæology, and drawn for us some of the soundest political axioms out of the penetrating and sympathising studies of natural character of which every passage in Petrie's life was redolent.

George Petrie was born in 1789, the only son of James Petrie, an eminent portrait painter, distinguished as an antiquarian and numismatist; but although born in Ireland, his blood was of an Aberdeen stock. He was at first intended for Surgery, but, being of a frail constitution, he was allowed to follow the bent of his own tastes, and so grew up to be an artist. From very boyhood he had an instinctive taste for archæology, and made observations on ancient incised stones and ancient Irish melodies, and showed a clear insight into the influence of national character and history on modern politics at an age when most boys are engrossed by cricket;—his opportunities for observation being found in the course of solitary tours which he took in the summers for the purpose of observing and sketching the landscape. Arrived at manhood, he was busily engaged in landscape painting, and exhibited pictures at Somerset-house; he supplied abundant sketches for the engravings with which the Landscape Annuals, Cromwell's "Excursions in Ireland," Brewer's "Beauties of Ireland," Fisher's "Guide to Ancient and Modern Dublin," Wright's "Tours," etc., were adorned. Besides this, he painted many pictures which, says Dr. Stokes, may be divided into two classes—simply landscape pictures and those which have additional interest as illustrative of national antiquities. Of the landscape class the highest, Dr. Stokes thinks, is the "Home of the Heron," a scene on Lough Atree; of the second class, the picture of the monumental circle of stones on the Caagh Hill, near Dungiven, in the county of Londonderry. Here we wish that we could dilate on the excellence of Petrie's biographer as a guide to the true secret of art criticism. The true painter not only represents external nature, the field, the hill, the cloud, the ruin, but he shows, in subtle form and colour, man's very soul—the emotions which the scenes of Nature call up in the mind of the spectator who has a soul. Petrie's works, says Dr. Stokes, not only present "perfect truthfulness of detail" (which is what the vulgar delight in, and are satisfied withal), but "the undefinable and indescribable charm of spirituality" which is appreciable to the mental vision of the poet. "This quality," says Dr. Stokes, in an admirable passage, "is difficult to analyse; it does not depend on addition or subtraction of any detail of form, for his representations are faithful to the most minute particular, but it seems to arise from a power—of which the artist was unconscious—of holding communion with his subjects. All the points of historical knowledge, all the memories of collateral events, and all the thoughts of a reflecting, poetic, and a loving soul as to the present, past, and future of the people with whose story these remains were connected, arose before him as he painted; and so over all his works a sad and sunset gold is made to shine, and we see the rude and early oratory, the Primitive church, the Cistercian abbey, and the Norman castle through the mental light of him who seemed born to be at once their preserver and their historian." Can we doubt what Dr. Stokes adds in the next paragraph—that Wordsworth was Petrie's poet?

Petrie's life, as depicted by Dr. Stokes, was employed sometimes in tours over the greater part of Ireland and in Scotland for the purpose of sketching natural scenery, of noting antiquities, and examining objects of ancient art and collecting ancient music; sometimes in artistic work proper, and at others in connexion, officially or privately, with every movement for the promotion of historical and archæological study. He became a member of the Royal Irish Academy, began virtually to found the Museum of Antiquities, and the collection of ancient manuscripts. He was employed in that most complete but prematurely extinguished work, "The Topographical Memoir of the Ordnance Survey of Ireland." He was successively Secretary, Treasurer, and President of the Hibernian Academy of Arts, received the degree of LL.D. *honoris causâ* from the University of Dublin, was granted a pension by Government, and, after a life spent in charity with all men, died peacefully in January, 1866.

We will now endeavour to give the shortest possible summary of his labours as detailed in Dr. Stokes's successive chapters.

Dr. Stokes devotes one chapter to the history and antiquities of Tara Hill, which were studied and described by Petrie in a memoir intended to accompany the Ordnance Survey, and of which Dr. Stokes says that "it forms the key to all the reliable ancient history of the country," and was an admirable illustration of Petrie's severely scientific method of testing the truth of history and tradition by existing remains.

Every one has heard of Tom Moore's Irish melodies, and the poem he wrote for one of them—"The harp that once in Tara's halls," etc. A hazy kind of knowledge (such as is sometimes called "floating information," from its having no fixity

(a) "The Life and Labours in Art and Archæology of George Petrie, LL.D., M.R.I.A., etc." By William Stokes, M.D., D.C.L. Oxon., Physician in Ordinary to the Queen in Ireland, Regius Professor of Physic in the University of Dublin. London: Longmans. 1868.

or accuracy), which is picked up from magazines and romances, may be present in some persons' minds that there were ancient kings at Tara, though more probably the place, the kings, the harp are supposed to be alike creatures of the imagination. Nevertheless, there is the hill of Tara to this day, and there are traditions of royal palaces where ancient kings reigned, and where—which is more important—St. Patrick is said to have preached the Gospel; and as the hill, and the hall, and the kings have been treated as myths, so has the same superciliousness been shown to the history of the saint. Petrie set to work anatomically, as Cuvier would have done with fossil bone. He first of all caused to be made a minute map of the district in the course of the Ordnance Survey; next he went over it with Captain Larcom and Captain Bord, noting even more minute vestiges, which would be imperceptible to any but an antiquarian eye; he further collected local traditions as to vestiges now changed or obliterated. Thus prepared by the anatomy, he used it to test the history of the place. "The remains were examined in the order pointed out in the ancient descriptions. This was done with little difficulty, as the first object mentioned was a natural feature—namely, a remarkable spring, whose position in the side of a hill was distinctly pointed out in these ancient topographical tracts. Pursuing the same course, monument after monument was identified: the Rath na Riogh, or Royal Fortress, and the Rath Laoghaire, the House of Cormac or Palace of Tara; and so through the rest of the remains, numbering not less than twenty. And thus the veracity of these ancient documents has been proved beyond the possibility of reasonable doubt by many of the principal monuments which they describe, and which still remain; and from this light the names of these monuments, which had been lost to tradition for centuries, have been restored on the Ordnance map." Thus Petrie may be said to have given by rigorous investigation the stamp of authenticity to matters which seemed within the region of fable, and to have vindicated the early history of his country.

Dr. Stokes next gives an account of Petrie's labours on the celebrated Round Towers of Ireland, on which the "airy and fantastic" imagination of so-called antiquaries had indulged itself to the utmost, and generated a variety of monstrous and irreconcilable theories. Petrie set to work like a philosopher, first to examine the towers themselves, their construction, and the differences therein; next to compare them with other existing ancient buildings; and thirdly, to collect all accounts of them in early tradition and history. His conclusions were that they were Christian, and not old pagan, monuments; for there is no evidence of any knowledge of the structure of the arch or of lime-cement in pagan times; that they were designed as belfries to churches; that they were occasionally used as "castles or keeps for the monasteries," as depositories of valuables and places of refuge, and sometimes as beacons to travellers (even as the church towers of Hornsey and Hadley still show the beacon turrets, whose fires of old lighted the traveller from the north to London). That skeletous and masses of burnt wood may be dug out of their floors does not prove them to have been, as asserted, burial-places or temples for the holy fire of the Phœnicians. Skeletons and burnt wood are naturally to be found in places which, spite of their strength and sanctity, were often sacked and burnt; on which we may mention the grim joke narrated by Petrie that, when Gerald, eighth Earl of Kildare, was accused before the King for burning the Cathedral of Kildare in 1495, his defence was that he thought the archbishop was in it.

The next chapter treats of Petrie's researches on ancient Irish military antiquities, in which the same calm and scientific mode of investigation enabled him to clear away a horde of vulgar fables (such as that all ancient strongholds were the work of *thim ould Danes*), and to assign to each class of structure its origin and probable date. Of the terms by which they are designated one, the word *dun*, which is the generic term for strongholds in general, is identical with the Scottish *doon*, the Welsh *din*, the Gaulish *dunon*, as in *Noviodunum*, and the English *ton* or *town*. The use and origin of fortresses were traced by Petrie upwards from the Norman castle, such as that of Tuam, built by Roderick O'Connor, the last native king, just before the period of the Norman invasion, to the round Irish castle, built with stone and mortar, and from these to the *cathairs*, or huge fortified enclosures of Cyclopean architecture, and before these to the raths, or fortified mounds, surrounded by concentric earthen ramparts and ditches, within which were doubtless palisades and stockades, in which the chieftains, surrounded by their retainers and flocks and herds, dwelt in barbaric grandeur. The notice of sepulchral monuments shows that Petrie from his earliest youth discarded the absurd popular notions that the gigantic cromlechs or dolmens were Druidical altars, or aught else than massive sepulchres sacrilegiously robbed of the earthen tumulus that once covered them. The succeeding chapters treat of ancient Irish art and ancient music, which our already exhausted space forbids us to touch upon.

One word by way of moral. There never was a better-timed publication than this, in which Professor Stokes, himself a companion and associate of Petrie in his distant journeys, and the sharer of his enthusiasm, gives us in conclusion one of the profoundest lessons in political philosophy. Here is no mere question of dilettantism, of archæological fribbles, of discussions about cairns, or torques, or crosses, but a question of the integrity and existence of what we proudly call the British Empire. The question of the day is the rendering abstract political justice to the Celtic race of Ireland by the disestablishment of the Irish branch of the English Church. It is easy to set the ball rolling, but who shall say where it will stop? A man who has a lame leg cut off at the hip joint may be told that there is no fear for the sound leg; but in the case before us the dismal prophecies of friends and the exultant hopes of enemies agree in this—that the process of disintegration once begun is not likely to be arrested, that other institutions nearer home must fall in succession, and that consequences must follow which will be felt in every parish and family in the United Kingdom. And why? Because English statesmen, in their pride of place, have for three centuries refused to acknowledge and respect the national character of those with whom they had to deal.

As metals are classified into noble and base, so may we divide races, and may claim for the Celts a place amongst that noblest family which includes Greek, Roman, German, Sclavonic. To affirm, as we find Petrie and a certain school of ethnologists (L. O. Pike, to wit), that the Irish Celts *are* Greek in origin, is proving too much, and applying to the race that false test which Petrie and his biographer justly repudiate when applied to their language. Some similarity may be fairly expected from races near akin; identity is not proved nor probable, and, if it were, the rule must be applied to other Celts than the Irish. Anyhow, they are one of the great historic races of Europe, once stretching from remote Hibernia to the Black Sea; they made their mark on Grecian history; they left their trace, however slight, on both the Old(b) and New Testament; and, to show that continuity of historic character and position which they exhibit, in the earliest Roman history the Gauls were at the gate of Rome, and there the Gauls are now. Brave to a fault, but rash and headstrong, their time was spent in agriculture and war, and of such wars, whilst some distant expeditious may have been inspired by love of

(b) In the Septuagint version of the Old Testament, there is a remarkable word used in Joshua viii. 18, 26, to signify *spear*, which shows the fame of the old Gauls. It is the word γαισός, the javelin of the Gæsatæ, an Alpine Gaulish tribe, famous for supplying mercenary soldiers (the *Swiss* of B.C. 500—200: how difficult it is for tribes to forsake the tradition of their fathers!). The Gauls brought their weapon into Greece, Asia Minor, and Egypt. Four thousand of them are said to have been employed by Ptolemy Philadelphus B.C. 265; and it is believed that this word helps to stamp the date of the translation of the Book of Joshua in the Septuagint (see also Judith ix. 7). See Polybius, book ii. chap. ii.; also Prebendary Blair's Lectures on the Septuagint, delivered in Westminster Abbey, London, 1785. This is not noticed in Smith's Dictionary of the Bible.

plunder, by far the greater number were for the possession of land, of which the Gauls deprived Ligurians, Tyrrhenians, and any other non-Gallic races, whilst the separate tribes were always ready to dispossess each other. They never hesitated to ally themselves with a foreign enemy against other foreign enemies, or against each other. As the Ædui asked Cæsar's aid against the Germans, so the British Celts are said to have asked the aid of the Germans against Picts and Scots, and the Irish king, Dermot Mac Morrogh, asked Henry the Second's intervention against King Roderick O'Connor. Just as in Cæsar's time Gaul and German faced each other angrily across the Rhine, so it is now. But, by the fortune of war, the German has proved the stronger, and has done to the Celt what the Celt would have done to the German if he could. The Irish have been no worse treated by the Saxons than the Tuaitha de Danaan and the Firbolgs treated each other. The Irish Celts have their bright and their dark sides. Queen Victoria in her journal notices the beauty of the women, and Petrie, with an artist's eye, dwells on the aristocratic hands and the small beautiful feet with long Grecian toes of the West Connaught peasant girls; whilst by way of contrast he speaks of the "remarkable strength and thickness of the limbs" of some women near Cashel, whose flaxen hair and light blue eyes, together with tradition, proclaimed them Gothic, and not Celtic. The ancient language of the Irish is still spoken by above a million and a quarter of people, and Archbishop M'Hale is said lately to have confirmed 2500 children who knew no other. It is a language moulded by the poet and orator, and is well married to that national music which is the very expression of deep and soft passionate feeling. No nation accepted Christianity more readily or used it more faithfully than did the Irish between the fifth and tenth centuries. Let us remember that the *Scoti* (whose name has been usurped by the lowland Anglo-Danes) were Irish, and that when all Europe was convulsed in the fall of the Roman empire the lamp of civilisation burned brightly in Ireland; churches, monasteries, and schools flourished in Ireland West Scotland and the Isles, their remains to this day attesting the zeal and devotion of their builders, whence missionaries and priests spread the truth over Central Europe. Does any English churchman need proof? The sentence in the Burial Service, "*In the midst of life we are in death*," was the composition of St. Notker, a disciple of St. Gall, an Irish missionary who founded the well-known monastery whence one of the cantons of East Switzerland takes its name. Even now amongst the Irish peasantry are to be found lineal descendants of the ancient royal and noble families who know their lineage, and are proud of it. Petrie's labours, and Dr. Stokes's record of them, are pre-eminently calculated to effect a great political end; to inspire in their countrymen loyalty, no less than patriotism, the love of truth, and the feeling of self-respect—a self-respect which will make them proud of being Irishmen, and as such of being members of the great British Empire, and a love of truth which will show them the vanity of many grievances sung by bards, and magnified by traders in politics.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

The Metropolis Local Management Act (18 & 19 Vict., cap. 120), by which the existing municipal organisation of all London except the "City" was constituted, contains a most important series of sections concerning "Reports." It provides, by section 198, that every Vestry and District Board shall, in the month of June in every year, cause to be printed an abstract of all their accounts, made up to the foregoing 25th day of March, together with an abstract of their works, a statement of legal proceedings taken for the removal of nuisances and the improvement of the sanitary state of their parish, and "a copy of every report made to such Vestry or Board during the preceding year by the Officer or Officers of Health for their parish or district;" and every such Vestry shall, in the month of June, send a copy of such abstract, statement, and report to the Metropolitan Board of Works. Every Vestry is to permit inspection of such reports, etc., by any ratepayer without fee, and shall sell the same to the public at a price not exceeding twopence.

These clauses clearly make it a duty that there shall be reports of Medical Officers of Health, that they shall be easily accessible to the public, and that the whole of them shall be rendered in and collected at the central office of the Metropolitan Board of Works once a year. Unluckily the Act stops short, and they to whom the working of it is committed either cannot or do not care to step beyond the strictly legal limits of duty. For it is clear that materials exist for a compendious account of the history of disease, both in London as a whole, and in the several parts of it, which might be utilised, but are not, for the want of some central authority who shall appoint an editor. Whoever read the abstract which we published of Dr. Gavin Milroy's paper on the "Topography and Chronology of Disease," read before the Association of Medical Officers of Health, must be aware that there is a gap to be filled. But there are many obstacles at present. The Act of Parliament clearly orders that the parochial and sanitary year shall be reckoned from March 25. In the City a different order reigns, and Dr. Letheby's year begins at Michaelmas. The reports of the Registrar-General conform to the civil year beginning on January 1. Hence annual sanitary reports vary as to the period they begin at, and this renders comparison difficult. The minor reports of details which are sent in by Health Officers to the local authority, vary infinitely more; some being fortnightly, some monthly; and the month may be reckoned from the first Tuesday or the third Friday, or any other day, according to circumstances. Then the Medical officers for the most part, when they formed their Metropolitan Association, agreed to harmonise their forms as much as possible; but, such is human nature, all of them do not belong to the Association, and some that belong to it do little in concert with their brethren. Nor is this entirely their fault, for the authorities who employ them can dictate the time and form of printing the reports, and these authorities have the greatest horror of the Association; they look on it as a kind of trades' union, and an endeavour on the part of their servants to make themselves independent of their masters; and they, jealous of their own local influence, do not favour any attempt at harmony and union. When the Medical Officers of Health some years ago did virtually unite, and furnished materials for a chronicle of existing disease, their publication, unique in itself, and which might have been expanded and set on a firm basis, was suppressed by the indifference or parsimony of the Privy Council Department. So we are in the condition of having plenty of cooks, but no broth, and must wait the next change for better times. Meanwhile, it is very desirable, as Dr. A. P. Stewart and Mr. C. Brooke pointed out in our last week's number, that all sanitary reports should be sent to the public Medical libraries, especially the College of Surgeons and the Medico-Chirurgical, where they may be at the service of any one who desires to use them. The authorities of the British Museum ought to insist on having copies of them, for, by the Act, they are published and sold as much as any other book whatever.

THE WEEK.

TOPICS OF THE DAY.

The Council of the Royal College of Surgeons have, we are glad to say, carried Mr. Curling's motion making it incumbent on all candidates for their Membership and Fellowship to pass an examination in Midwifery, or to produce a diploma which shall guarantee a knowledge of the subject. We regard this reform as of equal value to the cause of Medical education with that of the introduction of Medicine in the College Examinations.

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We are enabled to announce that Mr. Erasmus Wilson has made to the Royal College of Surgeons an offer, unfettered with any conditions, of £5000 for the purpose of founding a Professorship of Dermatology in connexion with the College. We are also glad to add that the Council of the College of Surgeons have been wise enough to accept the boon. The details of the arrangement have been referred by the Council to a committee. It may, indeed, be said that dermatology belongs rather more to the domain of Medicine than of Surgery; but the fact is that it lies on the confines of both provinces, and may fairly be said to belong exclusively to neither. A College of Surgeons, which in years past has given the diseases of the skin as a subject for the Jacksonian prize essay, could scarcely decline on this ground the £5000, and the addition, which Mr. Wilson also offers, of models of skin diseases to the Hunterian Museum. However, should any absurd notion of purity have prevented the acceptance of the gift by the Council of the College, we should have advised Mr. Wilson to offer his money to the older institution in Pall-mall East, for it would have been a pity if such a benefaction to the public teaching of a difficult and little known department of Medicine had been lost.

We regret, however, to have also to announce that Professor Humphry's motion in favour of the election of non-councillors into the Court of Examiners(a) was not confirmed at the meeting of the Council of the College on Thursday last. The reason of the non-confirmation of this motion is said to be that an opinion adverse to the admission of non-councillors to the examinership has been obtained from high legal authority.

The scheme of amalgamation proposed by the Committee of the Royal Medical and Chirurgical Society appointed "to consider and report whether any, and if any what, steps should be taken to unite the several Medical societies of London, or any of them," has prematurely seen light in the pages of a Medical contemporary. We say prematurely, for the report of the committee has not yet been approved by the Council of the Medical and Chirurgical Society, nor has it been presented to the Society itself. It is therefore too early to discuss in detail the several parts of the report. We may, however, offer one or two remarks upon the general question. In the first place, any scheme which does not include the chief Medical societies of the metropolis is but an imperfect and partial one. We believe it to be true that the property which the Medical Society of London holds under the wills of Dr. Fothergill and Lettsom presents a barrier to the amalgamation of that Society with the other Medical societies of London; but whether this Society might not be affiliated in some way to an Academy of Medicine, or be made itself, by virtue of its seniority and property, an integral and distinct but still component part of the Academy, seems worthy of further consideration. Another observation which we would offer is that no scheme which virtually doubles or trebles the entrance fees and subscriptions to the societies, such as the Pathological and Obstetrical, which are to take rank as sections, is likely to be received with favour, and that if amalgamation impose fresh burdens on the Fellows and Members of Medical societies instead of bestowing new privileges, it will only exert an adverse, instead of a beneficial, effect on the numbers and progress of the societies in question. Our third observation is that any division of Medical Practitioners subscribing to the Academy or its sections into two orders of Fellows and Associates is, in our opinion, unwise, and likely to injure instead of promoting social and scientific intercourse between the different branches of the Medical Profession.

The Pharmacy Act Amendment Bill, introduced in the House of Commons last week by Lord Robert Montagu, is simply a measure by which the rights of Scottish Medical Practitioners to dispense and supply medicines, and of legally qualified veterinary Surgeons in Scotland to dispense and supply cattle medicines, are preserved. The Pharmacy Act, as it originally stood, preserved the rights of all registered Medical Practitioners; but, at the last moment, this was changed, it was said, on the advice of the Medical Department of the Privy Council, and the reservation was limited to the rights of legally qualified apothecaries. This, of course, was a piece of direct injustice to the Medical Profession in Scotland, who obtain their licence to practise pharmacy from the College of Surgeons of Edinburgh or the Faculty of Physicians and Surgeons of Glasgow. As far, therefore, as the new Bill extends, it is based on the merest justice. The question has already been mooted in the House as to whether the Bill should not be extended to Scottish Licentiates practising in England. We would go further, and ask why it should not be extended to all registered Practitioners having a double qualification. Not that we think it to the interest of gentlemen affiliated to a College of Physicians to dispense medicine, but we do not see why privileges conferred by the Medical Act of 1848 should have been withdrawn by the Legislature in favour of the Pharmaceutical Society. Practically, indeed, the question is of no great consequence. The Apothecaries' Society have always been too wise and enlightened to interfere with the conduct of the business of any qualified Medical man, and, even should the Pharmaceutical Society attempt anything of the kind, we believe that public opinion would never sanction restrictions upon fair Medical practice.

The Medical Officership of Health for the parishes of St. Giles and St. George, Bloomsbury, is vacant by the retirement of Dr. Buchanan. It is understood that the Medical Department of the Privy Council, to which Dr. Buchanan has already rendered such valuable aid, is desirous of securing to the public his entire services. For the vacant officership of health there are already several candidates. Amongst them are Mr. Wm. Gill, of Woburn-place; Mr. R. Middlemist, of Upper Bedford-place; and Dr. Semple, the late successful candidate in the contest for the Bloomsbury Dispensary. The salary of the office being only about £150 per annum, it is not likely to attract many candidates from beyond the immediate locality.

We do not suppose that the Medical Profession will take much interest in the dispute between Lord R. Montagu and the present Government on the best way of excluding cattle plague, and on the merits of their respective Bills. Lord R. Montagu's scheme is one in which all foreign cattle are to be considered diseased until they are proved to be healthy. The Government Bill is based upon the idea that foreign cattle are generally healthy until they are shown to be diseased. Lord R. Montagu's Bill would virtually do away with free trade in cattle; the Government measure only admits restrictions where danger of infection is proved to be present. The Government Bill, however, has many other good points, especially clauses regulating cattle traffic, and for preventing the spread of pleuro-pneumonia and foot and lung disease.

Dr. Richardson, we are informed, is induced, by the success of his lectures delivered during the winter, to continue them during the coming summer months. His last lecture was on a very interesting subject to practical Medical men—the range of increment of animal heat compatible with life. What is the point at which an increase of heat in the animal body becomes fatal? To what temperature may the tissues be raised, and yet life continue? To these questions Dr. Richardson replies that the temperature of an animal cannot be raised more than from 11° to 12° above the natural standard, and the animal continue to live. In numerous experiments he has had no instance of recovery from an increased heat of 12°. Even if the animal thus heated be removed from the hot-air chamber and placed in ordinary air, it dies. Dr. Richardson showed that coagulation of fibrine in the heart was induced by increment of the animal heat. He exhibited the heart of a patient who had died after an operation, in whom an enormous deposit of fibrine was found, and showed how similar the appearances were to those in the heart of a cat which had died from increment of animal temperature by the

(a) See *Medical Times and Gazette*, February 20, p. 200.

inhalation of hot air. Another interesting fact which Dr. Richardson demonstrated was that the inhalation of ozonised air has the effect of raising the temperature, and will destroy the animal, producing the same general order of symptoms as the inhalation of hot air.

The retirement of Dr. Maurice Tonge from the Assistant-Physicianey of King's College Hospital creates a vacancy in the staff which will probably be filled by the appointment of Dr. J. Burney Yeo. Dr. Yeo's services to the school during four years as tutor certainly deserve recognition. Dr. Kelly, another distinguished student of the Hospital, is, we are informed, also in the field.

The returns of the week ending March 8 show an increase of deaths in London from scarlatina, measles, and hooping cough, but the deaths from all zymotic diseases were forty-six below the average.

There is a vacancy in the chair of Comparative Anatomy in the Charing-cross Hospital. If students of comparative anatomy are few, professors of comparative anatomy are likely to be fewer. The College of Surgeons, we hear, accepts certificates of attendance on Professor Huxley's lectures, delivered at the College, from candidates for the Fellowship. We think that the teachers of comparative anatomy may fairly complain of this. Professor Huxley's lectures are on the more abstruse parts of the science, and, admirable as they are, are not exactly the kind of lectures which we should suppose best fitted for teaching it as a whole. They are to be attended, moreover, gratis.

Dr. Tilbury Fox is appointed Physician to the department for skin diseases at University College Hospital. It is understood that Dr. Balmanno Squire will be a candidate for the appointment of a similar kind at Charing-cross, which Dr. Tilbury Fox's removal to University College will render vacant. It is rumoured that an extra Assistant-Physician will be appointed at Charing-cross, and that Dr. T. H. Green will most probably have the post.

THE "NOMENCLATURE OF DISEASES."

We are authorised to announce that the Lords Commissioners of Her Majesty's Treasury, in a letter dated Treasury, March 10, direct that 20,000 copies of the work entitled "Nomenclature of Diseases" shall be procured for gratuitous distribution among the registered Medical Practitioners of the United Kingdom.

THE ARMY ESTIMATES.

A curious feature in the army estimates for 1869-70 is the fact that, notwithstanding a total reduction of thirty-seven Medical officers—viz., one Deputy Inspector-General, five Staff Surgeons and Surgeons-Major, and thirty-one Assistant-Surgeons—the total cost of the Army Medical Department is £219,723, being £3625 in excess of previous estimates. This, we believe, can be accounted for by the large number of Medical officers who, having entered the service in 1854, become entitled during the present year to an increase of pay on the completion of fifteen years' service.

THE ADMIRALTY AND GREENWICH REVENUES.

We are not surprised that Mr. Childers was not able to give, in answer to Mr. Pease's questions on Friday last, some good reason for the newly established sinecure Governorship of Greenwich Hospital. He professed to have sacrificed his own convictions of what is right to a sense of duty, when the act he was called on to perform was not done of necessity, as the authority for it was merely permissive and not absolute. The ground of its costing so little is no excuse for a wrong to old seamen pensioners, even had it cost but the sum of one old sailor's annual allowance. We hear that while the revenues are thus misappropriated, there are about 10,000 naval pensioners without any assistance from Greenwich Hospital. The brief allusion Mr. Childers made to the question concerning the want of faith in abolishing the office of Inspector-General of the Hospital was not of a nature to restore confidence in his intention to do justice to the members of our Profession in the naval service.

CARBOLIC ACID.

We think it necessary to put our readers on their guard against an incautious use of carbolic acid. It seems to be forgotten sometimes that this substance exercises a powerfully destructive action upon animal tissues, and that it is, in fact, a very strong caustic when concentrated. There is no doubt that many serious accidents have recently occurred from Surgeons not being aware of the properties of the remedy they use so freely. It must also be remembered that the direct application of carbolic acid, even in a diluted form, to a granulating surface, will often delay cicatrisation, and tend to promote suppuration, whereas, if it is employed at a distance from the wound, it will tend to diminish the formation of pus. There is, moreover, a good deal of evidence to show that it tends to stimulate the circulation through the smaller vessels, and thus gives rise to hæmorrhagic oozing from recently cut surfaces, preventing their primary adhesion. If, however, it be properly applied in a diluted form to the wound itself, and in some permanent and non-volatile form to the external parts, it will be found to have a powerful influence in retarding and diminishing suppuration.

WISLEY COMMON.

Mr. Charles Jones, Secretary to the Surrey Commons Preservation Society, tells us that an Enclosure Bill is now passing the House of Commons which threatens the enclosure of Wisley Common, Surrey, one of the most wild and picturesque of all our suburban commons, exceeding 200 acres in extent, with several natural sheets of water, one of them about 20 acres in area, in which our Londoners indulge in the practice of angling. It is also much frequented by the botanical students of our London Hospitals on account of the rare wild plants with which it abounds. The common is only 19 miles from Westminster-bridge and Hyde-park, and therefore within an area of 20 miles from Charing-cross. It is reached in an hour from London by the South-Western Railway, being situate near to the Weybridge station. It is only nine miles from Surbiton and Kingston, two of the largely populated suburbs of the metropolis. It is estimated to be worth (divested of the manorial privileges) from £10,000 to £20,000, and is, in common with all suburban land, daily increasing in value. We contend that if such public lands are to be enclosed they ought not to be distributed to the neighbouring landlords, but sold publicly to the highest bidder, and the proceeds applied in making metropolitan parks.

A VOLUNTEER REPRESENTATIVE.

We understand that Dr. Horace Dobell has issued a circular to the Profession, and especially to that portion of it engaged in the treatment of pulmonary diseases, requesting their aid towards a series of reports upon chest affections and their treatment, the first of which he wishes to publish at the end of the present year. To this circular the Medical officers of the Hospital for Consumption, Brompton, have sent the following reply:—

"Resolved unanimously that the Medical Committee declines to appoint a person to co-operate with Dr. Dobell in the preparation of such report."

Dr. Dobell might remember that many of the numerous writers on chest disease might well desire to choose their own time and form for publishing the results of their labours, and would naturally object to occupying a secondary place as contributors to a publication projected by another man. Moreover, if there is to be a grand union of thoracic Medicine, the various mem-

bers might desire to elect their own representative and editor, and they might at any rate think it fit that they should be consulted beforehand, and have the opportunity of confirming Dr. Dobell's self-election, or the contrary, at their pleasure. It is astonishing to see how easily some men put themselves into false positions, and how zealous students, in the innocence of their hearts, may subject themselves to the charge of what is technically called presumption—*i.e.* the taking on themselves, without being asked, to do things which they ought not to undertake except with the previous consent of those with whom they desire to act.

THE OVARIOTOMY CLAMP.

Our American brethren have been discussing the question, "Who introduced the use of the clamp in ovariotomy?" and have appealed to Mr. Spencer Wells to settle the question. The *Boston Medical and Surgical Journal* publishes the following letter from this gentleman, which will be read with interest here:—

"London, January 25, 1869.

"Dear Sir,—The credit of the introduction of the use of the clamp in ovariotomy is certainly due to Mr. Hutchinson, Surgeon to the London Hospital. He first used one in 1858. It was simply the common *calliper* of carpenters which he used and left applied, handles and all. Then the handles were made movable, so that they could be taken off as soon as the clamp was fixed. Then I made the blades parallel, and did without handles. But I afterwards returned towards the original form of clamp, altering the joint and the form of the opposing surfaces of the clamp until I arrived at that which I now use. You may see it figured in Druitt's 'Vade Mecum,' ninth edition, 1865, page 541. . . . . I have now completed 300 cases. Of the

1st 100	cases	64	recovered and	34	died.
2nd 100	,,	72	,, ,,	28	,,
3rd 100	,,	77	,, ,,	23	,,
300		213		85	

A general mortality of 28 per cent., but it is very encouraging to note that the mortality has been steadily diminishing with increasing experience.

"Yours very truly,

"T. Spencer Wells."

THE ROYAL ASYLUM OF THE ST. ANN'S SOCIETY.

The *Echo* of Monday evening contains a letter in which certain charges are made against the administration of the Royal Asylum of the St. Ann's Society, which demand the attention of the secretary and governors of that institution. In some remarks the following day the *Echo* says, and we agree with every word:—

"The case represented was that of Arthur Marmaduke Hoffmann, aged eleven years. His father, the late Staff Surgeon Hoffmann, was cruelly murdered in Barbadoes, shortly before he would have been entitled to a pension. His grandfather was a major in the army, and his great-grandfather a colonel who served under General Wolfe at the siege of Quebec, since which time his family have distinguished themselves in the church and in the army. Now, if any one had a claim upon a charitable institution, surely it was this orphan boy, whose three brothers and a sister are entirely unprovided for, and whose fathers have served their country during three generations. It was, moreover, his last trial, and a kind friend interested in his behalf succeeded in obtaining for him twenty-two additional votes. But we are told that the Treasurer of the Society sat at a table and openly sold and took money for votes up to the last moment. It is stated that one man put down forty guineas, and thus secured eighty votes for the election of his candidate, and that Arthur Hoffmann, who had no friend rich enough or unprincipled enough for this business, lost his election by forty-three votes. We should be glad to find that the scandalous sale and purchase of votes is not correctly reported. But we trust that no one will subscribe to St. Ann's Society until the matter is entirely cleared up. If these allegations are correct, nothing can be more shameful, more hypocritical, than to call such an institution charitable. It is indeed scarcely possible but those who were elected may have had stronger claims than Arthur Hoffmann, yet nothing short of a complete and satisfactory denial can exonerate the management from the shameful charge of trafficking in votes. The Royal Asylum of St. Ann's Society is disgraced, and the privileges of its name are dishonoured until a satisfactory exculpation has been made."

Certainly this is a flagrant case if the statement be correct. It is just such candidates as Arthur Hoffman who have the strongest claims on such a charity. His father fell in the service of his country, and he belonged to a profession which renders more gratuitous assistance to the public than any other. The public are too apt to forget our claims when they can dispense with our services, but are always ready when they require us to tax our patience and our skill either with or without reward.

STATISTICS OF OPERATIONS IN PRIVATE COUNTRY PRACTICE.

Sir James Simpson is busily collecting materials for setting at rest the question of *Hospitalism*—that is, the influence of Hospitals on the patients. The first thing is to determine the general rate of mortality after operations, and Sir James has selected the greater amputations as the best tests, in Hospitals and out of them. "With the hope," he says, of collecting sufficient data to approach, if not to determine, the rate of mortality generally attendant upon amputations of the thigh, leg, arm, and forearm, when performed in private country and provincial practice, I addressed an application—with an accompanying form of schedule—to numerous Medical gentlemen practising in England and Scotland."

He publishes part of the results in a table in the March number of the *Edinburgh Medical Journal*, of which the following is a summary:—

"1. *Total Mortality of all the Amputations.*

When all the amputations are placed together, and all the deaths from them, the result as to the general mortality is as follows:—

Total number of cases, 2098;
Total number of deaths, 226;
Or 1 in every 9·2 died; or 10·8 in every 100.

2. *Mortality of the Individual Amputations.*

When we calculate the mortality attendant upon the four individual amputations of the Thigh, Leg, Arm, and Forearm, the results stand thus:—

Thigh	cases,	670;	deaths,	124;	or 1 in	5·4;	or 18·5 per cent.
Leg	,,	618;	,,	81;	or 1 in	7·6;	or 13·1 ,,
Arm	,,	433;	,,	19;	or 1 in	22·8;	or 4·3 ,,
Forearm	,,	377;	,,	2;	or 1 in	188;	or 0·5 ,,

3. *Mortality from the Amputations that were Primary or for Injury.*

The death-rate among the class of amputations for injuries or their results may be represented thus:—

Thigh	cases,	314;	deaths,	81;	or 1 in	3·9;	or 25·8 per cent.
Leg	,,	407;	,,	55;	or 1 in	7·4;	or 13·5 ,,
Arm	,,	344;	,,	14;	or 1 in	24·5;	or 4·0 ,,
Forearm	,,	317;	,,	2;	or 1 in	158;	or 0·6 ,,

4. *Mortality from the Amputations that were Secondary or for Disease.*

The death-rate among this class stands as follows:—

Thigh	cases,	356;	deaths,	43;	or 1 in	8·3;	or 12·0 per cent.
Leg	,,	211;	,,	26;	or 1 in	8·1;	or 12·3 ,,
Arm	,,	89;	,,	5;	or 1 in	17·8;	or 5·6 ,,

Of amputations of the forearm for disease, 60 cases were reported in the schedules. None of the 60 patients died."

FROM ABROAD.—BARON HAUSSMANN AND SANITARY RESULTS—CLERICAL CÆSARIAN SECTIONS—ANIMAL VACCINATION AT MILAN.

In the late "demolition" debate in the French Chambers, one of the arguments for Baron Haussmann's reconstruction of Paris, prominently put forward in excuse for the tremendous expenditure incurred, was the admirable sanitary results which had flowed from it, as evidenced in the diminished rate of mortality. This statement has been made repeatedly, forgetting that it could could only, if exact, apply to a very small portion of the reconstructions, most of which have taken place in quarters in which they were not called for on sanitary grounds. Moreover,

in a recent number of the *Gazette Médicale*, M. Vacher, who, from his well-known acquaintance with all matters relating to public health, speaks authoritatively, challenges the exactitude of the conclusion even within these narrowed limits. In the first place, he observes that the statement that the mortality of Paris has diminished from 1 in 25 in the time of Louis XIV. to 1 in 42 at the present date is exaggerated; for an examination of authentic returns shows that the mortality in the reign of Louis should be put down at 1 in 30 rather than 1 in 25, while the present rate, deduced from the returns of the last eight years, is not more than 1 in 39½, or, in round numbers, 1 in 40. This still remains a highly satisfactory result; but how far it is attributable to M. Haussmann's transformations is quite another thing. It, in fact, results from much more complex causes. In the first place, there has been the influence of vaccination in the prevention of small-pox, the mortality from this disease having become so much less of late years. The comparison can only be conjecturally made, as there are no returns of these deaths in the seventeenth and eighteenth centuries; but some documents which exist as regards Sweden and Denmark throw great light on the subject. A return furnished by Dr. Berg exhibits the number of deaths per annum occurring in Sweden from variola from 1750 to 1860. From these returns it appears that from 1750 to 1802 there occurred 301,165 deaths from variola in a mean population of 2,066,000, while from 1802 to 1860, with a population of 3,060,000, they diminished to 39,102—so that in Sweden variola has become thirteen times less a cause of death than heretofore. Then, again, as regards the city of Copenhagen, from 1750 to 1802 12,805 deaths took place from variola in a mean population of 70,000, while from 1802 to 1860 only 1819 deaths occurred in a population of 120,000—showing that there were fourteen times fewer victims of variola since the introduction of vaccination. It is fair to assume, then, that in other still larger towns the mortality from this source was fourteen times greater than it now is; and, as the present annual mortality in Paris is 472, this would in the pre-vaccinal period be raised to 2200 for that city. Contemporary documents show that this statement is not exaggerated, and this proves that from vaccination alone the mortality is lessened from 1 in 30 to 1 in 32.

Other facts would seem to show that there has been rather a displacement than a diminution of mortality. Thus, formerly, still more than now, the infantile mortality was excessive, but then almost all these infants died in Paris itself, as the custom did not then prevail of sending them into the country to be nursed. At the present time M. Vacher calculates that as many as 27,000 are so sent annually, of which a large proportion die, removing a formidable item from the Paris bills of mortality. Moreover, these immense reconstructions, which have now been going on for these twenty years in Paris, attract an enormous number of workmen. The number cannot be accurately known, but may to some extent be judged of by the fact that while for every 10,000 inhabitants in all France there are 4339 individuals between the ages of 20 and 50, in Paris itself this number in 1861 was as high as 5593; and it is obvious that this is just the age which contributes fewest deaths. Should this immigration of workmen be by any chance suddenly arrested, we should have cause to observe the remarkable phenomenon of a sudden increase in the mortality in Paris by the very fact of the disappearance of this strongly viable element.

While it is obvious that these three causes explain much of the decrease of the mortality observed in recent times, it is not meant to be contended that the vast works executed in Paris during the last twenty years have been without their sanitary influence. But the works to which this result is attributable are not those which excite public attention, and which, not having been undertaken with any such views, often, as in the overcrowding of other parts of the town they give rise to, even act rather adversely than otherwise, while in other instances they have been executed in districts where, in a sanitary point of view, they were uncalled for. On the other hand, the system of sewerage, supply of water, and the like, have exerted, and will continue to exert, a most beneficial effect.

M. Vleminckx, who may be regarded as the head of the Medical Profession in Belgium, recently brought before the Chamber of Deputies of which he is a member the question of the performance of *post-mortem* Cæsarian operations by the clergy. This has now been so often executed by priests under the hope of baptising living infants, that it has excited general attention and no little indignation. In one case at least, the woman operated upon was not even pregnant, and in none was there any security that the certainty of death had been verified by competent persons—in fact, the operation seems to have been resorted to entirely unsanctioned by the presence of a Medical man. In one case a priest was prosecuted and condemned to a month's imprisonment, but the sentence was annulled by the *Cour de Cassation*, on the ground that the law punished any violence offered to a corpse after sepulture, but was silent in respect to one that had not been buried. This case formed the chief ground of M. Vleminckx' application to the legislature, demanding that all persons save Medical men, who are alone competent to judge of its propriety, should be interdicted from the performance of the operation.

A Medical committee, consisting of four Doctors, has been established at Milan for furthering the employment of "animal vaccination," which, as far as the experience of revaccinating 1200 recruits is concerned, is pronounced as far more efficacious than the ordinary mode. At all events, the committee are not sparing in their assertions when they state that the possibility has been established of communicating through the human lymph scrofula, rickets, tuberculosis, and especially syphilis, the various Italian cases, so loosely reported and so ill confirmed, being referred to as all-sufficient proof of the easy transmission of this last disease. According to a circular addressed to the Profession and municipal authorities throughout Lombardy, the committee has established a vaccine office in Milan, and is prepared to do business on the following terms: —Removal of a pustule from the animal at the patient's abode, 8 lire (about 7s.); removal of a pustule at the office, 6 lire; forwarding one to the country, carriage included, 7 lire; a tube at the office, 1½ lire; sending a tube into the country, 2 lire; vaccination at the office with lymph from the animal, 1 lire; vaccination at the office by means of a tube, 3 lire.

PARLIAMENTARY. — REMOVAL OF PATIENTS TO THE FEVER HOSPITAL — GREENWICH HOSPITAL—THE PREVENTION OF CATTLE DISEASES—PHARMACY ACT AMENDMENT BILL—ADULTERATIONS OF BEER AND WINE—NAVAL HOSPITAL EXPENDITURE—METROPOLITAN SICK POOR ASYLUMS.

In the House of Commons on Thursday, March 4,

In answer to questions by Captain Dawson-Damer, Mr. Goschen said it was true that three or four patients referred to were found dead on their arrival at the Fever Hospital, and the Medical officers stated that the sitting posture may have materially contributed to the result, which was, of course, much to be deplored. Parishes were not bound to provide ambulances, and these patients were conveyed, not in ordinary cabs, but in what are called parish cabs. The matter was under the consideration of the Poor-law Board, and it was a question whether the Metropolitan Asylum Board should not take the matter in hand and provide proper carriages for the purpose. He added that the patients who had died were not carried a very long distance; it was the sitting posture and not the distance that caused their deaths.

In answer to questions by Mr. Pease, the First Lord of the Admiralty (Mr. Childers) explained the circumstances under which the sinecure office of Governor of Greenwich Hospital had been continued, the salary of which, he said, is only £433, and as the Governor remains on the active list, no additional charge for pay or half-pay is involved. He said that he did not propose to appoint more Medical men to Greenwich or any other Hospital than are required for the public service merely in order to give employment and salary, and he had no reason to anticipate that any more such officers would be required. Although it was not originally intended to give any Medical

pensions out of the Greenwich Fund, the Order in Council of February 16, 1866, established fifteen such pensions of £80 and £50, at a cost £780 a year. As to the intentions of the Admiralty with respect to this and other matters connected with Greenwich Hospital, his hon. friend the member for the Border Burghs would before long make a full statement to the House.

Mr. W. E. Forster brought in the Government Bill for consolidating, amending, and perpetuating the Acts for preventing the spread of infectious diseases among cattle. He explained that, as regards the home trade, it would re-enact, almost as they stood, the present arrangements for "stamping out" the cattle plague, and would give some new powers with regard to sheep. It was also proposed to give the Privy Council power for checking other diseases besides the cattle plague, as well as the diseases of sheep and horses; and it contained other provisions for regulating the traffic in cattle, and particularly for securing to cattle in transit an ample supply of water. As to the foreign trade, it transferred from the Queen in Council to the Privy Council the power of prohibiting the import of cattle from any country into any port, of stating from time to time the countries from which cattle might be brought, and of defining areas at ports into which cattle might be brought, but out of which they could not be taken alive. There were also provisions, at which Mr. Forster glanced slightly, for encouraging the formation of markets.

The House having resolved itself into Committee,

Lord R. Montagu moved, in the usual form, for leave to bring in a Bill to amend the Pharmacy Act, 1868. In doing so he explained that the necessity had arisen from the fact that in Scotland, unlike England, the Medical Practitioners were not licensed apothecaries, and hence were precluded from taking about medicines and dispensing them, although, in some parts, it might be necessary to travel twenty miles in order to have their prescriptions made up. Both in the interests of the Practitioners and the public it was desirable to remove this hardship, which was not foreseen when the Act of last year passed. In the same way veterinary surgeons in Scotland, not being veterinary surgeons of the United Kingdom, would be precluded from taking medicines with them. The object of his Bill was to remove the disability in both those cases.

An hon. member hoped the noble lord would extend the wording of the Bill, so as to include the case of Scotch Practitioners practising in England.

Mr. W. E. Forster, on the other hand, thought that the Bill had better remain as drafted.

Dr. Brewer doubted whether the Bill was not a measure of retrograde legislation.

The Chairman was directed to move the House, which then resumed, and leave was given to bring in the Bill, which was read a first time.

On Friday,

Lord E. Cecil called attention to the state of the law in regard to the use of false weights and measures and the adulteration of food—practices which he showed from the criminal statistics to be largely on the increase. In reference to the adulteration of beer, he said that the importation of *cocculus indicus* had largely increased within the last few years. *Cocculus indicus* was a narcotic of an intoxicating and stupefying character, and, as far as he was aware, was only used in this country for two purposes, the poisoning of fish and the poisoning of men. He found that, in 1857, the quantity of the drug consumed in this country was only 68 cwt., but in 1858 it had increased to 394 cwt.; while in the years 1867 and 1868 the quantities consumed were respectively 689 cwt. and 1064 cwt. The drug was thus extensively used, notwithstanding the fact that the very heavy duty of 5s. per cwt. was levied upon it. In concluding his speech he recommended a more extensive system of superintendence and more stringent penalties for the infringement of the law, and he moved a resolution, though he did not press it, calling on the Government to give their early attention to the subject with the view of amending the law.

In the course of the debate which followed, Mr. Pochin, referring to the adulteration of bread and beer, said two kinds of adulteration had been specially named—the mixing of alum in bread and *cocculus indicus* in beer. Now he was not going to dispute the poisonous nature of *cocculus indicus*, but no one had yet shown that the injurious effects produced on the system by intoxication were not quite as little injurious when resulting from *cocculus indicus* as from spirit. ("Oh!") As to the presence of alum in bread, the general opinion on this point was quite at variance with that of the most able chemists. Professor Liebig had acknowledged that the ordinary mixture of alum in bread as practised in this country was not injurious, but positively beneficial. ("Oh!" and laughter.) Hon. members laughed, and he should like to convince them by going into the question somewhat technically. In general terms, however, he might say that flour contained a quantity of gluten, which very readily passed into a state of decomposition and decay. The presence of a small quantity of alum arrested that decay, and enabled the baker to produce by the use of seconds flour a very much superior bread than would otherwise be possible. ("Oh!") The substitute which Liebig recommended the baker to use in such cases was caustic lime. Hon. members might take their choice between the addition of alum and caustic lime—(a laugh)—for his part he preferred the alum, and that would be the general opinion. He had said that the health of the community was not extensively interfered with by adulteration.

Mr. Bright thought there was much exaggeration both with regard to false weights and adulteration. It was vain for Parliament and the Executive to attempt to keep a watch over every shop in the kingdom, and if a shopkeeper was to be perpetually followed about in his business, life here would not be worth having, and a man had better emigrate to some other country.

Mr. Bentinck commented with some warmth on the unsatisfactory tone of Mr. Bright's answer, and recommended him to study the laws of foreign countries on this matter.

In his speech on the Navy Estimates, on Monday, the First Lord of the Admiralty made the following remarks upon the expenses of Naval Hospital administration, and the Commission of civilians lately empowered by the Admiralty to examine and report upon it.

"In the same way, one of the things which cannot but strike any man who goes into the details of the Admiralty Estimates is the gradual increase which during the last ten years has arisen in the establishment charges at our naval Hospitals, while the other expenses have not increased at all. When this came under my notice—and I looked into the subject rather narrowly—it occurred to me that the present was a very favourable opportunity for obtaining some advice and assistance outside the public department, because Dr. Bryson, who has been Medical Director-General for some years, was ending his term of service (it has since expired), and between his retirement and the appointment of his successor this independent report might be obtained. We therefore appointed a committee of three Medical men, known, I dare say, to many members of this House—Dr. Murchison, Mr. Hobnes, who carried on an inquiry on behalf of the Government on a previous occasion, and Mr. Ellis—and they furnished to us a report of great value, going minutely into the details of the establishment of those Hospitals, comparing them with the civil Hospitals, proposing certain very clear reforms, and giving very valuable information upon the whole subject. That report has only been received within the last few days. It is now being referred to the proper department, where it will be narrowly examined, and I have reason for saying that, as the result of it, very valuable improvements will be made in the administration of our naval Hospitals."

On Tuesday,

Mr. M'C. Torrens asked the President of the Poor-law Board when the return ordered on February 19 regarding the cost of sick poor asylums in the metropolis would be presented to the House.

Mr. Goschen replied that the part of the return which related to the number of Medical officers, their salaries, and the cost of medicine for the last three years, could not be obtained without communicating with several boards of guardians, and therefore there had been some delay in collecting that information. It would probably be in the hands of members next week. The other part he would endeavour to place in the hands of members the day after to-morrow.

On Wednesday, March 10,

Lord Robert Montagu, in moving the second reading of his Contagious Diseases (Animals) Bill, grounded it on the powerlessness of the present system to keep out the rinderpest, an argument which he illustrated by copious quotations from the evidence given before the Select Committee last year and from the history of the cattle plague. He preferred to accustom the trade to run in certain grooves—though there might be restrictions—rather than expose it to sudden shocks, as would be the case under the Government Bill. At much length he insisted on the advantages of his measure—the establishment of permanent markets for foreign cattle, the concentration of slaughter-

houses, etc.; and as dead meat could travel more cheaply and in a better condition than live animals, he maintained that the system which he advocated would reduce the price of butchers' meat. He averred that one of his objects was to reduce the profits of the middleman—the butcher—and thus to increase the price to the producer and reduce it to the consumer. He urged that his Bill should be referred to the same Committee as the Government Bill, so that the House might have the opportunity of forming a judgment on the two systems. The rejection of the Bill was moved by Mr. Headlam, seconded by Mr. Norwood, who preferred the principle of the Government Bill, which gave perfect freedom to the foreign cattle trade, and imposed no restrictions except under a real and immediate apprehension of the importation of the disease. After a long debate Lord R. Montagu's Bill was rejected by a majority of 56—253 to 197.

THE PHARMACY ACT (1868) AMENDMENT BILL.

The following is the text of this Bill:—

"Whereas it is expedient to exempt from the provisions of the Pharmacy Act, 1868, all duly qualified Medical Practitioners and Veterinary Surgeons in Scotland:

"Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

"1. Nothing contained in the first fifteen sections of the recited Act shall extend to or interfere with the business of any legally qualified Medical Practitioner in Scotland duly registered under 'The Medical Act,' or of any legally qualified Veterinary Surgeon in Scotland."

THE FOURTH ANNUAL REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF BENGAL FOR 1867.

The history of the cholera epidemic which swept over Northern India, as given in the above report, strongly indicates the connexion between the immense congregation of pilgrims at the great annual sacred fair at Hurdwar, the dissemination of the seeds of cholera among them, and the subsequent deportation of the disease throughout the country by the pilgrims returning to their homes.

Hurdwar, sometimes called Gungadwarra, or the "Gate of the Ganges," is an inconsiderable town, about forty miles due east of Saharunpore, in North-Western Provinces, in lat. 29° 57′ N., and long. 78° 14′ E., at an elevation of about a thousand feet above the sea, on the southern slope of the Siwalik Range, in a malarious valley at the mouth of the gorge through which the Ganges first issues from the Himalayas on the plains. From time immemorial an annual pilgrimage to this spot from all parts of Hindostan has been enjoined for ablution in the sacred stream. Every twelfth year is believed to be peculiarly efficacious for this purpose, on account of certain favourable planetary combinations.

The fair of 1867 was expected to be unusually large and important. Upper India had for more than the ordinary term of years been free from epidemic visitations of cholera; the occurrence of a few cases during the close of 1866 and the commencement of 1867 had, however, caused the approaching fair to be anticipated with unusual anxiety. Active preparations were made by the Government of the North-Western Provinces to meet the dreaded enemy. A special officer, Dr. Cutcliffe, was appointed to superintend the Medical and sanitary arrangements, and ample means were put at his disposal. It is computed that three million pilgrims visited the fair. Dr. Cutcliffe estimated the number actually present on the night of April 9 to be 2,855,966.

The encampment was on a narrow island, nine miles by three, so that, deducting unoccupied space, twenty-two square miles represent the area actually occupied. The sanitary arrangements for such a vast multitude formed no light task. Assuming the number of pilgrims present at any one time not to have exceeded two millions, it was estimated, at a moderate computation, that 446 tons of dry matter would have daily to be removed, and this was considered to be impossible. The dry-earth system, as far as possible, was employed, and all filth was buried in trenches, or burned in furnaces especially constructed for the purpose. Latrines were provided in convenient situations; they were of the simplest nature, being merely screened trenches dug in pairs, the earth thrown up in digging one being stored for future use on the edge of the other. In some places, where the soil consisted of sand and boulders, the trench system could not be worked, and from these the filth, having been first mixed with earth, was removed by donkeys or mules to the furnaces to be burned.

Attention, so far as was possible, was paid to maintaining the purity of the river, from which the drinking water was principally obtained.

Large quantities of grain had been stored up for use during the fair, and the quality of all bazaar supplies was most vigilantly attended to.

Six Hospitals and two Dispensaries were distributed through the camp, under the care of three Medical officers, with an ample staff of native subordinates, vaccinators, etc. The sanitary precautions adopted in the management of these establishments appear to have been most judicious.

The weather had been unsettled during the month of March, and some rain had fallen. April was characterised by excessive dryness of the atmosphere, low barometric pressure, great and sudden alternations of temperature, westerly breezes, and absence of ozone, and these conditions existed prior to, and concurrently with, the fair. No rain fell during the first ten days of the month, but on the afternoon of the 11th, which had been a sultry cloudy day, a storm, accompanied by heavy rain, thunder, and lightning, came up from the west. There was, of course, a marked decrease of temperature. The deluge continued all night; the whole encampment was drenched. Most of the pilgrims were without dry clothing, and remained so all the following day. Rain continued on the 12th, the great bathing day, and the pilgrims, in addition to the external drenching, drank freely of the river water, which had been polluted and rendered muddy by the heavy rain and the bathing operations of the vast multitude, as also in great part by the ashes of the dead, brought by surviving relatives to be deposited in the sacred waters.

Up to April 12 the health of the camp had been excellent. Taking the lowest estimate of the numbers, the sick only amounted to 1 in 2000 during the first fortnight of their stay at the fair. About 17 per cent. of the total treated were from ordinary intermittent fever, and out of the very small total of sixteen deaths, six were from intermittent or remittent fever. Bowel affections caused about 22 per cent. of the total treated.

Towards the end of March a few cases (4) of severe diarrhœa were sent to Hospital, where they speedily recovered. Only 4 deaths from diarrhœa and dysentery occurred during the period under review.

The first recorded appearance of any disease resembling cholera was on the night of April 9, when a *sporadic* case occurred in a grasscutter of the 14th Bengal Cavalry, near Kunkhul, a short distance below stream from Hurdwar. The man speedily recovered, and no other case occurred in the regiment at Hurdwar. The Medical returns of all the Hospitals and Dispensaries at Hurdwar show a complete absence of cholera up to April 13, but it cannot be stated as a fact that no other cases occurred during the intermediate days. On that day eight cases of cholera were sent to Hospital. Up to the 15th there were nineteen admissions from this disease.

From noon on the 12th, the auspicious hour for bathing, the vast multitude had begun to depart, and the rapidity with which they did so is said to have been inconceivable. On the morning of the 15th the entire ground so lately covered by the encampment was a bare plain again. It is not therefore to be wondered at that only nineteen cases of cholera were seen and treated at Hurdwar. The cause of cholera having assumed the epidemic form in 1867 is unknown; but that it did so directly in connexion with the concourse of pilgrims at Hurdwar during that year, and used them as a means of conveyance and dissemination among the general population, is established beyond a doubt. "Similar difficulties exist in regard to the spread of other diseases, the communicable nature of which is undisputed." "Can it be explained why small-pox prevails in some years and not in others, or why a case of any contagious disease sometimes appears single and alone, and at other times appears to be the signal for the outburst of an epidemic?" As the seed of a plant must be good, and must be received into a suitable soil, be planted at a proper season, with climate and circumstances adapted for its growth, so "similar conditions appear to be necessary for the propagation of epi-

demics. What the condition of the human body which constitutes a good soil for its reception, and what the climate and other circumstances favourable to its growth, have yet to be determined."

The native Doctors at Hurdwar considered the cause of the epidemic to have been contamination of the air by the smoke of the furnaces in which was consumed the filth from the latrines. The mass of the people attributed the outbreak to the filth having been buried near their tents; this answered well during the dry weather, but the heavy rain raised a miasma which affected the whole camp. At other fairs at which no such precautions had been taken, cholera had not appeared—*ergo*, they were the cause of it now.

Taking into consideration the history of past fairs at Hurdwar, so far as known, during which it was hardly possible to move in any direction, on account of the filth which lay about in every quarter, and the fact that cholera was generally absent from them—of fourteen fairs between 1854 and 1867, there was only one, in 1857, during which an epidemic of cholera appeared—and the extreme care paid in 1867 to sanitary measures, it may be stated with perfect confidence that its appearance "at the Hurdwar fair of 1867 was not *generated* by any unsanitary conditions."

It has been found a hopeless task, even in England, to trace any causative relation between atmospheric variations and cholera epidemics. How much more so must it be in India, in which no accurate series of meteorological observations of sufficiently extensive nature has yet been made.

If, therefore, neither filth nor atmospheric conditions caused the outbreak of cholera, importation from without appears the only method by which it can be accounted for. There are two places in which the disease was actually known to exist, and from both of which large bodies of pilgrims had gone to Hurdwar. In the Serai, the jungly belt at the foot of the Nepal and Kemaon Himalaya, and not far distant from Hurdwar, the disease was known to exist early in 1867. "Numerous cases occurred among pilgrims proceeding westwards to Hurdwar, prior to the general outbreak there. Cases are specially noted as having occurred at Bazpoor, on the road to and fifty miles distant from Hurdwar, on April 5. There were nineteen deaths in that town from cholera between April 5 and 12, inclusive."

The other source from which importation may have taken place is Bhurtpore, over which cholera had been hovering all the cold weather, and in which it became epidemic on April 6. The Maharajah of Bhurtpore visited Hurdwar with a large retinue, having left his territory just at the time when cholera began to extend. How many other infected streams of pilgrims may have contributed to the concourse at Hurdwar is, of course, impossible to say. That there were others is more than probable. The two above mentioned, however, afford quite sufficient grounds for the hypothesis that the active communicable principle of cholera, the *contagium*, existed among the multitude, and that, although very few were actually attacked at Hurdwar, the poison had been imbibed before they left the fair.

That the mode of bathing afforded the means of dissemination appears beyond question. The bathing-place was 650 feet long by 30 wide, shut off from the rest of the bed of the Ganges by rails. Into this pen the pilgrims from all parts of the encampment crowded on April 12 from early morn till sunset. The polluted condition of the stream, swollen by recent rains, has been already described—also how the devotees drank as well as bathed. Dr. Cutcliffe asks, "Is it an extravagant or far-fetched idea that persons drinking of such water would very likely be directly poisoned?" We certainly think not, and if any there be of a contrary opinion, the only thing likely to convince them of their error would be for them to take the first favourable opportunity of trying the experiment *in corpore vili* on themselves, if their disbelief in the possibility of communication of cholera through such channels be so sincere, and arise from such settled convictions.

The probabilities of infected pilgrims having bathed on the 12th, the day before the appearance of the epidemic, are increased by the fact that by far the greatest numbers bathed on that day. It is also stated by Major Watson and other officers, who have been present at many Hurdwar fairs, that, as a rule, people who reside near to Hurdwar do not come to bathe until the last or nearly the last day of the fair. From Bazpoor, the cholera-infected place, pilgrims would "get to Hurdwar in two or three days, and would probably come into the fair only in time for the great bathing day," so that the delay in the outbreak of the disease may be so explained.

The progress by long and hurried marches of the ill-fed, ill-clad, terror-stricken crowd to their homes along three main routes, south-east, south-west, and north-west, had an important influence on the spread of the disease. Facts are clearly stated which render it indisputable that the pilgrims bore the disease with them to distances varying from fifty to three hundred miles, that there was no simultaneous outbreak of the disease over a large area, and that in fifty-one districts through which the progress of the epidemic has been traced, there had been no cholera in any of them until the pilgrims actually had returned, excepting Goorgaon, near Delhi, in which there had been two doubtful cases before the pilgrims had commenced to arrive; but even there the epidemic prevalence of the disease dates from their return. The disease appears to have so much more closely accompanied the pilgrims travelling in the north-west direction, and to have extended so freely from them to the general population, as to suggest the resemblance of its progress to the advance of a "wave," such as Dr. Lawson describes. It is certainly very remarkable that below Allyghur on the south and Shahjehanpore on the south-east, no connexion can be traced between the return of the pilgrims from Hurdwar and the subsequent appearance of cholera. No comparative estimate of the numbers travelling by each of the three main routes appears to have been made, so that we are without the means of judging whether the greater prevalence of the epidemic along the north-west route may have depended upon the greater numbers travelling in that direction.

In thirty-five out of the fifty-one districts the first persons attacked were pilgrims, and after they had been seized the disease appeared and spread among the inhabitants. It is a noteworthy fact that, although some Medical officers could not satisfy themselves that the disease had been imported into their districts, in no case has any positive evidence been advanced to show that such a cause was improbable, much less that it was impossible. Although some of the statements may be incorrect, it is quite impossible that the whole story of the returning pilgrims carrying cholera with them from Hurdwar to Rawul Pindee, with the dates of its appearance in the successive districts through which they passed, can have been invented. It must surely be more than a coincidence that, in thirty-five "districts of Upper India, covering an area much larger than that of Great Britain, the epidemic should have gradually appeared in one place after another, immediately after the return of a body of persons stricken with the disease."

The total mortality from cholera in the native population is estimated at 117,181. The ratio of deaths to population in the different provinces, according to the figures given, was—in the North-West 1·9 per 1000, Oude 2·4, Punjab 2·4. These give only a fair approximation to the truth, as a correct census in India has not yet been taken. Among native troops there were only 244 cases, and 124 deaths from cholera; the latter being in the millesimal ratio of 3·17, the total death-rate having been 16·72 per 1000.

Among the European troops cholera prevailed to a much greater extent, having caused 722 admissions into Hospital, and 479 deaths; the latter being in the ratio of 13·84 per 1000 of strength; the total death-rate having been 30·95 per 1000, a higher mortality than any between 1859 and 1866, except 1861, when it was 45·93 per 1000.

The comparative immunity of the gaols is very remarkable. It may be an open question as to how far this may be attributed to quarantine, which had been very generally adopted except in those of the Lower Provinces, and how far to improved sanitary arrangements. The total ratio of admissions and deaths in the gaols of the Bengal Presidency during 1867, from cholera, were respectively 11·5 and 4·93 per 1000 of the strength.

Having already exceeded the space at our disposal for the notice of this exceedingly valuable and well-arranged report, we must conclude by assuring our readers that careful study of its contents will amply reward all who may consult it.

Sign of Death.—M. Carrière observes that the D'Ourches prize of 20,000 fr., if it is intended for the author of a certain and easy method of determining the reality of death, ought to be conferred on himself, for the procedure he has successfully adopted during forty years. It is simple to a degree. If you hold your hand, having the fingers well pressed against each other, four or five centimetres from a lamp or candle, it appears transparent and of a rose colour—capillary action being in full activity. Place the hand of a dead person in the same conditions, and this appearance is wanting; circulation being absent, the hand is like one of stone.—*Rev. Med.*, January 31. [*Quære:* How would this test apply during prolonged syncope?]

REVIEWS.

Clinical Lectures on Diseases of the Liver, Jaundice, and Abdominal Dropsy. By CHARLES MURCHISON, M.D., F.R.S., Physician to the Middlesex Hospital, and Lecturer on the Practice of Medicine at the Middlesex Hospital Medical College, etc. London: Longmans and Co. Pp. 556.

By his work on continued fevers Dr. Murchison proved himself a careful and competent observer, as well as a clear and intelligible writer. Those who have seen him in the wards of the Hospital have long known that he was one of the very best clinical teachers in London; but this remained to be made known to the world at large. Of the truth of the above statement the volume now before us affords ample evidence. Some of the lectures here published first made their appearance in the columns of a contemporary, but the greater and most interesting portion of the volume now appears for the first time. Dr. Murchison's attention has evidently been long attracted to diseases of the liver, and his translation of Frerichs' valuable treatise on that subject, which was some years ago issued by the New Sydenham Society, attested the diligence with which he had studied this department of Medicine. The present volume does not aim at being an exhaustive treatise on hepatic diseases, but only deals with certain of them—notably enlargements and jaundice. To both of these subjects Dr. Murchison has devoted considerable space. He separates all enlargements into two classes, the *painful* and the *painless*, objecting to Dr. Bright's division into *smooth* and *irregular*, on the ground that certain forms of enlargement ordinarily smooth may become nodulated. This is no doubt the case, especially with waxy or amyloid enlargements; but exactly the same objection applies to Dr. Murchison's classification. Cancer of the liver is usually a painful affection, but we remember well a case which some time ago came under our observation in which during life there was nothing to indicate any particular affection of the liver, although the general cachectic condition denoted some serious constitutional disease, which was suspected to be cancer, and which, from certain other circumstances, was supposed to be in the colon, yet there was nothing to lead one to believe that the liver was affected. After death, a careful post-mortem examination revealed extensive cancerous disease of the liver, although there was no appearance of this on its surface, whilst the gut was not at all affected. Dr. Murchison himself relates a case of cancer of the liver where pain was entirely absent. Still, both classifications are clinical instead of pathological, and both therefore necessarily imperfect; it would be well to keep them both in mind.

Dr. Murchison first treats of the waxy or amyloid liver, which he is somewhat inclined to refer to what has been not very elegantly and not very correctly termed the process of depuration. There is no doubt, from what has been shown, that in many instances waxy liver has been preceded or is accompanied by prolonged and extensive suppuration, but Dr. Murchison wisely admits other predisposing causes, as syphilis, tubercle, and diseases of a chronic and wasting character. Fatty liver is next briefly noticed, after which comes a long and interesting account of hydatid cysts in the liver. Where possible and proper, Dr. Murchison is strongly in favour of tapping these cysts, and he recommends that in withdrawing the trocar the walls of the abdomen be pressed against the viscera, so as to interfere with the escape of fluid into the peritoneum. Those which are allowed to open spontaneously very frequently end fatally. Congestion, inflammation, and the various kinds of abscess are successively noticed, but they present nothing of unusual interest, neither does the chapter on cancer. They are, however, thoroughly well and practically handled, and the account given of each is quite satisfactory. The various varieties of atrophy are next considered, both acute and chronic; but in dealing with the former we are disposed to believe that the author puts too much stress on the presence of leucin and tyrosin in the liver and urine. Kühne's researches have shown what these substances really are, and that they normally exist in considerable abundance in certain tissues, especially if these be examined some time after death. Thus the pancreas invariably contains a large quantity of both, apparently produced by the action of its own secretion on its own tissues. In putrefactive metamorphosis of albumen, these substances always occur. The figures Dr. Murchison gives of the two are not very characteristic of either body when it has been fairly purified.

The part of the volume, however, which is of most interest to us, and to many more, are those lectures which deal with jaundice. This mysterious and ill-understood affection—which, indeed, it cannot cease to be until we know more of the relations of the bile to the blood, and of the liver to both, is one of the most interesting which we have to study—its causes are so multifarious, its varieties so numerous. Dr. Murchison divides all cases of jaundice into two classes—first, those associated with obstruction or mechanical impediment to its flow, and, secondly, those cases where there is no such impediment. The rationale of the former is simple enough, but the latter and more common class of cases are most difficult to understand. The origin and source of the bile pigments have long supplied a *casus belli* to physiologists, and until their quarrels are finally settled, Physicians need not hope for any satisfactory settlement of the jaundice question. It is not our intention to enter into this part of the discussion at present, but we would hint that the double function of the liver, its glycogenic as well as its bile-forming functions—to say nothing of more hypothetical duties—is too apt to be overlooked in dealing with its disorders. The theory has been broached by an authority of no small weight—by no less a man than Henle—that the bile is secreted by the walls and cysts of the hepatic ducts, and that the so-called parenchyma of the liver has nothing to do with it. Dr. Murchison opposes Dr. Harley's views as to the pre-existence of bile pigment in the blood, for he says, were this true, every case of diminished biliary secretion would be accompanied by jaundice, which is notoriously not the case. Dr. Murchison is inclined to adopt another view somewhat similar to that of Frerichs. He holds that the bile pigments, in passing along the alimentary canal, are reabsorbed, like certain other portions of its constituents, that these are speedily changed so as to give rise to no colour, but that, should by any means these changes be arrested, or even postponed, jaundice will follow. We are not completely satisfied with this explanation; to obtain a better, we must understand more of the various transformations which the bile undergoes. At present we are very much in the following position. We do not know whence the glycocholic and taurocholic acids come, nor whither they go, beyond having a vague idea that they are useful in the absorption of fat; we do not know the origin of the so-called glycogen; and we only know that, normally, glucose is destroyed in passing through the lungs. As to the bilirubin and biliverdin-colouring matters, we have some idea that they are derivatives of cruorin, and that they are partly reabsorbed and partly expelled, in a changed form, along with the fæces. This is certainly very little, but we fear it is only too just an exposition of the exact state of our knowledge as to the bile and its functions. Dr. Murchison adopts Hughes Bennett's doctrines as to mercury and its cholagogue properties. He holds that it does not increase the secretion of bile, but rather diminishes it. The drug only sweeps it on more rapidly than usual from the duodenum, so that there is not time for its absorption.

As to the diagnosis of the cause of jaundice, Dr. Murchison also opposes Dr. Harley's doctrine that in jaundice from obstruction the bile acids appear in the urine, but not when the jaundice arises from suppression. He also rejects Dr. Harley's mode of testing for bile acids, inasmuch as it affords no means of separating the reactions of the urinary pigments from those of the bile acids.

The subsequent chapters on fluid in the peritoneum and on pain in the liver are also highly interesting, especially the latter. His remarks on the removal of gall-stones are, we think, sound and practical. He advises alkalies as most likely to do good. Such also is our opinion, but, in common with our author, we also hold that hygienic conditions must be carefully attended to. The great cause of gall-stones is sluggish bowels, and the great cause of sluggish bowels is indolent habits, still more if associated with high living. Of no malady can it be more aptly said that prevention is better than cure.

We take leave of Dr. Murchison's work with regret, and we cordially recommend it to our readers.

Medical Anatomy. By FRANCIS SIBSON, M.D., F.R.S., F.R.C.S., Senior Physician to St. Mary's Hospital, etc. London: John Churchill and Sons.

THE seventh and last fasciculus of Dr. Sibson's Medical Anatomy has just appeared. Nearly six years have elapsed since the sixth part made its appearance, but the researches Dr. Sibson has entered into, especially as to the structure of the heart, and which are contained in this part, must have occupied much time. The present fascicle deals with the relations of the heart, and is illustrated by two full-sized and two half-sized figures. As a work of art it is almost beyond praise, better by far than any-

thing of the kind we have recently seen—in fact, it infinitely surpasses its predecessors in this respect, and we cannot help wishing that the same pains had been taken with those as with this. Dr. Sibson is to be congratulated on the completion of a work which will ever stand a monument to his talent and industry.

GENERAL CORRESPONDENCE.

THE WINTER CLIMATE OF ST. MORITZ, UPPER ENGADINE, GRISONS.

LETTER FROM DR. WILLIAM BAYES.

[To the Editor of the Medical Times and Gazette.]

SIR,—I am indebted to my friend, M. Avignone, of the Italian Royal Navy, for the accompanying interesting tables for the past thirteen months of the temperature at Bevers and Sils-Maria. St. Moritz has attracted some notice as a winter residence in those cases where steady cold and extreme tenuity of air are indicated. I entered into this subject in a paper published in your journal of October 3, 1868. I am glad to be able to supplement my former remarks by the carefully prepared meteorological tables appended. The observations were originally made on the centigrade scale, and have been reduced to Fahrenheit by M. Avignone. I am, &c.

Norwich, February 17, 1869. WILLIAM BAYES, M.D.

My correspondent says in his note (dated "Samaden. Ober Engadine, Hotel Bernina, February 10, 1869"):—"As in all the rest of Europe, the winter has been, and still is, very changeable. We had awfully cold days last January, as you may see from the table. The river Inn was entirely frozen on the 24th ult., and was covered with ice a foot and a half thick. We took a long walk on it up to the gorge of the St. Moritz lake. Our little colony is going on pretty well, so far as non-professional people can judge. The G—— family left the other day from fear of an epidemic which is affecting children at St. Moritz. I intend to leave for Italy on the 20th of next month, and intend to re-enter the navy, after two years' residence in this valley. Dr. Berry thinks it safe for me to do so. We have had snow on the ground for the past three months from November 6; but on the whole the winter has been mild. Our life here is quiet, as you may fancy. We are able to take walks nearly every day. The days on which it has been impossible to go out for a pleasure walk have been very few indeed. We often drive out in sleighs, and on December 12 we went to the Bernina Hospice, 7692 feet (French) above the sea. It was a splendid day, not at all cold; the snow was several yards in depth in some parts. The view from the Hospice, over the valleys, glaciers, and mountain peaks, was magnificently grand. Our friends at St. Moritz amuse themselves by skating on the lake almost every day."

Meteorological Observations in the Valley of the Upper Engadine, 1868.

	Bevers Station (1715 metres above sea level).						Sils-Maria (1811 metres above sea level).	
Months.	Monthly average of temperature.	Maximum.	Minimum.	Days of snow.	Days of rain.	Remarks.	Monthly average of temperature.	Remarks.
	°	°	°				°	
Jan.	+14·95	+35·25	−20·50	7	0	St. Moritz is about	+16·30	According to
Feb.	+20·75	+41·96	− 8·32	2	1	half-way between	+23·8	Prof. Krättli,
Mar.	+22·50	+45·30	− 8·86	12	0	Bevers and Sils-	+22·80	the yearly
April	+29·22	+54·84	+ 5·	10	2	Maria. According	+33·11	average of
May	+50·75	+74·48	+37·58	0	11	to Prof. Krättli,	+49·79	temperature
June	+53·60	+74·01	+34·52	0	13	Bevers is colder	+52·26	is the same
July	+53·49	+79·01	+30·74	0	18	than St. Moritz in	+52·80	for Sils and
Aug.	+53·38	+76·64	+26·24	0	13	winter because ex-	+52·59	St. Moritz.
Sept.	+48·80	+75·20	+24·80	0	15	posed to the north	+47·08	
Oct.	+39·76	+59·	+15·98	0	13	wind, and warmer	+39·09	
Nov.	+21·02	+53·60	− 4·76	8	0	in summer from	+24·62	
Dec.	+24·52	+50·75	− 0·58	7	1	the reflection of the sun's rays from the rocky hills and rocks which surround the village of Bevers.	+26·78	

Yearly Average at Bevers Station.

	° Fahr.
1864	+36·52
1865	+35·7
1866	+36·23
1867	+36·23

Observer, Professor J. L. Krättli.
Time for taking observations, 1 and 9 p.m.

Yearly Average Temperature at Sils-Maria.

	° Fahr.
1864	+36·75
1865	+35·15
1866	+36·24
1867	+35·78

Observer, Herr Joh. Caviezel.
Time of observations, 1 and 9 p.m.

January, 1869.

BEVERS STATION, 1715 metres above sea level.

Observer, Professor Krättli.

Average temperature for the month . . . . +10·84°
Maximum temp. (Jan. 6 & 7) +45·50°
Minimum temp. (24th) . −23·05°
Average of coldest day (23rd) −11·92°
" warmest day . +33·56°
Barometer corrected:
Average, 622·65 millimetres
Maximum, 629 " on the 9th
Minimum, 613·6 " " 22nd
The quantity of snow that melted produced 8·6 millimetres of water.
Depth of snowfall for the month 14¼ millimetres.
Five days perfectly serene.
Fifteen days more than half serene.
Seven days snow.
The 24th was the coldest day since 1854.

SILS-MARIA STATION, 1811 metres above sea level.

Observer, Herr Joh. Caviezel.

Average temperature for the month . . . . +15·46°
Maximum temperature (7th) +45·50°
Minimum " −16·42°
Average of coldest day (23rd) − 6·54°
" warmest day (6th) +35·38°
Barometer corrected:
Average, 614·57 millimetres
Maximum, 621 (9th, morning)
Minimum, 606·1 (23rd, morning)
The quantity of snow melted produced 6·7 millimetres of water.
Depth of snowfall in January, 8 millimetres.
The Lake of Sils was completely frozen on January 3, Lake Silvaplana was only partially frozen the same day.

January, 1869.

Lowest temperature read at 7 a.m.

Day.	Bevers.	Sils-Maria.	Day.	Bevers.	Sils-Maria.
18 .	− 5·78°	+ 3·02°	23 .	−17·86°	−10·12°
19 .	− 9·40°	− 1·12°	24 .	−22·72°	−16·42°
20 .	− 7·98°	− 1·30°	25 .	−16·42°	− 9·76°
21 .	− 4·36°	+ 2·30°	26 .	−13·72°	− 7·98°
22 .	+11·12°	+11·50°	27 .	− 9·40°	− 0·04°

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, FEBRUARY 9, 1869.

Mr. SOLLY, F.R.S., President, in the Chair.

A PAPER, by Mr. JOHN WOOD, was read on

FISSION AND EXTROVERSION OF THE BLADDER AND EPISPADIAS, WITH THE RESULTS OF EIGHT CASES TREATED BY PLASTIC OPERATIONS.

The author commenced by stating that the frequency of this deplorable deformity was greater than was generally supposed. He had himself seen upwards of twenty cases. In its more usual form it was perfectly compatible with viability, and even longevity. One case is recorded by Flajani, of a person aged seventy, and by Quatrefages of two, aged forty-six and forty-nine respectively. It is much less common in the female than in the male; the author had seen two cases in the female, and operated on one. Cases are recorded by Huxham, Oliver, Bonnett, Thiebault, and Ayres, of delivery of a child at full time in females suffering under the deformity. In both sexes the ossa pubis are widely separated, and the symphysial surfaces can be felt projecting under the integuments on each side of the genital organs. In both the hinder surface of the bladder is seen as a red, vascular, projecting tumour, often ulcerated, and discharging muco-purulent fluid and blood, and surrounded by a cicatrix, which above is blended with, and obscures, the umbilical mark. In the male, the penis is usually completely epispadiac, with the urethra open along its entire length. The corpora cavernosa are stunted, and fail to cover the urethra above, and they are connected below by an imperfect corpus spongiosum, forming the lower half of the urethra. The glans penis is grooved above by the urethral gutter, but perfect underneath, and is provided with a frænum and an abundant but split prepuce. The stunted penis is placed flat against the lower part of the bladder, covering by its root the papillary orifices of the ureters. The scrotum is perfect, and contains testes; and often a congenital oblique hernia, or a small ventral hernia, is also present. In the female, the clitoris is split, and the anterior commissure of the labia minora wanting, exposing more completely than in the male the orifices of the ureters, and laying open the urethra. The normal os uteri can be seen in the vaginal groove. The author then reviewed the theories

of the cause of the deformity—viz., that of Duncan and Bonn who attributed it to the bursting of the fœtal bladder from over-accumulation of allantoic fluid; that of Velpeau and Phillips, who considered it to be caused by ulceration of the hypogastric region between the second and third months of intra-uterine life; and that of Vrolik and other teratologists, who explained it by an arrest of development similar to those producing harelip, fissio thoracis, and ectopia cordis. He considered that the latter view was undoubtedly the correct one, but was of opinion that the arrest of development was itself owing to a process of morbid changes, and adhesion of the front part of the allantoic mucous and vascular layers to the membranes of the ovum at the site of the future placenta, at about the end of the first month. He gave drawings of the fœtal allantoic formation at this period, and described varieties of this kind of deformity illustrative of the period and extent of the arrest of development—from simple fissure of the urethra (epispadias), and of the urachus and abdominal wall simply (ectopia vesicæ), on the one hand, representing a later arrest of development, to those extreme cases presenting a common cloacal opening of the genito-urinary organs and rectum, with imperforate anus, on the other, which are the results of a morbid change and consequent arrest of development at a still earlier period than the cases which form the especial subject of the paper. Mr. Wood next alluded to the efforts made by Surgeons at various times—viz., Dieffenbach, Langenbeck, and others in this country—to relieve by plastic operations this frightful deformity, in almost all instances with partial or complete failure. He briefly described Professor Pancoast's case operated on successfully in Philadelphia, and Dr. Ayres's, in New York, attributing to the former the first adoption of the idea of turning flaps from the sides of the abdominal wall with the skin surface towards the exposed mucous membrane. Dr. Ayres's case was that of a female who had borne a full-grown child four months before, and was entirely successful after two operations. He also alluded to the operations performed by Mr. Holmes in this country. He then gave a detailed account of eight cases in which he had himself operated. In seven of these he had been successful in providing a complete covering for the bladder. In the last two he also succeeded in covering the penis with a prepuce, completing the upper wall of the urethra, and forming a fair substitute for the meatus urinarius. In one case (the only female operated upon) an entire failure had resulted, in consequence of the extreme youth and violent crying of the patient. Three methods of covering the bladder had been employed. The first was by two lateral flaps taken from the groin, with their bases towards the thigh, scrotum, and penis, and united by sutures in the median line, with their raw surfaces towards and touching the exposed mucous membrane of the bladder. After many operations, necessitated by partial failures of the plan, the bladder was at length completely covered in, with only one opening, placed at the root of the penis. The boy died afterwards of erysipelas of the head and face, and the parts operated on were shown in a preparation, the bladder being opened behind to show the union of the flaps within, and the formation of a pseudo-mucous membrane on the raw surface. The next method consisted in the employment of one reversed lateral flap, in combination with a smaller reversed umbilical flap, both turned with their skin surfaces towards the bladder, and covered by another larger lateral flap, placed with its raw surface downward upon them. The reversed umbilical flap was adopted to obviate the great difficulty experienced in the earlier cases in closing up a fistulous opening which remained above the bladder. It cannot always be employed with safety, in consequence of the extreme tennity of the abdominal parietes at this part in some of these cases. It was found better to attempt it at the time of the first operation than by a subsequent one, and to make it large enough to afford a firm hold by primary adhesion to the lateral flaps which cover it. The third method employed consisted in the formation of a larger umbilical flap, turned with its skin surface upon the bladder, and big enough to cover its exposed mucous membrane as far down as the root of the penis. This was covered by two lateral flaps taken from the groin, with their bases towards the penis, scrotum, and thigh, and united in the median line over the umbilical or reversed one, with their raw surfaces in contact with it. By this means the author succeeded, in five cases, in covering by one operation the entire surface of the bladder. In this step of the operation the chief features of the author's plan, as most successfully practised, are the use of the broad reversed umbilical flap, to prevent the upper fistulous openings; and the arrangement of the lateral or groin flaps, with their bases turned towards the scrotum and thigh, so as to receive for their supply of blood the external pudic and superficial epigastric vessels from the common femoral uninjured, and so to prevent sloughing or shrinkage. In the second step of his operation, as performed in the last two cases—viz., that of providing a preputial covering for the glans penis and an upper wall for the urethra—the author availed himself of the front part of the scrotum and the skin of the lower surface of the penis, which he raised from the deeper parts in the form of a bridge of skin, retained at both ends to its original connexions, and lifted in the middle over and across the penis, like a saddle. This was placed with its raw surface in contact with that of a reversed fold of skin, turned over from the sides of the opening left by the first operation, the whole being held together by a continued wire suture. The sides of the wound in the scrotum were then brought together vertically over the tunica vaginalis and testicles, the hinder half of the bag of the scrotum being amply sufficient to cover the whole. This part of the operation proved entirely successful in the last two cases, which were the only ones in which the method has been tried. It was stated by Pancoast that the hairs which might form on the reversed surface of the flap became gradually shed by the depilatory action of the urine upon them. In the author's cases this process is certainly going on, but it is still necessary to remove some of the hairs as they grow by the use of a pair of forceps passed into the artificially formed meatus urinarius. This is, however, a process requiring only a little trouble and dexterity on the part of the patient himself, and to be repeated whenever the incrustation of the phosphates upon them causes uneasiness. A very dilute nitric-acid lotion aids in the process of cleansing. As the cicatrices contracted, the orifice of the artificial urethra became more tightened and braced up, and the transplanted dartos could be felt to clasp the finger vigorously when passed into the opening. Already the urine sometimes accumulates in the bladder, when the patient is lying down, in sufficient quantity to be expelled in a stream, on rising, to the distance of a few inches from the penis. In one case no sinuses now remain; but in the other, one or two still discharge matter occasionally when the patient is out of health. One of them now wears a silver instrument closely fitted round the penis and not enclosing the scrotum, thereby removing the pain and annoyance from the sores and tenderness which the trickling urine caused upon the surface of the scrotum. During the night, when the patient lies in the recumbent position, very little urine escapes—not more than can be caught by a sponge placed under the penis; and in the daytime a much smaller and less conspicuous urinal can be worn than that which was necessary before the operation. The last case operated on by the author—that of a man aged thirty-five—was exhibited at one of the meetings of the Medical and Chirurgical Society last session.

The President, in cordially thanking Mr. Wood for his important contribution, said he had seen many failures, but no operations which had succeeded. He had never attempted the operation, not having the courage to face its antecedents. Mr. Wood's success was a cause for general rejoicing.

Mr. Bryant wanted to know the period of life at which the operation was performed, as he had been struck with what Nature had herself done to remedy such cases. He had often seen much retraction of the projecting bladder, leaving only a furrow well marked. This led him to think that the operation was hardly justifiable in early life. He had not himself performed the operation, but in two cases let alone, the opening had almost closed. He was under the impression that the pubic bones were cleft in both.

Mr. Thomas Smith had seen many of these operations, especially those performed by Mr. Holmes, but had never seen anything to induce him to operate. In the case alluded to as operated on by Mr. Holmes with success, the operation had better not have been done. The boy's after sufferings were very great, chiefly owing to the formation of concretions in the artificial pouch. There was also extremely violent neuralgia in the stump of the penis. He had to take morphia in very large quantities. Mr. Wood's operation was extremely ingenious, especially in that which related to an umbilical flap and the lifting up the penis. The growing of the hair was a serious defect, but this might easily have been destroyed previous to the operation. He had never seen anything like that described by Mr. Bryant.

Mr. Weeden Cooke remarked that in one of the female cases already mentioned a good deal might have been done; but the kidneys and ureter had already become sacculated so as to serve as an artificial bladder.

Mr. Wood, in replying, stated he had seen a good many cases, but never one like those described by Mr. Bryant. Really when unaided they went from bad to worse. He had, in leav-

ing the hairs unremoved, trusted a good deal to Pancoast's statement that they fell off. He should certainly remove them next time he had occasion to perform the operation. He would like a child to know what was going on before he operated on it. Only two of his cases were adults. In females, he thought, the difficulty would be even greater than in males. In plastic surgery it was impossible to say *à priori* what could, and what could not, be done.

THE PATHOLOGICAL SOCIETY.

TUESDAY, FEBRUARY 16, 1869.

Mr. W. ADAMS, Vice-President, in the Chair.

THE CHAIRMAN drew attention to the fact that the rules of the Society require perfect clinical descriptions of cases which afforded the specimens examined by the Committee on Morbid growths.

Reports from this Committee were read on Mr. Claremont's specimen of enlarged liver. It was found to contain large cavities filled with semi-gelatinous fluid. Also on Mr. Pick's specimen of tumour removed from the labium of a syphilitic woman, which was found to consist almost entirely of connective tissue.

Mr. ROBINSON exhibited a specimen of what was called Syphilitic Disease of the Brain, occurring in a soldier aged 26. He was rather delicate, and had three times been admitted to Hospital with venereal sores, and he had complained much of osteocopic pains in the head. The last time he was admitted he was seized with paralysis of the right side of the face and eye, with ptosis of that eyelid. No secondary symptoms had been observed. Iodide of potassium did some good, but after a month there was slight loss of consciousness, which became more complete, and he finally died after having been ill nineteen weeks. There was little enlargement of bone in the skull, but there was effusion beneath the arachnoid, especially at the optic commissure. There was a syphilitic deposit in the liver.

There was some dispute in this case as to the existence or non-existence of a tumour near the origin of the fifth nerve.

Mr. HULKE had seen the patient during life, and also the recent specimens. He had not tested his powers of taste, but had remarked the complaint of a taste on the affected side as of salt.

Dr. MOXON had seen such cases, and he was inclined to think that syphilis, like tubercle, might induce meningitis otherwise than by actual deposit.

Dr. KELLY exhibited a specimen of Ruptured Aorta, occurring in an aged woman under the care of Dr. P ale. She had long been healthy. The rupture took place sud l nly. The heart was large, and the rent was just outside it. The cause of the rent was not very clear. The coats had been partly dissected by the blood. The valves were calcareous.

Dr. LANGDON DOWN exhibited a specimen of Addison's Disease of the Suprarenal Capsules. The deposit was homogeneous and translucent. He corroborated Dr. Greenhow as to its association with tubercle and to prolonged latency. The specimen was removed from a male aged 21. His face had become changed before leaving service. He suffered from tonsillitis, and was very weak. He attributed his bronzed skin to his work of painting greenhouses. There was no stain on his mucous membranes. On the third day after his seizure with acute symptoms he became delirious, and died in about thirty-six hours after these had first shown themselves. There was a little tubercle in the apices of his lungs.

Dr. D. POWELL also showed some specimens illustrative of Disease of the Suprarenal Capsules associated with discoloration of the skin and extreme exhaustion. The patient was a man, aged 42, who had been ill six months. His face was dusky and sallow. He died suddenly. There were ecthymatous scars and bald patches on his legs and thighs, the margins of these being dark in colour. The heart was flabby. The lungs were puckered at their apices. The right suprarenal capsule was enlarged and yellowish, but hard and not very bright. The left was atrophied. Their structure was fibro-nuclear.

Dr. GREENHOW moved that both specimens be referred to a committee, which was nominated by the Chairman, and consists of Dr. Wilks, Moxon, and Greenhow.

Dr. HICKMAN showed a female child with Persistent Vitelline Duct. The child was four months old, and passed no fæcal matter by the opening, although the smell of fæces could be recognised. The protrusion readily bleeds, but no aperture can be found, perhaps because the end had sloughed off.

Dr. FAGGE and Mr. HULKE thought these were most common in males.

Mr. COOPER FORSTER said they were quite common. If a string was tied round them, they sloughed off.

Dr. HICKMAN also showed a Congenital Tumour of the Tongue, removed from a child which died twelve hours after birth. It had breathed with great difficulty. The tumour was at the back of the tongue, rising from its centre, and pressing down the epiglottis. (Referred to Committee.) He also exhibited a curious Malformation of the Heart associated with cyanosis occurring in a male child aged six weeks. Its temperature was natural. The liver was on the left side, the stomach and spleen on the right side. The cæcum was on the right side; thence the colon passed upwards on the right side, then, with a figure of 8 curve, to the top of the pelvis, whence it passed straight down. Parts of the lungs were not distended. The foramen ovale was partly closed. There was an interventricular orifice. The aorta rose from the right side, there being no pulmonary artery. A ductus arteriosus permitted the flow of blood into the lung. The ventricles thus appeared to be transferred from one side to another, the auricles not.

Dr. MOXON exhibited a Tumour of Cervical Glands which had been removed after death from a girl aged 13. The tumour was eight months in growing, and on the girl's admission into Guy's Hospital in September, 1868, it formed a great swelling, which extended from the left mastoid process to the sternum and clavicle. At one time a small part of it suppurated, and Mr. Hilton, under whose care the girl was, hoped that the suppuration might have extended to destroy the glandular mass; but, instead of this, it grew, and caused extensive dropsy of the head and left upper extremity, and pressed aside the trachea, causing dyspnœa, and at last set up pleurisy on both sides, which pleurisy put on a tuberculous form, and was the cause of the girl's death in January, 1869. The tumour, which was so large as to produce great deformity of the neck, was found to be composed chiefly of the cervical glands in a state of great enlargement. They were elastic, firm, hard, and generally of a yellowish opaque colour. These glandular tumours were embedded in, and closely united to, a dense thick mass of white fibrous tissue, which formed a layer around them of about half an inch in thickness, and extended between them, so that it itself composed at least one-third, and perhaps half the tumour. By means of this fibrous tissue, the whole mass was inseparably united to the parts around, especially to the sternum, the clavicle, the spine, and the teguments. The skin was very coarse and swollen, looking like coarse orange-peel. No trace of the sterno-mastoid remained; it was quite destroyed in the inflammatory fibrous thickening. The left jugular vein was occupied by old blood-clot which was organised. Microscopic examination of the tumour showed it to be composed of tissue resembling the substance of normal lymphatic glands, but with its cellular elements enlarged, and with more of fibrous tissue than is natural. Practically the case was interesting, as in its earlier stages it must, as a simple enlargement of the cervical glands in a child, have been deceptively like the common and comparatively trifling scrofulous disease of cervical glands. In point of pathological relationship, the case corresponds with what Virchow describes as hard lympho-sarcoma with indurative periadenitis; and this is a very rare disease, especially in so young a child. The whole class of glandular tumours is of the utmost interest, from the extraordinary associations which they show—at one time going with leukæmia; at another, with peculiar formations in the spleen in Hodgkin's disease; at another, while still of the same structure, showing truly malignant characters by spreading into the tissues around; and yet, in other cases, leaning so much towards scrofulous disease that no line of demarcation could be found between them. This example was curiously intermediate between scrofulous gland and true tumour. Thus the simple inflammation around, the yellow opaque appearance, the partial suppuration, and the association with tubercular pleurisy, made it like scrofula; while the elastic consistency, great size and persistent growth, and the microscopic appearances classed the case with tumours. However, when we call it tumour, we must see that in any case the enlargement of an organ in all its dimensions is not tumour in the fullest sense of that term, which more properly implies the origin of a new individual mass growing from a centre. Such cases as this prove that the divisions in pathology are not absolute, but that intermediate conditions between tumour and scrofulous enlargement are to be expected.

Mr. Bruce thought this must be something similar to the specimen described by Dr. Beigel as lepra tuberosum.

Dr. Hilton Fagge next showed a specimen of Cirrhosed Lung from a man aged 23. He had been a butcher, and had been very intemperate. He had been ill about six months, and latterly often suffered from hæmoptysis. His heart was displaced to the right side, where the disease was, the right lung being contracted and dull, giving forth many moist sounds. He died in three days from acute pleurisy of the opposite side. This lung was large. The right was adherent chiefly at the base. The pleura seemed extremely thickened. Bands passed through the lung tissue. The bronchi were dilated, and the bronchial glands large. After death the displacement of the heart was not so great. The right kidney contained calculi. The liver was healthy.

Dr. Powell said that in one case he had seen, the impulse of the heart apparently rose from the right ventricle, that having been laid bare by the right lung.

Dr. Moxon thought this correct. He doubted if the apex beat was ever on the right side of the chest.

Dr. C. J. B. Williams recollected several cases where the apex was decidedly on the right side. He had figured one where the axis was turned from left to right.

Dr. Powell thought the axis never changed.

Dr. Fagge also brought forward a specimen of Acute Yellow Atrophy of the Liver of a child which had come before him in a jaundiced state. The child was better next week, but died suddenly, it was supposed from some mistake in the dispensing of the medicine. The cells of the liver were completely destroyed, but the ducts were patent. A fibroid material was found in the lung, similar to that found in the last case of acute atrophy he had recorded.

In reply to Dr. Cholmeley, Dr. Fagge said leucin had not been looked for.

CLINICAL SOCIETY.

Friday, February 12.

Mr. Paget, President, in the Chair.

Dr. Buzzard related the case of an epileptic girl who became afflicted with acute rheumatism whilst under his care in the National Hospital for the Epileptic and Paralysed. From the fourth to the twelfth day of her illness the pulse varied between 120 and 160, and the first sound of the heart was nearly inaudible. Quinine, opium, and brandy were employed with marked benefit, and during convalescence after the attack (which lasted thirteen days) the heart sounds were found absolutely normal. The rapidity of pulse and the inaudibility of the first sound gave rise to some anxiety respecting the heart, which was dispelled by finding that the temperature never exceeded 102·0°, and averaged only 100·9°. He thought the phenomena were due to neurosis, and not to inflammation.

Dr. Duffin communicated two cases of acute rheumatism successfully treated by iodide of potassium. The first case was that of a young man who had had a primary sore four years before, but no secondary symptoms. The rheumatic affection for which he was admitted into the Hospital was of three weeks' duration. As the patient perspired at night, and the skin was several degrees warmer in the evening than in the morning, quinine was substituted for the usual alkaline saline mixture, without good result. Some time after admission he had exacerbation of rheumatic pain, which was accompanied with the appearance of syphilitic sores on his head and legs; thereupon he was ordered thirty grains of iodide of potassium daily, under which treatment the sores began to heal, the temperature became regular and natural, and the patient recovered. The second case was similar, excepting that the syphilitic history was more complete. In commenting on these cases, Dr. Duffin admitted that in the first the syphilitic origin of the rheumatic symptoms could not be proved, and stated that he had brought them forward rather as illustrating the probability that there are cases of acute rheumatism which can be cured by iodide of potassium, and that these may be recognised by the diurnal oscillations of temperature which occur in them.

Mr. Lee expressed his doubt as to the syphilitic nature of the rheumatic affection in the first case, on the ground that the patient had had no secondary symptoms.

Mr. Barwell was disposed rather to refer the cases to syphilitic periostitis than to regard them as examples of acute rheumatism. He believed diurnal variations of temperature of the same kind as were observed in these cases, and of equal extent, occurred independently of any unusual constitutional disturbance in cachectic persons. In the absence of more complete information on this point, he thought that such variations could not be regarded as evidence of acute disease.

Dr. Wilks adduced facts in support of the position that in tertiary syphilis it was frequently the case that the outbreak of syphilitic eruptions was preceded for many days by fever, attended with unnatural increase of bodily temperature, and expressed his belief that in those instances the pyrexia was attributable to the direct working of the syphilitic poison, not to any local condition approaching inflammation.

Dr. Baeumler had made observations which strikingly confirmed Dr. Wilks's statement. He had not only observed that in tertiary syphilitic affections the increase of temperature was out of proportion to the local disease, but that the variations of morning and evening temperature were exactly as described by Dr. Duffin.

A discussion followed as to the numerous cases in which syphilitic disease of the brain and other viscera appear to occur independently of previous secondary symptoms. Dr. Buzzard and Dr. Wilks (with whom the President coincided) had observed innumerable instances of this description, particularly with reference to syphilitic disease of the nervous system.

Mr. Lee admitted that in many cases the occurrence of secondary symptoms cannot be ascertained from the patient's statements, but stated as the result of his own very extended observations that the only cases in which syphilis appears to manifest itself in its ultimate stages of development are those which have not been under Medical observation from the first, and are therefore beyond the reach of scientific investigation.

With this opinion Mr. Berkeley Hill concurred, referring to the extreme difficulty of obtaining certain information as to the previous progress of the disease in syphilitic patients.

Dr. Baeumler read the history of a case of Hæmoptysis followed by inflammatory changes in the lungs, catarrh of the smaller bronchi, and signs of infiltration and fluid effusion, in a girl, aged 18, in whom on the first examination no signs of chest disease could be discovered. After five weeks, the febrile symptoms had entirely subsided, and after ten weeks no abnormal physical signs remained except increase of the area of the cardiac dulness to the left and upwards; all cough disappeared, and she entirely recovered her general health. Two similar cases, which time did not permit to read *in extenso*, were also referred to—that of a young man aged 22, in whom the course of the symptoms had been exactly the same, only of less intensity and much shorter duration; and of another young man aged 22, in whom hæmoptysis, supervening during apparently perfect health, was followed by pneumonia of the left lung, taking a chronic course ending fatally after seven months. Dr. Baumler concluded from these cases that in hæmoptysis, blood which remains in the air-passages, or rather which is driven into the smaller divisions and into the air-cells by aspiration, may act as an irritant and give rise to bronchitis and pneumonia, which may either terminate in complete resolution, or lead to chronic lung disease, thus supporting the view which had been generally held before Laennec, and has been lately revived by Niemeyer, of a "phthisis ab hæmoptysi."

MEDICAL SOCIETY OF LONDON.

Monday, February 18, 1869.

Dr. B. W. Richardson, F.R.S., President, in the Chair.

Dr. Greenhalgh exhibited some new Medicated Pessaries and Suppositories, the bases of which (isinglass and glycerine) offered many advantages over the fatty and saponaceous compounds hitherto used.

Dr. Meadows agreed that fatty bases were unadvisable, as the vagina does not absorb fat. He had tried the fluid pessaries introduced by Dr. Sansom, and was inclined to prefer them to all others.

Dr. Anstie read a paper on the Popular Idea of Counter-irritation. His own views presented a very complete though undesigned coincidence with those propounded by Dr. Dickinson in a late number of the *St. George's Hospital Reports*. As to the value of counter-irritation in Medical practice, proof is singularly deficient, and we are unable to explain the *rationale* of the process. The term itself is almost a relic of barbarism, of the times when the human body was supposed to be ruled

by intestine demons. The author passed in review the various structures which could be possibly influenced by the process known as counter-irritation. 1. The blood-vessels. These could only be affected within a narrow range. In the case of counter-irritation of joints, the operation might be explained on account of the connexion of the superficial with the deeper vessels, and consequently the depletion of one being the depletion of the other: but in the case of counter-irritation of the chest for the possible relief of an internal congestion, no such explanation can be given. 2. The nerves. The difficulty here is the fact taught by ordinary experience that peripheral irritation is more productive of morbid than of beneficial results. 3. The absorbents. Here the action must be almost wholly a bad one. The author condemned the routine practice of blistering. The foundation of it was too often the lingering love of something like a charm.

The PRESIDENT thought that the term was good if the facts were good. The author's arguments seemed intended to shake the foundations of the practice. Much harm had been done, especially in phthisis, by injudicious irritation of the skin. In some cases we must accept what we cannot explain. Who can doubt the value of blistering in obstinate ulcers of the legs? He confirmed the observations made as to the powerful agency of external impressions, instancing the observations of Weir Mitchell, confirmed by himself, showing that the stage of thawing of the skin after freezing in the neighbourhood of a portion of the encephalon was attended by the same symptoms as freezing the portion of the encephalon itself. There is an intimate and constant relation between the skin-nerve and the encephalic centre.

Dr. ANSTIE, in the course of an able reply, repudiated the notion that he desired to condemn all agents known as counter-irritants. He wished to reuder them "arms of precision." He had seen danger directly follow from the unrestrained practice. A blister does not equalise the pulse; it aggravates the febrile form of the pulse-trace.

NEW BOOKS, WITH SHORT CRITIQUES.

The Law to regulate the Sale of Poisons within Great Britain. By William Flux, Attorney-at-Law, Solicitor to the Pharmaceutical Society. London: J. Churchill and Sons. Pp. 84.

*** The laws relating to the sale of poisons in Great Britain are mostly contained in two recent enactments, the one called the "Arsenic Act," the other the more recent "Pharmacy Act." This compilation, which has been made with great care, cannot fail to be useful to chemists and druggists as well as to such members of our Profession as keep open shops, and who might be liable to fall into error, not knowing the formalities prescribed by law. Mr. Flux has been engaged in many of the most important suits relating to this matter, and his opinions are likely to be thoroughly sound.

Medicine in Modern Times; or, Discourses delivered at a Meeting of the British Medical Association at Oxford. By Dr. Stokes, Dr. Acland, Professor Rolleston, Rev. Professor Haughton, and Dr. Gull. With a Report on Mercury by Dr. Hughes Bennett. London: Macmillan and Co. Pp. 255.

*** Many Medical men not members of the Association will be glad to see this volume, for although the discourses were fully reported in all the journals, this more compact and more handy volume will increase facilities of reference to such papers as those by Professors Haughton and Bennett. Dr. Gull's address was one of the most suggestive we have ever read.

A Manual of Therapeutics. By Richard Hughes, L.R.C.P.E., M.R.C.S.E. London: Henry Turner.

*** Some time ago Mr. Hughes published a work on pharmaco-dynamics; he now publishes another on practical therapeutics. They both serve to represent the absurdities of homœopathy.

La Ville de Doux-Repos, Station d'Hiver par excellence! Par le Docteur Charon. Nice. 1868.

*** A capital parody on the puffing pamphlets published by the resident Medical authorities of German baths, health resorts, etc., etc. The descriptions of Dr. Anglicide with his *dust cure*, and of Dr. Philopuce with his theories of cutaneous irritation, and the dedication to Dr. Polycarpus Gastfenger, are capital. Speaking of the excellence of the eggs, the author says, "Les œufs de notre pays dégagent, *même quand ils sont frais*, une abondante quantité d'acide sulphydrique. Nous n'avons qu'à les mêler avec de l'eau, et vous avez les eaux d'Aix-la-Chapelle." Rumour attributes this piquant work to Dr. de Hartsey, of Cannes. If Dr. de Hartsey's prescriptions are as good as his jokes, we should feel safe in his hands.

On Synthesis as taking Precedence of Analysis in Education. By Henry MacCormac, M.D. Pamphlet. Pp. 16.

*** An interesting and able examination of the question whether education should commence on the principle of synthesis or analysis. The author argues that we begin at the wrong end, and take asunder before we combine. He contends that this principle is a mistaken one, and says much in support of his assertion.

How to dispose of our Refuse. By Dr. Syson.

*** This pamphlet consists of a review of some of the principal systems proposed or adopted for the above purposes, being the contribution of the author, who is Medical Officer of Health for Salford, to the discussion on the above subject at the Manchester and Salford Sanitary Association. It gives an able exposition of some points of importance respecting water-closets and ash-pits.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS.—The following Members of the College having been elected Fellows at previous meetings of the Council, were admitted as such on the 11th inst., viz.:—George Redford, Cricklewood, Hendon, diploma of Membership dated November 9, 1838; Charles Knight, Wellington, New Zealand, April 3, 1840; and Gilbert George William Maitland, her Majesty's Indian Army, October 26, 1841. At this meeting of the Council, Professor Richard Partridge, F.R.S., of King's College, was readmitted a member of the Court of Examiners for a second quinquennial period.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, March 4, 1869:—

Allen, Thomas, Fylingdales, Whitby.
Bösenberg, Andreas G. H., Cape of Good Hope.
Henry, George, Kingstown, Dublin.
Kidger, Alfred Armitage, Ashby-de-la-Zouch.
Lloyd, William Howell, Broad Oak, Llangathen.
Thompson, George, Wakefield.
Warren, Thomas, Princes Risborough.

As an Assistant in Compounding and Dispensing Medicines:

Clarke, Josiah, Long Buckby.

The following gentlemen also, on the same day, passed their First Examination:—

Atkinson, Alfred James, University College.
Barringer, Thos. S. W., St. Bartholomew's Hospital.
Collins, Henry William, Guy's Hospital.
Gray, Clements Frederick, St. Bartholomew's Hospital.
Horsford, Joseph A., University College.
Hudson, Hubert E., Guy's Hospital.
Manby, Alan R., Guy's Hospital.
Milles, George R., King's College.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—The following appointment has been made:—Dr. William J. Rankin, Assistant-Surgeon, to the *Vindictive*.

78TH FOOT.—Staff Surgeon Valentine Mumbee McMaster, M.D., to be Surgeon, *vice* John Meane, appointed to the Staff.

MEDICAL DEPARTMENT.—Surgeon John Meane, from the 78th Foot, to be Staff Surgeon, *vice* Valentine Mumbee McMaster, M.D., appointed to the 78th Foot.

Staff Surgeon George Fearon has been permitted to resign his commission.

INDIA OFFICE.—Her Majesty has been pleased to approve the following admissions to her Majesty's Indian Medical Service:—*Bengal*.—To be Assistant-Surgeons: Kenneth Mackenzie Downie, M.B., Frederic Morell Mackenzie, John MacGregor, George Hutcheson, M.B., and Edward Reginald Johnson. *Madras*.—To be Assistant-Surgeons: Alfred William Lupton, M.B., William Evatt Evan Wright, and Frederick Henry Blenkinsop. *Bombay*.—To be Assistant-Surgeons: John Robb, M.B., and William Coleridge Kiernander.

14TH CHESHIRE RIFLE VOLUNTEER CORPS.—George Hill, Esq., M.D., to be Assistant-Surgeon.

4TH LINCOLNSHIRE RIFLE VOLUNTEER CORPS.—Francis Snaith, to be Honorary Assistant-Surgeon, *vice* Tuxford, resigned.

BIRTHS.

BLENKINSOP.—On March 2, at Bournemouth, Hants, the wife of Dr. W. H. Blenkinsop, of a son.

COUSINS.—On March 5, at 19, Clifton-villas, the wife of the late Edward Cousins, F.R.C.S. (Exam.), of 215, Camden-road, of a daughter.

HUTHWAITE.—On February 28, at Nottingham, the wife of Charles Huthwaite, L.R.C.P., of a daughter.

TURNER.—On March 8, at 30, Margaret-street, Cavendish-square, the wife of J. S. Turner, M.R.C.S., of a son.

MARRIAGES.

BLACK—COX.—On March 4, at St. Peter's Church, Croydon, James Walter Black, M.D., London, to Mary Wedderburne, eldest daughter of the late Captain James Cox, 92nd Highlanders.

GOSSE—RITCHIE.—On December 8, at Penola, South Australia, William Christie, second son of William Gosse, M.R.C.S.L., to Gertrude, third daughter of the late William Henry Ritchie, Esq., of Melbourne, Victoria, formerly of London.

GUTHRIE—MENZIES.—On January 20, at All Saints' Church, Lucknow, Dr. Alexander Guthrie, Surgeon 8th Brigade Royal Artillery, to Emily Anne Guy, second and youngest daughter of E. Menzies, Deputy Inspector-General of Hospitals, British Forces, Lucknow Circle.

MORRIS—TURNER.—On March 9, at St. John's, Richmond, James Morris, M.D. Lond., Fellow of University College, of 13, Somers-place, Hyde Park-square, to Agnes, only daughter of John Turner, Esq., late of Glasgow.

DEATHS.

DANIELLS, CHARLOTTE GERTRUDE, eldest daughter of the late J. B. Daniells, M.D., at 19, Royal-crescent, Bath, after a few days' illness, on March 2.

DRAWBRIDGE, GEORGE HENRY, M.B., at Rochester, on March 7, aged 71.

EDMONDSTON, ELIZA MACBRIAR, wife of Laurence Edmondston, M.D., at Halligarth, Unst, Shetland, on February 19.

FLEWITT, REBECCA ARMSTRONG, the wife of M. W. Flewitt, Surgeon, Northampton, on March 7, in her 52nd year.

GUTHRIE, MARY, wife of Alexander Guthrie, Surgeon, at Brechin, on March 5, aged 74.

JONES, JOHN DALSTON, M.D., F.L.S., at 201, Queen's-road, Dalston, on March 8, in the 58th year of his age.

LAY, WILLIAM, M.R.C.S., late Superintendent of the County Asylum, at Littlemore, on March 7, aged 62.

LYE, HORATIO, Surgeon H.E.I.C.S., son of the late William Lye, Esq., of Ramsbury, Wilts, at Hayle, Cornwall, on March 8, aged 83.

MITCHELL, T. H., Surgeon, third son of the late John Mitchell, Esq., of Kington, Herefordshire, at Holloway, on March 8, in the 41th year of his age.

POWELL, WILLIAM HENRY, M.D., formerly of Fareham, Hants, at 5, Albion-road, South Hampstead, on February 27.

SEATON, SARAH ELLEN, for nearly thirty years the devoted and beloved wife of Joseph Seaton, M.D., of Halliford House, Sunbury, at 8, Crescent, Scarborough, the residence of Richard Howell, Esq., on March 4, after intense suffering.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BRADFORD INFIRMARY AND DISPENSARY.—Two Physicians; must be graduates in Medicine of one of the Universities of the United Kingdom, or Fellows or Members of one of the Colleges of Physicians, and be registered under the Medical Act. Diplomas and Testimonials to Mr. Chas. Woodcock, Secretary, Sun-bridge, Bradford, on or before April 15. Election on May 5.

BRADFORD INFIRMARY AND DISPENSARY.—Two Resident Medical Officers; one to attend to the patients in the Hospital, and the other to visit those belonging to the Dispensary department. Candidates must have both Medical and Surgical qualifications. Applications and testimonials to Mr. Chas. Woodcock, Sun-bridge, Bradford, on or before March 16. Election on April 6. Candidates must state for which of the situations they apply.

CHESTER GENERAL INFIRMARY.—House-Surgeon; must have both Medical and Surgical qualifications. Applications, with testimonials, to the Chairman of the Board of Management on or before the 31st inst.

EPPING UNION.—Medical Officer for the Buckhurst-hill district of the parish of Chigwell. Candidates must be legally qualified. Applications and testimonials to J. W. Windus, Esq., Epping, on or before March 18. Election on March 19.

GRAY'S HOSPITAL, ELGIN.—House-Surgeon. Testimonials to Fife Duff Robertson, Town Clerk, Elgin, on or before April 27. The duties will commence on May 15. The gentleman who holds the above appointment is usually elected Medical Officer to the Lunatic Asylum for Elginshire, which adjoins the Hospital.

ISLINGTON DISPENSARY.—Surgeon; must be F. or M.R.C.S., and not a Practitioner of Midwifery or Pharmacy. Qualifications must be produced at the meeting of the Medical Council, to be held at the Dispensary on March 25, at half-past seven o'clock p.m. Election on March 30, at the same hour.

KING'S COLLEGE HOSPITAL.—Assistant-Physician; for particulars apply to J. W. Cunningham, Esq., Secretary at the Hospital.

LEEDS FEVER HOSPITAL.—Resident Medical Officer; must have both Medical and Surgical qualifications, and have had some experience in the treatment of fever. Applications and testimonials to Dr. Eddison, 16, Park-square, Leeds, on or before March 22.

LIVERPOOL INFIRMARY FOR CHILDREN.—House-Surgeon (unmarried); must have both Medical and Surgical qualifications, and be on the Medical Register. Applications and testimonials to John Calder, Esq., Hon. Secretary, on or before March 22. Selected candidates will receive notice requiring their attendance

LURGAN UNION.—Medical officer for the Moyntagh sub-district of the Lurgan Poor-law Union; candidates must be legally qualified. Applications and testimonials to J. Hancock, Esq., the Manor House, Lurgan, Co. Armagh, on or before April 9, at 10 o'clock a.m. The election will take place at 3 p.m. on the same day. Residence within the district of the Union will be required.

MIDDLESEX HOSPITAL.—Physician's Assistant; must hold some qualification, and be prepared to become a Medical pupil of the Hospital. Applications to be made in writing to the Secretary at the Hospital, on or before March 31. Candidates must attend for examination before the Medical Committee on April 3. The successful candidate will be required to enter upon his duties on April 5.

NEWPORT UNION, COUNTY MAYO, IRELAND.—Medical Officer for the Achill Dispensary District, comprising the electoral divisions of Ballycroy, north and south, and the townlands of Cartron, Cuillalorghan, Cushlecka, Dooghbeg, Owenduff, and Tonregee, east and west. Candidates must be legally qualified. Applications and testimonials to C. C. Boycott, Esq., Corrymore, Doogort, Achill, Newport, on or before April 6, the day of election. Personal attendance on the day of election will be necessary.

PARISH OF ST. LUKE, MIDDLESEX.—Medical Officer for the Whitecross-street District. Candidates must be qualified as required by the orders of the Poor-law Board. Applications and testimonials to John Parson, Esq., Vestry Hall, City-road, on or before March 18. Candidates will be required to attend before the Finance Committee on March 18, at 4 p.m.

ROYAL ORTHOPÆDIC HOSPITAL, 315, OXFORD-STREET, W.—Assistant-Surgeon; must be M.R.C.S.E. (not practising pharmacy or midwifery). Applications and testimonials to the Secretary, on or before the 24th inst. Further information may be obtained from the Secretary.

ROYAL SOUTH HANTS INFIRMARY, SOUTHAMPTON.—Dispenser. Further information may be obtained of the Honorary Secretary, J. Reeve Shorto, Esq.

ST. LUKE'S HOSPITAL FOR LUNATICS.—Resident Medical Superintendent; must be F. or M.R.C.S.E. and L.S.A., unmarried, and under 25 years of age Applications and testimonials to the Treasurer on or before March 17. Election on March 19. Any further information may be obtained from Mr. Owthwaite, Secretary, at the Hospital, between 11 a.m. and 3 p.m.

SUNDERLAND INFIRMARY.—House-Surgeon; must possess both Medical and Surgical qualifications, and be registered. Testimonials and diplomas to the Secretary, on or before May 1. Election on May 10.

THE GENERAL HOSPITAL, BIRMINGHAM.—Dispenser; must have had at least three years' experience in compounding and dispensing medicines. Applications and testimonials to F. Fowke, Esq., at the Institution on or before the 18th inst. Election on the 25th inst.

WEOBLEY UNION.—Medical Officer; must be M.R.C.S. and L.S.A. Applications and testimonials to R. Rickards, Esq., Weobley, Herefordshire, on or before the 13th inst. Election on the 16th inst.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Clifton Union.—Mr. Joseph J. Evans has resigned the Third District; area 2199; population 16,759; salary £25 per annum.

Louth Union.—Mr. W. D. Ditchett has resigned the Grimoldby District; area 17,217; population 2854; salary £40 per annum.

Maidstone Union.—Mr. John F. Wilkin has resigned the Second District; area 5424; population 13,013; salary £120 per annum.

APPOINTMENTS.

Bedford Union.—Jabez Carter, M.R.C.S.E., L.S.A., to the Bedford and Kempston District.

Bingham Union.—Charles Bateman, M.R.C.S.E., L.S.A., to the East District.

Birmingham Parish.—Edmund B. Whitcombe, M.R.C.S.E., L.S.A., to the Workhouse.

Henley Union.—John Johnstone, L.F.P. and S. Glas., L.R.C.P. Edin., to the Caversham District.

Pembroke Union.—Joshua W. Morison, L.R.C.P. Edin., M.R.C.S.E., L.S.A., to the Second District and the Workhouse.

West Ashford Union.—Charles Wilks, M.R.C.S.E., L.S.A., to the Third District; John Chapman, M.R.C.S.E., L.S.A., to the Fourth District.

Woodbridge Union.—Thomas R. Mitchell, M.D. St. Andrews, M.R.C.S.E., L.S.A., to the Fifth District.

HER MAJESTY'S DRAWING-ROOM.—Dr. William Carr, Dr. W. Sedgwick Saunders, and Sir William Fergusson were amongst the gentlemen who attended the drawing-room on Wednesday.

THE LEVÉE.—At the Levée held by Her Majesty at Buckingham Palace on Friday, March 5, the following presentations were made to the Queen:—Dr. Bonney, Assistant-Surgeon, 1st Royal Surrey Militia, by Lieutenant-Colonel Evelyn. Mr. Oscar Clayton, on appointment as extra Surgeon-in-Ordinary to His Royal Highness the Prince of Wales, and Surgeon-in-Ordinary to His Royal Highness the Duke of Edinburgh, by the Lord Chamberlain. Dr. R. W. Cunningham, Bengal Medical Service, by the Secretary of State for India. Dr. S. Currie, C.B., Inspector-General of Hospitals, on return from Abyssinia, by the Director-General, Army Medical Department. Surgeon John L. Erskine, M.D., R.E., on promotion, by the Deputy Adjutant-General, R.E. Staff-Assistant-Surgeon Dr. W. Geoghegan, on appointment, by the Director-General of Army Medical Department. Surgeon-Major J. Hilliard, M.D., by the Secretary of State for India. Inspector-General of Hospitals Ross Jameson, by the Director-General of the Army Medical Department. Assistant-Surgeon Jonas R. Leake, by Major-General Sir John Garvock, K.C.B. Surgeon-Major John Madden, by the Director-General of the Army Medical Department. Surgeon-Major M. F. Manifold, by the Director-General of the Army Medical Department. Assistant-Surgeon J. T. Milburn, by the Director-General of the Army Medical Department. Assistant-Surgeon J. Munday, by the Director-General of the Army Medical Department. Surgeon-Major G. R. Pemberton, M.D., by the Secretary of State for India. Surgeon W. H. Pollard, by the Adjutant-General. Inspector-General of Hospitals H. W. Porteous, by the Secretary of State for India. Surgeon W. J. Rendall, by the Director-General of the Army Medical Department. Staff-Surgeon Sampson Rock, on return from Abyssinia, by the Director-General of the Army Medical Department. Dr. W. Sedgwick Saunders, on appointment as a Commissioner of Lieutenancy of the City of London, by the Lord Mayor. Dr. Adolphus Simpson, by the Earl of Fife. Surgeon-Major Dr. J. Sinclair, on promotion and on return from Abyssinia, by the Director-General of the Army Medical Department. Staff-Assistant-Surgeon Count Cyprian Wollowicz, on return from Abyssinia, by the Director-General of the Army Medical Department. The following gentlemen attended the Levée:—Sir Henry Holland, Sir William Jenner, Sir Charles Locock. Doctors—Aeland, Alderson, Frederic Bird, Cape, Langdon Down, Arthur Farre, Frederic Farre, Woodforde Finden, Gream, Day-Goss, Logan, C.B., Priestly, Reginald Read, Frederick G. Reed, Sieveking, Yearsley. Inspectors-General—Dr. G. S. Beatson, Dr. Dumbreck, C.B., Dr. Armstrong, R.N. Deputy Inspectors-General—T. Graham Balfour, Robert Bowen, and Jee, C.B., V.C. Messrs. Du Pasquier, Cæsar Hawkins, H. V. Martin, S. Rock, J. Simon, Solly, Haynes Walton, T. Spencer Wells, Erasmus Wilson, etc.

University of Cambridge. — Natural Science Scholarships.—Competitive Examinations in Natural Science for Scholarships are about to be held as follows in the several Colleges:—Downing College (£40 per annum) on Tuesday, March 16. Clare College (£50 per annum for 3½ years), on Wednesday, March 17. Trinity College (£80 per annum), on Easter Monday. St. John's College (£50 per annum), Friday, April 9. The examination at Trinity College is open to all undergraduates of Oxford or Cambridge. The examinations at the other Colleges are open to all students who have not begun to reside in the University, or who have only recently done so. These Scholarships and others are offered each year. Information respecting them may be obtained from the tutors of the respective Colleges.

The late Dr. Scholfield.—A painted window is to be placed in Doncaster parish church in memory of the late Dr. Scholfield at a cost of £684. The subject is to be the "Good Physician." The contract has been given to Messrs. Clayton and Bell.

Hydrophobia.—Two deaths have recently occurred at Preston from hydrophobia. The police are poisoning stray dogs with prussic acid.

Medical Charities.—The sum of £19,500 has been bequeathed by John Bairstow, Esq., of Preston, Lancashire, for the erection of a new wing to the Infirmary of the House of Recovery at Preston, £5000 to the Royal Asylum for Idiots at Lancaster, £200 to the Medical Benevolent College, Epsom, £300 to the Medical Benevolent Fund, and equally large sums to other institutions not Medical.

Danger of leaving Lunatic Patients together unwatched.—An inquest was held in the Birmingham Borough Lunatic Asylum, on Monday, on the body of a female patient who was killed by another female lunatic. The two were accidentally left alone in the airing-yard, when one struck the other a blow on the head with a piece of iron, from which she immediately died.

Poor-law Medical Service.—*Islington.*—A long discussion took place on Mr. Cufflin's motion that the resolution approving of one vaccinator for the whole parish be rescinded, and four vaccinators be appointed. The motion was ultimately carried by eight votes against two. *Halifax.*—Advantage was taken of the death of Mr. Peacock, the Medical officer, to lower the salary attached to the office from £130 a year, the officer finding all medicines, to £100 a year, the guardians finding cod-liver oil and quinine. *Sheffield.*—Messrs. Mellor, Jepson, and Siddall were reappointed vaccinating inspectors. Mr. Skinner, jun., was appointed to act temporarily as Medical officer, in the room of his father lately deceased.

Royal Victoria Dispensary, Northampton.—At the annual meeting of this institution held on February 26, the Rev. Sydney Gedge in the chair, the statement of accounts for the year 1868 was read. It appeared that the total receipts from the free members, who are chiefly artisans and labourers, amounted for the year to £1648 2s. 10d. After defraying the costs of drugs and all other expenses, there remained a clear balance of the free members' fund of £1296 18s. 11d., which was divided amongst the Medical officers in the following manner:—To Dr. Barr £527 0s. 3d., Mr. Moxon £467 18s., Mr. Evans £302 0s. 8d. These amounts considerably exceed what has been paid in any former year.

Typhus fever, in Newcastle, has continued less prevalent, and in Gateshead has only once been recorded in the four weeks. In Newcastle, during the four weeks, 23 cases against 39, the number corrected for four weeks of December, 1868. The total admissions into the Newcastle Fever Hospital amounted to 13—9 typhus. In the corresponding period of 1868, the admissions from typhus were 49; in 1867, 22; and in 1866, 53. It has been further remarked that at the Newcastle Fever Hospital, during the month of January, no death occurred.—*Health and Meteorology of Newcastle and Gateshead (First Report for* 1869), *by G. H. Philipson, M.A., M.D.*

Monthly Return of Deaths Registered in the Eight Principal Towns of Scotland, February, 1869.—Of the 2506 deaths, 1148, or 46 per cent., were of children under 5 years of age. The zymotic (epidemic and contagious) class of diseases proved fatal to 547 persons, thus constituting 21·8 per cent. of the mortality. This rate was exceeded in Glasgow from the combined prevalence of measles, scarlatina, hooping-cough, and fever. That rate was also slightly exceeded in Paisley, from the prevalence and fatality of fever. Fevers were the most fatal of the epidemics in the eight towns, having caused 120 deaths, or 4·8 per cent. of the mortality. 10·3 per cent. of the deaths in Paisley were from that cause. Of these 120 deaths, 70 were tabulated as having been caused by typhus, 35 by enteric, 6 by relapsing, 4 by simple continued, and 5 by infantile remittent fever. Scarlatina caused 113 deaths in the eight towns, hooping-cough 96, measles 84, croup 41, diarrhœa 32, diphtheria 16.

Secondary Education.—We have been requested to publish the following petition:—

"*To the Honourable the House of Commons in Parliament assembled.*

"The humble Petition of the British Medical Association, at its meeting at Oxford this twentieth day of August, 1868,

"Showeth—That the British Medical Association, consisting of more than four thousand British Medical Practitioners, takes a deep interest in the advancement of Medical science, and in all measures calculated to promote the efficiency of persons engaging in the Profession of Medicine and Surgery.

"That the Association is of opinion that, for the successful study of Medicine, sound general education is of the utmost importance.

"That the Association has reason to believe that the education of many Medical students is hindered and rendered less efficient than it ought to be by their defective general education.

"That the Association has reason to fear that, notwithstanding the regulations of the Medical Corporations and Universities of the United Kingdom which have been designed to secure the preliminary general education of Medical students, some of them have great difficulty in maintaining a sufficient standard of acquirement, owing to the inefficient state of secondary education in the schools of the country.

"That the Association is aware that the subject of secondary education in schools has engaged the attention of Commissioners appointed by her Majesty to inquire into it, and that the reports of these Commissioners have been for some time before the public.

"The British Medical Association, therefore, humbly prays that your honourable House will allow but little time to elapse before such laws shall be enacted as will remedy existing defects in endowed schools, and otherwise place the secondary education of the country in a satisfactory state.

"And your petitioners will ever pray.

"On behalf of the British Medical Association,

"Henry W. Acland, Regius Professor of Medicine in the University of Oxford, and President of the Association."

The Wels (Silurus Glanis).—This strange new fish was imported from Prussia last week by Mr. King, of Great Portland-street, for acclimatisation in this country. He succeeded in bringing over, in appropriate tanks, twenty-seven live specimens, which were immediately despatched to Oxfordshire, where they were placed in a lake belonging to Mr. James Mason, High Sheriff of the county, who is desirous of breeding and rearing these gigantic fresh-water fish. Dr. Albert Günther, of the Icthyological Department at the British Museum, has well described this fish in "Fisheries Gossip." Its habitat is the deep water of lakes or of places by the sides of sluggish rivers, like those in the north of Germany, out of the general current. They lie wallowing in the mud (hence one of their Teutonic names, Waller-fisch), and feel with their long barbels for their passing prey; their eyes are small and almost rudimentary; they live in a thick muddy medium, where good sight would be useless. Nature, however, has provided them with a highly developed beard, which surrounds the mouth. Two of these *barbels* are nearly the length of the whole body, and are capable of voluntary movement, serving the purpose not only of guiding the fish, but of apprising them of the approach of their prey, which, from the vermicular movement of these appendages, are often attracted by them as by a bait. The Wels (Silurus Glanis) is the largest of fresh-water fish, often weighing over five hundredweight; their average weight being, when mature, between 50 and 80 lbs. The head is large, and the mouth has a very wide gape, and is well studded with teeth; the body is short, about the length of the head, and sometimes attains a girth which a man's arms would fail to compass; the skin is smooth, and devoid of scales; its tail is long and immensely powerful, being supplied with an enormously developed anal fin, which enables it to dart with prodigious rapidity forwards or sideways towards its prey; all the other fins are small, as the habits of the fish do not require it either to swim rapidly or balance itself in the water; it lies in the mud on its belly, intent only on what comes within its reach. It is very tenacious of life, like the eel; in fact, one that Mr. King imported, weighing 50 lbs., lived twenty-four hours without water. "Medicus," in the

Standard of the 10th inst., says:—"The meat, composed of a fine but compact muscular fibre, was beautifully white and firm; when boiled, as mine was, it resembled cod in appearance, and had a compound taste, from which it was difficult to decide whether it resembled turbot, cod, or conger-eel, for it seemed to combine the characteristics of each—sapidity, firmness, and delicacy. So far as I am able to judge from this one trial, the Silurus seems not only adapted for the table generally, but for invalids."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

*** We regret that the pressure of other matters keeps out for this week the subject of Medical charities, Hospital abuses, etc. We may, however, call attention to the letter of a Medical Practitioner at Brighton in our last number, page 264.

Mr. Raynes shall have an answer next week.

Local Hot-air Baths.—Two correspondents inquire for the present address of the manufacturer of hot-air baths for the arms, legs, etc., who had a shop some time since in North Audley-street.

M.D.—1. Two shillings and sixpence to four shillings. 2. Two shillings and sixpence to five shillings. 3. Five shillings. 4. Five shillings. 5. A shop where medicines can be purchased.

Tasmania.—We complain of advertising quacks in this country, and the latitude which is given to them in the columns of many newspapers. But it would appear that in some of the colonies the licence is still further extended. We have received an extract from a newspaper published in Hobart Town. This is in the shape of a homily, and is headed "A Warning." It is difficult to imagine how any person can be taken in by such disgusting rhodomontade; but the "game" appears to succeed. The paragraph or statement occupies nearly a column of the paper, and is printed in type similar to the "leading articles."

Art v. Nature.—The concerts at the Tuileries are known to set the fashion for the whole year, not of dress but of deportment, and we were anxious to obtain a suggestion or two for your fair readers. We observed that ladies will be expected to walk on their toes, with the waist elevated behind and sinking much in front. Her Majesty, with whom originates the fashion, executes it charmingly. The heels of the satin boots being very high, and the soles extremely thin, this *tournure* becomes easy enough, and can be acquired without much practice. The air of the visage is to be bold, no longer wearing that expression of simpering timidity which suited with the long curls down the neck. The chin is projected forward, and the forehead thrown back, while the eyes are kept wide open, hard, and round as possible; the lips are in general pale—coral-colouring is quite gone out of fashion—and the expression of the mouth to be that of weariness and scorn! In consequence of the raising of the coiffure, the ears, so long neglected, have become an object of attention, and may now be seen tinted with pink or white, as may be required. They are brought forward or forced backward according to the urgency of the case, and it is astonishing to find what expression may be given to the countenance by dint of a little management. Blue eyes and fair hair are still considered indispensable to a reputation for beauty, and black eyes and raven hair are scarcely tolerated; those who are unfortunate enough to possess them being compelled to use every kind of stratagem in the way of powder, paint, and dust to conceal their disgrace. The elbows must be rather squared, not rounded, but brought forward as much as possible, in order to make the chest look hollow, and add to the consumptive look bestowed by the pale lips and flushed cheeks imparted by the absence of all colouring in the one case, and the exaggeration of its application in the other. Let no young lady dare to appear in fashionable society unless she adhere with the utmost strictness to these rules.—*Paris Correspondence of a Country Paper.*

Bengal.—Candidates for the Fellowship of the College are required to undergo an examination in Medicine equally with those for the Membership, unless already possessing a recognised Medical degree. The L.S.A. is one of these.

Statistician.—Your objection is well founded, as many Practitioners possessing double qualifications only register one of them.

Fowey, Cornwall.—The Medical Register for 1869 is only supplied "gratis" to those gentlemen who registered in 1868. Write to Dr. Hawkins, 32, Soho-square.

Dermatologist, Manchester.—So much importance did the Council of the Royal College of Surgeons of England attach to the study of cutaneous diseases, that, in order to promote its advancement, the Jacksonian Committee recommended, and the Council at once adopted the suggestion in 1822, of offering the Jacksonian Prize for the best essay "On Diseases of the Skin," when it was carried off by Mr. Samuel Plumbe, a Member of the College.

Psychologist.—It is an official blunder on the part of the authorities of St. Luke's Hospital in requiring candidates for the vacant Medical Superintendentship to be Fellows of the College under 25 years of age, inasmuch as this is the age at which only they are admitted to the examination. Write to the Secretary of St. Luke's.

Carbolic Acid for Wounds.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I shall be glad if any of your correspondents will tell me if any appreciable difference in the statistics of Hospital mortality is observable since the general use of carbolic acid as an application to wounds. Is pyæmia less frequent or less fatal? Are more lives saved after amputation? Are any good effects demonstrable in lying-in Hospitals? What are the results at Glasgow and Edinburgh before and since the now prevalent custom? I am, &c. Philo-Chia.

Mr. Porter's Case of Calculus.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your last report of the Army Medico-Chirurgical Society of Portsmouth, I note "a case of calculus in the bladder," by Surgeon Porter, 97th Regiment. I should be extremely obliged if Surgeon Porter would, through your columns (always with your permission), give me something of the previous history of the case, more especially regarding the renal symptoms, and composition of the "gravel," with date and origin of the fistula. I should also be glad to know whether the vesical calculus was composed wholly of triple phosphate or contained a nucleus, and whether there was no pyelitis after the lumbar fistula closed.

Begging both Surgeon Porter and yourself to excuse my thus troubling you, I am, &c. E. Oldfield, M.D., &c.

Hotel Gouden Leeuw, Breëstraat, Leyden, Zuid Holland, February 23.

Hydra-headed Quackery.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The letter of "Dr." Hammond (of "the ex-Governor Lock Hospital dodge") forwarded to you by Mr. Murray, of Forfar, is almost word for word the same as that published in Mr. Courtenay's "Revelations of Quacks and Quackery," p. 15. As to the "curative belt," Mr. Courtenay says: "I have it now before me, and it is a common suspensory bandage. The penis passes through; there is a string of pieces of metal through which the penis is passed, and by which it is then encircled. The whole thing, for which two guineas was charged, would cost about three or four shillings at the utmost."

The following statement, showing the method pursued by this individual and his confrères in advertising, is interesting:—

"Dr." Hammond, 11, Charlotte-street, Bedford-square; Mr. Rapkey, 11, Charlotte-street, Bedford-square; A. Barrows, Esq., 11, Charlotte-street, Bloomsbury; H. James, Esq., Percy House, Bedford-square; Professor James, 11, Charlotte-street, Great Russell-street.

The above addresses are found to refer to one and the same house.

London, March 9. I am, &c. Deltius.

Confection of Senna in Hæmorrhagic Affections, etc.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Perhaps it will not be considered inopportune if at the present time I may be permitted to direct your attention to the great value of the confection of senna, administered in the usual dose, in cases of hæmorrhagic affections, particularly the following, viz.:—Epistaxis and hæmorrhoids, and even also in dysentery when there is much blood evacuated. It may be difficult to point out its *modus operandi*, but, nevertheless, it seems to operate by contracting the venous capillary system. It may notwithstanding possess a peculiar virtue of its own in thus arresting, and also in curing, such affections. For some years past I have been extremely gratified by its being so administered, and I think that it deserves to be tried on a much greater scale in all affections where blood is preternaturally discharged.

Wallingford, March 3. I am, &c. Willoughby Arding, M.D.

Ling's Gymnastics.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your reply to "Gymnast," in the last number of the *Medical Times and Gazette*, you inadvertently, I am sure, commit an injustice in attributing to Dr. Roth the introduction of the system of gymnastics which that gentleman practises.

Ling's Swedish gymnastics were first introduced into this country by Mr. De Béton about the year 1837. He was shortly after followed by Mr. Ehrenhoff, while Professor Georgii has practised in London since 1849. It was, indeed, at this latter gentleman's gymnasium—the practice of which has always been open to the Profession—that Dr. Roth gained his first knowledge of the system. The first work Dr. Roth published on the subject (Churchill, 1851) was dedicated by him to Professors Branting and Georgii, upon whom the mantle of Ling is, in Sweden, considered to have fallen.

Of the immense value of Ling's gymnastics, whether as an educational or Medical system I believe there cannot be a doubt in the minds of those who have practically watched their results, it being the only gymnastic system founded on a scientific knowledge of the human body, and so exactly graduated as to be applicable alike to the weakest as the strongest.

That gymnastics should ever be held up as a general panacea must cause regret to every intelligent and honest practitioner of them. That their practice is a speciality I admit, and even think this must remain so, as well from the necessities of such kind of practice as for the reason that, where used as a therapeutic means, gymnastics should be regarded as supplementary to, and not in substitution of, other remedial measures. That the purely Medical and the purely gymnastic treatment are best conducted by those who have given special attention to each, I believe. But this does not preclude the Physician from an intelligent appreciation of, and voice in, the mechanical treatment, or the gymnast from a knowledge of the other branches of the Medical art. In illustration of the position of gymnastics in Sweden, I need only mention that Professor Huss was until recently the President of the Governing Council of the Royal Gymnasium at Stockholm.

London, March 3. I am, &c. John Holm.

Dr. Balmanno Squire's Manual of Skin Diseases.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I trust you will kindly permit me to correct a mistake in the notice you were pleased to give of my "Smaller Manual of the Diseases of the

Skin" in your last number; and since the notice contains no criticism, but is evidently intended to be simply a *précis* of my preface, I feel under no embarrassment in begging of you this favour. The inaccuracy to which I refer is a matter of regret to me for this reason. I feel that I should be inclined to laugh at any one who should write as I seem in your columns to have written. They display me in a position that I am anxious to escape from as soon as possible. I quote your reviewer's words:—"Mr. Squire says that the state of the pathology of skin diseases is so very unsatisfactory that nothing certain can just now be laid down with regard to it." Now the words in my preface are these—"I freely own that the imperfect state of cutaneous pathology throughout Europe necessarily leaves the subject of cutaneous diagnosis, for the present, in a most unsatisfactory condition;" and I should be sorry to think that I had said anything in my book which can be construed as your reviewer has put it. Had he given me three minutes more and gone beyond my preface (of three pages) into my introductory chapter (of three and a half pages), he would have seen that I am far from taking so airy a view of the matter as he has credited me with.

Another assertion which I should think absurdly untrue is also fathered on me thus:—"Mr. Squire holds that no specific has sunk more in the estimation of modern dermatologists than arsenic." If in place of that I had been made to say that no specific stands higher in the estimation of modern dermatologists, I could not have complained of misrepresentation. This, however, is what my preface says—"It may be noticed that it is in the treatment of those chronic diseases of the skin with the nature of which we have of late become best acquainted, that the reputation of arsenic (the most reputed of cutaneous specifics) has most fallen." I here call it what it still is, the most reputed of cutaneous specifics, although I say at the same time that for the diseases that we have latterly learnt most of we have found out better remedies (to which the name of specific may scarcely be applicable). But I daily meet with arsenic in the prescriptions of "modern dermatologists" far too frequently to be capable of asserting that "no specific has sunk more in their estimation." I am, &c.

9, Weymouth-street, W., March 5. BALMANNO SQUIRE.

COMMUNICATIONS have been received from—

Mr. ORMEROD BENTLEY; Mr. A. B. SQUIRE; Mr. BECKE; Dr. BOECKEL; M.; Messrs. A. and C. BLACK; Dr. ALTHAUS; M.D.; Mr. J. B. CURGENVEN; Mr. J. F. COLLINGWOOD; Mr. E. FLINT; Dr. J. W. R. MACKIE; DELTIUS; Mr. T. JOHNSTON; Mr. ALEXANDER YULE; Dr. WILES; Mr. C. F. MAUNDER; Mr. J. CHATTO; Dr. DAY; Dr. MORRIS; Mr. H. RAYNES; Mr. J. R. H. O'CONNOR; A LONDONER; Mr. T. E. AMYOT.

BOOKS RECEIVED—

Holmes on Children's Diseases, 2nd edition—Ball's Guide to the Eastern Alps—Philipson's Health and Meteorology of Newcastle and Gateshead—Hughes's Manual of Therapeutics—Sibson's Medical Anatomy, Part 7—How to dispose of our Refuse—Buchanan on the Forces which carry on the Circulation of the Blood—The Chemists' and Druggists' Advocate, No. 1.

NEWSPAPERS RECEIVED—

L'Union Médicale—Gazette Hebdomadaire—California Medical Gazette—Brighton Times—Boston Medical and Surgical Journal.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 6, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1861.)	Births Registered during the week ending Mar. 6.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Mar. 6.	Temperature of Air (Fahr.). Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3170754	40·7	2307	1462	1487	53·6	23·8	39·1	0·47	47
Bristol (City)	169423	36·1	118	76	*82	54·5	28·7	41·4	0·34	34
Birmingham (Boro')	360846	46·1	281	175	127	51·9	30·4	40·1	0·69	70
Liverpool (Boro')	509052	99·7	400	295	256	49·6	33·3	40·1	0·41	41
Manchester (City)	370892	82·7	251	210	*212	50·8	27·0	39·5	0·73	74
Salford (Borough)	119350	23·1	94	60	53	48·6	28·0	38·6	0·65	66
Sheffield (Borough)	239752	10·5	167	126	144	50·0	28·8	37·8	1·37	138
Bradford (Borough)	138522	21·0	138	71	73	50·0	27·0	38·8	0·68	69
Leeds (Borough)	253110	11·7	243	129	133	50·0	31·0	39·9	0·82	83
Hull (Borough)	126682	35·6	80	59	56	38·0	23·0	35·0	0·33	33
Newstl-on-Tyne, do.	130503	24·5	93	69	88	48·0	23·0	34·9	0·58	59
Edinburgh (City)	178002	40·2	122	86	104	46·7	26·0	35·0	0·70	71
Glasgow (City)	458937	90·6	352	268	332	47·2	27·4	35·6	1·02	103
Dublin (City and some suburbs)	320762	32·9	184	158	176	...	...	...	...	...
Total of 14 large Towns	6546587	35·5	4839	3244	3323	54·5	23·0	38·1	0·68	69
					Week ending Feb. 27.	Week ending Feb. 27.				
Vienna (City)	(1863) 560000	...	...	...	411	...	...	41·5	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·706 in. The barometrical reading increased from 28·99 in. on Tuesday, March 2, to 30·14 in. at the end of the week.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 6, 1869.

BIRTHS.

Births of Boys, 1144; Girls, 1163; Total, 2307.
Average of 10 corresponding weeks, 1858-67, 2089·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	740	747	1487
Average of the ten years 1858-67	715·9	685·2	1401·1
Average corrected to increased population	...	...	1541
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	...	3	6	...	3	5	1	...
North	618210	2	6	15	1	14	14	5	...
Central	378058	...	1	1	...	6	3	3	...
East	571158	..	4	27	2	14	17	3	...
South	773175	4	11	7	1	28	13	6	...
Total	2803989	6	25	56	4	65	52	18	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·706 in.
Mean temperature	39·1
Highest point of thermometer	53·6
Lowest point of thermometer	28·8
Mean dew-point temperature	31·9
General direction of wind	Variable.
Whole amount of rain in the week	0·47

APPOINTMENTS FOR THE WEEK.

March 13. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Odling, "Hydrogen and its Analogues."

15. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Address by the President. Dr. Jno. Thompson Dickson, "On 'Matter and Force' in relation to Mental and Cerebral Phenomena."

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

16. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

ANTHROPOLOGICAL SOCIETY, 8 p.m. Mr. L. O. Pike, M.A., "The alleged Influence of Race on Religion." Dr. Davy, F.R.S., "On the Character of the Negro."

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

ROYAL INSTITUTION, 3 p.m. Rev. F. W. Farrar, "On Comparative Philology."

17. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

METROPOLITAN COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION, 7½ p.m. Adjourned Discussion "On Hospital Administration," at the rooms of the Medical Society of London.

ROYAL COLLEGE OF PHYSICIANS, 5 p.m. Lumleian Lectures—"On Diseases of the Serous Membranes and some of their Results," by Dr. Barker.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

18. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

HARVEIAN SOCIETY, 8 p.m. Mr. De Méric, "On Sulphite of Soda in the Treatment of Syphilis."

ROYAL INSTITUTION, 3 p.m. Dr. H. Power, "On the Eye."

19. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ROYAL COLLEGE OF PHYSICIANS, 5 p.m. Lumleian Lectures—"On Diseases of the Serous Membranes and some of their Results," by Dr. Barker.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

ROYAL INSTITUTION, 8 p.m. Dr. Crum Brown, "On Chemical Constitution and its relation to Physical and Physiological Properties."

ORIGINAL LECTURES.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,

Fellow of the Royal College of Physicians, Physician to King's College Hospital, and Professor of Physiology and of Morbid Anatomy in King's College, London.

LECTURE V.

CONTRACTILE TISSUES CONTINUED—STRIPED OR VOLUNTARY MUSCLE—SARCOLEMMA—RUPTURE OF CONTRACTILE TISSUE WITHIN—GERMINAL MATTER OF MUSCLE—FORMATION OF CONTRACTILE MATERIAL—"PROTOPLASM"—YOUNG, MATURE, AND OLD MUSCULAR FIBRE—JUNCTION OF MUSCLE AND TENDON—FIBROUS AND FATTY DEGENERATION OF MUSCLE.

OF NERVE TISSUE—GERMINAL MATTER AND FORMED MATERIAL OF NERVE—NO ENDS TO NERVE FIBRES—ULTIMATE NETWORKS—DIFFERENT KINDS OF NERVE FIBRES—NERVE CENTRES—ACTION OF NERVE FIBRES AND NERVE CELLS.

(*Continued from page* 217.)(a)

THE opinion generally entertained is that the contractile material of muscle is in its nature different from the formed material of other tissues, but from what has been stated it will be seen that there is good reason for regarding the contractile tissue as a formed but non-living substance possessing remarkable properties, but not manifesting any of those phenomena which are peculiar to matter in a living state. While every one will agree with me in considering the tissue of the fully formed hair, nail, and epidermis as non-living; and some will not strongly object to the same view being entertained with regard to the formed material of bone, cartilage, white and yellow fibrous tissue; few will be disposed to go the length of placing muscle and nerve-fibre in the same category. To these last textures mysterious vital properties are still assigned, and, strange to say, even by those who entertain the strongest opinions concerning the physical character of *all* vital phenomena. Although neither muscular nor nerve tissue can produce new texture, although each exhibits well-marked *structure*, and is destitute of every attribute of living matter, it is maintained that muscular contraction and the transmission of a current along a nerve-fibre are *vital* phenomena. But some, perhaps, may incline to the opinion that germinal matter exists diffused through the formed material of these textures, and that to it their wonderful properties are entirely due. It is therefore desirable in this place to consider the possibility of such an arrangement in the case of muscle. The structure of unstriped muscle is smooth, or very slightly fibrous, and exhibits no indications of containing germinal matter in its substance. This tissue is not tinged with the carmine fluid. It possesses all the general characters of formed material, and its relation to the germinal matter is the same as that of the formed material of other tissues. The evidence is therefore against such a view as regards unstriped muscle. Neither is it probable that in the sarcous particles of striped muscle there is a minute portion of germinal matter, because, in the first place, it cannot be detected at an early period of the development of the muscle; secondly, in inflammation and in other morbid conditions in which the masses of germinal matter of tissues are much increased in size, no change is seen in the sarcous particles; thirdly, the lines of sarcous particles correspond with the wavy bands of the fibrous tissue of tendon, which unquestionably consist of formed material only; and lastly, since the very transparent contracting tissues of some of the lower animals do not contain germinal matter in their ultimate fibrillæ, there is good reason for concluding that there is no living matter in the substance of the higher forms of contractile tissue. The phenomenon of contractility characteristic of this class of tissues is therefore probably due to changes in non-living formed material only, and is not in any way dependent for its manifestation upon germinal matter.

Of the Junction of Muscle with Tendon.—If an elementary muscular fibre attached to its tendon, taken from a properly prepared specimen, be examined, it will be seen that the formed material of the muscle is directly continuous with that of the tendon, and that the oval masses of germinal matter bear to the formed material of the two textures respectively a similar relation. In specimen 81 these facts are well illustrated, and the observer who considers carefully the facts demonstrated in specimen 79 of developing muscle, in 75 of young and fully formed muscle, and in 81 showing the junction between muscle and tendon, will, I think, feel convinced that the formed material of muscle is produced by the germinal matter, and that for its development and growth muscle is dependent entirely upon this living substance, which in the adult exists in very small proportion.

Changes occurring in old Muscular Tissues. Fibrous and Fatty Degeneration of Muscle.—In old muscular tissue the proportion of germinal matter to the formed material is much reduced, and in some cases the muscular fibre appears to be destitute of germinal matter altogether. It nevertheless retains its contractile power unimpaired.

The proportion of tendon in connexion with the muscular tissue, the thickness of the sarcolemma, and the quantity of connective tissue, gradually increase as age advances, and in old age much of the muscular tissue is replaced by fibrous material. The contractile material of the muscle has degenerated into fibrous tissue. In this process the soft contractile matter, which, as Kühne has shown, is fluid or semi-fluid, is absorbed, while an indistinctly fibrous basis substance remains. A similar change takes place after the contractility of muscle has for some time been impaired, as results from many forms of nerve paralysis; and when the central nerve disease progresses very slowly, a very great extent of muscular tissue may pass into a state of fibrous degeneration.

Fatty Degeneration.—In this morbid condition the contractile material in great part disappears, and in its place oil granules and globules are found. Fatty degeneration does not appear to be a consequence of nerve paralysis, at least in the greater number of instances. It runs its course in a shorter period of time than the fibrous degeneration. It occurs in unstriped muscle as well as in the striped fibre, and can always be observed in the altered muscular fibres of the uterus after parturition, and in the tissues near the margin of the placenta towards the end of the period of gestation. Fatty degeneration often affects a great number of tissues in the same individual. Nerves at the periphery and centre, ganglion cells, capillaries, arteries, veins, connective tissue, epithelium, cartilage, and even bone are not unfrequently affected by it, as well as every kind of muscular tissue. In many cases the fatty matter is first seen near the germinal matter, and results from changes taking place in the imperfectly developed formed material, and in the germinal matter itself oil globules are not unfrequently found. It is probable that the morbid change is in some cases dependent upon prior alterations in the composition of the blood, which are themselves the consequence of improper assimilation, or of the introduction into the organism of more food than can be properly assimilated, and in others upon some unusual changes in the germinal matter which depend upon some irregularity in the order of occurrence of the developmental phenomena.

In some instances an adventitious texture is formed outside a vessel by the multiplication of the masses of germinal matter of the tissue itself, as well as of the corpuscles resulting from the growth and detachment of buds or offsets from the white blood-corpuscles which have passed through the capillary walls with serous fluid (exudation). Collections of germinal matter are thus formed which give rise to alterations in the delicate membrane. The transparent tissue loses its elasticity, and, in consequence, becomes friable and rotten. Gradually the germinal matter itself undergoes change, and at last dies. Fatty matter, cholesterin, and earthy phosphates are among the resulting products, and these remain outside or amongst the tissue of the vessel, interfering with the due performance of its function.

Such are some of the remarkable alterations which take place in the walls of arteries, and usually precede rupture and the occurrence of aneurismal dilatations in the case of the largest vessels. Changes of the same character affecting the smaller arteries and capillaries invariably lead to serious derangement of the nutritive operations, and eventually to irreparable structural alteration in the tissues in which they ramify. A vast number of fatal diseases originate in changes

(a) *Correction.*—On page 217, lines 12 and 29, *for* "gases" *read* "elements."

in the vessels, and in many cases it is almost certain that the change in the wall of the vessel is due to an altered state of the blood, which has been caused by injudicious living as regards the quantity and quality of solids or liquids swallowed.

LIST OF MICROSCOPICAL SPECIMENS ILLUSTRATING THE STRUCTURE OF STRIPED MUSCLE.

No. of Specimen.		No. of diameters magnified.
73.	Elementary fibres of striped muscle with vessels, newt. Observe the masses of germinal matter.	40
74.	Elementary muscular fibres of striped muscle, newt; showing transverse striæ and masses of germinal matter	215
75.	Elementary fibres of striped muscle; pig at birth and at three months old	215
76.	Large and small elementary muscular fibres, frog; showing numerous masses of germinal matter.	215
77.	Elementary muscular fibre, water beetle; showing "discs" broken off within sarcolemma and masses of germinal matter in the centre of the muscular tissue	215
78.	Extremely fine muscular fibres, showing transverse markings and germinal matter; green tree frog	215
79.	Striped muscular fibres of calf at a very early period of development, showing large masses of germinal matter in centre of the fibre, as in insect muscle	215
80.	Very fine striped muscular fibres tapering into delicate fibres of connective tissue; nose of mole	215
81.	Connexion between striped muscle and tendon; chameleon	215
82.	Muscular fibres of heart of very fat pig, showing adipose tissue between them	130
83.	Striped muscular fibres in a state of fatty degeneration	215
83*.	Striped muscle, hyla; showing contractile material fractured within the tube of sarcolemma	130

ORIGINAL COMMUNICATIONS.

WHAT IS "PROTOPLASM?"

By Dr. LIONEL S. BEALE, F.R.S.

It will be remarked that in the lecture referred to in the *Medical Times and Gazette* of March 6, Professor Huxley includes under the term "protoplasm" matter in very different states, and maintains that this "protoplasm" is the physical basis of *life*, or the basis of physical *life*.

1. Living moving matter, as that in the cells of vallisneria, the hairs of the nettle, the matter of an amœba, a white blood-corpuscle, and a pus corpuscle, is protoplasm.

2. Contracting matter—as of muscle, which is capable of shortening or lengthening (contraction, relaxation), but not of moving in any direction like the amœba and the white blood-corpuscle, etc.—is protoplasm.

3. Albuminous matter, as white of egg, which is not capable of any movement at all, is protoplasm.

4. Dead and roasted matter is protoplasm. "Mutton contained protoplasm of the same nature as was found in every living thing." "As he spoke he was wasting his stock of protoplasm, but he had the power of making it up again by drawing upon the protoplasm of some other animal—say of a sheep. (Laughter.)"

If a white blood-corpuscle, a piece of muscle, white of egg, and roast mutton are all to be called *protoplasm*, surely the name may be also employed in speaking of hair, horn, nail, bone, wood, coral, and shell, and a number of other things: indeed, we might call men, animals, and plants, dead or alive, protoplasms. Huxley makes no difference between dead and living and roasted matter, and he confuses together the living thing, the stuff upon which it feeds, and the things formed by it, or which result from its death.

If the *forms* assumed by water are due to the properties of its constituent gases, it must be admitted that these forms are not quite so numerous as those taken up by protoplasm, and that the greater number of elements in the latter substance will not account for the difference. It is quite true we cannot ascertain by physical investigation any difference between the protoplasm of the embryo of a worm, dog, and man, and I have myself dwelt upon this, but it by no means follows that the *properties* of protoplasm to form worm, sheep, bird, man, as the case may be, are due to the arrangement and nature of its component molecules, of which Mr. Huxley knows nothing definite. Of course any one might *assert* that the differences exhibited by the fully formed "protoplasms" of these living things are to be explained by supposing a gradual alteration in property and arrangement of the elements as growth advances, but it would be absurd to attribute these alterations to physical changes, because there is no instance of non-living matter undergoing such alterations in property. Mr. Huxley teaches *unity of power*, and it was therefore unnecessary for him, at least in the city of Hume, to defend himself against the charge of teaching materialism, which could not with reason be made. Mr. Huxley manifests a tendency to modify his old views and to bring them more in accordance with the results of researches made during the last ten years. Already the vacuoles of his periplastic substance have become tenanted by the simple or nucleated protoplasms, and he may yet discover that the latter existed before the former, and that, after all, the endoplast is really of more importance than he was disposed to think. From this the transition to the opinion that the periplastic matter is formed by the protoplasm, which possesses power of a remarkable kind, will be simple and easy enough.

CASE OF

PARALYSIS OF THE HYPOGLOSSAL NERVE, FOLLOWED BY SLOUGHING OF THE TONGUE.

By EDWARD BALLARD, M.D.

On December 22 last I was requested by Dr. Fergusson, of Claremont-square, to see with him a gentleman who had been suddenly attacked that day with difficulty of articulation. He was 78 years of age, and, until within a few weeks of his attack, had never known what it was to be ill—eating and drinking heartily, and living tolerably freely. He had been under Dr. Fergusson's care for a week or two on account of what appeared to be a neuralgic affection in the occipital region, attributed to exposure to a draught while travelling in a railway carriage. On the day in question he had been permitted to take a drive, and while away became all at once unable to articulate freely. I saw him in the evening. The principal symptoms were an inability to pronounce the lingual consonants; the labial consonants and all the vowels he managed very well. There was no drawing of the face, and he could pucker his lips readily. His pulse was quick; but this might have been due to alarm. The tongue was protruded steadily, but slowly, and only to a short distance beyond the teeth, inclining also to the right side. There was difficulty, too, in swallowing both solids and liquids; the attempt to swallow solids seemed to agitate him. The act was performed with manifest effort, the face being distorted in the effort as it is when a person with a severe sore throat attempts to swallow. Still, the throat was not sore, and there was nothing abnormal about the fauces observable on inspection. He complained still of the pain extending from the nucha towards the occiput, chiefly on the right side. During the succeeding days, although he was supported with such nourishing liquids as he could be induced to swallow—strong beef-tea, soups, milk, etc., together with plenty of wine—his bodily powers steadily weakened, and a distressing cough added to his sufferings. He was unable to clear his throat of the mucus he coughed up, so that it hung about the fauces, rattling there until it was removed mechanically. The saliva also ran from his mouth, evidently because he could not swallow it. The pulse was never less than 98 or 100, and was weak and compressible. The prognosis was most unfavourable.

During the last few days of December a fœtid odour was observed in the breath, and the tongue, flabby and insensible, lay crushed partially by the teeth on the right side of the mouth.

On January 1 it was apparent that a great part of the organ was completely dead, and a line of separation having commenced, it was thought advisable to remove the dead portion with the scissors. More than half of the tongue was thus removed, no hæmorrhage following. This operation gave him great relief, and certainly added to his comfort. The ulcerated surface was dressed daily by being painted with a solution of carbolic acid in glycerine. The pain in the back of the head had by this time nearly disappeared, the cough was better, and he gradually acquired greater facility in expectoration.

On January 6, when I left him in Dr. Fergusson's hands, he had improved very much in every way. Although he had lost flesh considerably, he had felt sufficiently strong to sit up in a chair while his bed was made; he swallowed fluids without much effort, and he was free from pain. The wound of the tongue was clean, and the surface was beginning to heal.

I did not see him again until February 26, when we met Sir William Fergusson in consultation, as it was supposed something more might yet be done for his permanent relief. He was then vastly improved, was up, and had been out for a drive more than once; had regained his strength and natural plumpness, and had learned to swallow solids as well as liquids. He had dined that day upon boiled mutton. He articulated even the lingual consonants imperfectly, and there was no difficulty in understanding everything that he said. Still the saliva dropped from the right side of his mouth as he talked, compelling the constant use of his handkerchief. On examining the mouth, it was observable that the right side of the tongue was wanting as far back as the palatal arch, the root of the tongue forming a stump with a prolongation forwards ending in a rounded point on the left side. The death of the tongue was evidently not quite confined to the right side, but had extended to the tip of the organ on both sides.

The treatment he received was chiefly support with wine, brandy, and such food as he could swallow. The back of the neck was kept sore with blistering fluid. Bark and ammonia were given him during the period of the greatest depression, occasional aperients, and towards the latter end of the case he had bromide of potassium given him. I should have stated that his urine at the commencement of his illness was free from albumen, of natural appearance, but gave evidence of containing a small quantity of sugar on the application of Böttcher's test.

I place this case upon record because, if not unique when the fact of recovery is taken into consideration, it is altogether an instance of a very rare occurrence. The limitation of the disease is not the least extraordinary feature it possesses.

CASE OF GLANDERS; WITH AUTOPSY.

By ALFRED POLAND, F.R.S.

From notes by the Registrar, Mr. Eastes, and the Reporter, Mr. Fasken.

Francis L., aged 45, horse slaughterer, admitted in the private room at Guy's Hospital on June 8, 1868, under my care. On Sunday morning last, he was being shaved by a barber, who cut him with a razor. He states that at that time he was attending to some horses supposed to have glanders. On the following morning he first discovered a swelling on the right side of the mouth, which was very painful; he poulticed it, and continued doing so until Thursday. He passed very sleepless nights, although he had taken opium. The pain continued up to the time of his admission. He had entirely lost his appetite. On admission the whole of the lower half of the face on the right side was swollen, more especially the lower lip, and extending over to the left side. The skin of the lower lip and chin presented an eruption in three different stages—(1) spots about the size of a fourpenny piece, of highly inflamed appearance, and of a dark claret colour, in which are observed small pustules; (2) in other places the skin is abraded, having an eroded surface covered with pus mixed with blood; (3) scabs of a reddish-black tint, with purulent discharge at their edges, and occupying the whole of the right half of the lower lip. The adjoining skin is shining and hard, the redness disappearing on pressure. The mucous membrane on the inner side of the mouth is highly inflamed, and small pustules are scattered over it. The surface opposite the right lower canine tooth has sloughed, leaving a jagged uneven surface. Pulse 120; respiration 34 a minute; temperature 102·7°. He has no cough. A puncture was made with a lancet through the skin in front of the right shoulder joint, and the wound inoculated with matter from one of the pustules at the chin. The patient was placed under chloroform, and all the involved inflamed cutaneous surface, and as much of the inflamed mucous membrane as could be reached, were swabbed with nitric acid. In the evening the surface of the eschar was of a dull ashy-grey colour. The pulse was full and bounding; but he had difficulty in mastication, though the appetite was good. A diet of beef-tea, milk, etc., with wine and brandy, was prescribed, and he was ordered 30 minims of tinct. ferri perchloridi every four hours.

June 9.—Much about the same. Has slept tolerably well during the night. The inoculated puncture over the right shoulder has its presence marked by a speck of coagulated blood at the precise situation of the puncture; the skin surrounding it is slightly reddened for half an inch or so. The tissues of the neck as low as the clavicle are reddened and brawny; the left half of the lower lip is infiltrated, swollen, and hard, its surface being shiny; appetite still good. In the evening, the puncture over the right shoulder appeared vesicular. Fresh pustules are springing up over the face and neck around the area which was swabbed yesterday with the nitric acid, and a sanious purulent discharge, which has a very fœtid smell, is now taking place from the said area. I ordered a bread poultice to be applied to the chin and other parts, so as to clean the surface of the crusts and sloughs, and then to keep applied a strong solution of the permanganate of potash as a lotion. Four fresh punctures were made in the left shoulder, and inoculated with the matter from the eschar of the chin.

10th.—The infected area is increasing, especially towards the neck beneath the angle of the jaw, and not at all up the face, where the right cheek is even less swollen than on his admission two days ago. The day was a very hot one, and he was bathed in perspiration. There were slight tremors of the muscles of the arms, as if from depression. An abscess is forming at the back of each forearm, also one on the centre of each calf. No discharge from the nose, nor any abnormal condition of its mucous membrane. No appearance of pulmonary mischief. The inoculated surface on the right shoulder is pustular. In the evening he was slightly delirious, getting out of bed, etc. An opium pill was given, after which he slept.

11th.—Much inclined to doze. Apparently in very little pain. He takes all the fluid nourishment that is given him. Is quite sensible. Bowels not relieved since his admission. Urine scanty, but clear, and not albuminous. The discharge is very fœtid, so that chloride of lime has to be freely used and exposed in the room to counteract the noxiousness of the atmosphere. Mucous membrane of the nose reddened. A dose of castor oil was given, and bowels relieved.

After this date the daily report of the case was lost, but the general facts are that the patient became lower, had low muttering delirium, and sank into a typhoid condition. He died on June 16, at 7 p.m.

Autopsy.—Notes from Dr. Moxon's report:—No swellings of the lymphatic glands. There were on the limbs simple subcutaneous elevations (not now discoloured), of a size varying from a halfpenny-piece in circumference to twice that size, but well defined. A section made into these lumps in all cases showed that they were caused by abscesses of the muscles. No suppuration superficial to the fascia was discovered, though eight careful dissections were made. The inguinal glands were natural. These suppurations of muscle were remarkably symmetrical, the two outer heads of the triceps and the two superficial layers of extensors of the forearm being affected. The knee and shoulder-joints opened, and found free from suppuration. No other joints opened. The abscesses were in the fleshy substance, and not in the interspace. They were surrounded by a semi-consistent cyst, and had sanious pus in them. Many were small, others as large as a full-sized walnut. The largest were in the triceps and gastrocnemius. The pleura had slight patches of recent lymph. The lungs showed lobular pneumonia, not suppurating. At the base of the right upper lobe a large portion of bony substance was in a state of grey hepatisation, but not any tendency to suppurate. The state of the lungs conformed to what is common in aneurismal and cancerous disease of the upper air-passages, and not to pyæmia. Liver free from disease.

State of Pulse, Respiration, and Temperature in Axilla.

		Pulse.	Resp.	Temp.
June 8,	2.30 p.m.	120	34	102·7
„ 8,	9.30 p.m.	118	35	103·1
„ 9,	12.50 p.m.	118	30	102·4
„ 9,	8.30 p.m.	122	34	103·3
„ 10,	11.50 a.m.	112	33	1[illegible]·0
„ 10,	10 p.m.	120	32	1[illegible]·3
„ 11,	10.30 a.m.	108	28	1[illegible]·1
„ 11,	10.15 p.m.	124	32	1[illegible]·7
„ 12,	10.30 a.m.	102	26	1[illegible]·0
„ 12,	9.15 p.m.	116	30	1[illegible]·1
„ 13,	12.50 p.m.	102	28	1[illegible]·6
„ 13,	10 p.m.	126	32	103·2
„ 14,	10 a.m.	112	30	101·3
„ 14,	9.45 p.m.	148	36	102·4
„ 15,	mid-day	146	34	103·2
„ 15,	9.30 p.m.	144	40	103·2

NEURALGIA: ITS PATHOLOGY AND TREATMENT.

By JOHN CHAPMAN, M.D., M.R.C.P., etc.

Many distinguished Physicians have striven to answer the question—What is the essential nature or immediate cause of neuralgia? and the different theories which have been from time to time propounded by way of answer are numerous and, in some instances, diametrically opposed to each other. The idea at once the most primitive, the most simple, and the most generally held, is that local irritation of the nerve, which is the seat of pain, is the cause of the disease; and this cause Pinel imagined to be in the shape of some material adherent on the nerve. Fothergill regarded neuralgia as a product of the cancerous diathesis. Sir Henry Halford suggested that neuralgia "is connected with a preternatural growth of bone in some part of the animal economy where it is not usually found in a sound and healthy condition of it, or with a diseased bone." He freely admitted, however, that there are other cases in which no such immediate cause of irritation can be discovered. Arterial congestion or hyperæmia of the nerve itself has been thought to be the proximate cause of neuralgia: this idea was held by Bichat; and several subsequent writers, including Descot, have ascribed neuralgia to "a chronic and inflammatory turgescence of the neurilemma which envelopes the nerves of the part affected." Swan believed that hyperæmia and anæmia may alike produce the disease. He says: "In those cases of painful affections of the nerves in which the limb is cold, and the pain is prevented or relieved by warmth, I conceive the languor of the arterial circulation may favour the congestion of the veins of the nerves, and thus produce distension of their fibrils." And afterwards he observes: "That the blood-vessels have a principal share in the production of pain in some cases may be inferred from their increased size in nerves that have long been thus affected." The most "immaterial" or "non-organic" cause of neuralgia—so immaterial, indeed, that I cannot apprehend it—is that which has been suggested by Dr. Downing, who thus describes it:—"A morbid excitability of particular nerves or parts of nerves leading to violent and painful spasms of their fibres." Dr. McCulloch maintained that neuralgia is a form or variety of intermittent fever of which he had large experience, and which he carefully studied. Sir Charles Bell ascribed the douloureux to a morbid influence of the abdominal sympathetic; and Sir B. Brodie so far concurred in this doctrine as to believe that a very large proportion of cases of neuralgia originate from this source. Quite recently, Dr. Bland Radcliffe has propounded the doctrine that neuralgia is associated with a state of low or deficient vitality of the nervous centres implicated; he says—"There is reason to believe that pain of a neuralgic character is to be regarded as a sign of defective vital power in general, and of defective nerve power in particular." And this doctrine is endorsed by Dr. Anstie, who observes: "It is universally the case that the existing condition of the patient at the time of the first onset of the disease is one of debility, either general or special;" and that he has "never seen a case of neuralgic pain in which there were not marked evidences of nervous debility, either local or general."

The several hypotheses just enumerated comprise, I believe, all the most noteworthy attempts to explain the phenomena of neuralgia. In the number and variety of these attempts, every thoughtful reader will see evidence that, at any rate, many of them must have been unsuccessful. When the science of any subject has entered on the "positive" phase, diversity of doctrine becomes impossible; but each successive treatise on neuralgia has but added to a heterogeneous store of theories which, though more or less justifiable and ingenious, stand condemned by their confessed inadequacy to explain and harmonise all the various phenomena of the disease. A theory may, indeed, do all this, and may yet be untrue; but no theory which in the least degree fails to do this can be true. In a paper on "Neuralgia: its Pathology and Treatment," read to the Harveian Society November 21, 1867, I reviewed each of the above-mentioned theories, and showed, I believe, that not one of them is able to withstand this trial. I ventured, moreover, to propound a theory which, whatever may be its defects, possesses the merit of accounting for all the facts of the disease, and therefore, having passed unscathed through the preliminary ordeal to which all hypotheses ought to be rigorously submitted before being accounted worthy of serious attention, it presents itself with strong *primâ-facie* evidence in its favour. And, while thus seeming to me to be the most acceptable of any hypotheses yet proposed, it is also countenanced by experience. Guided solely by its light, I have had what I think I may justly call extraordinary success in the treatment of neuralgia; and, though successful practice, originated by a theoretical principle, does not actually prove that principle to be true, such attestation greatly increases the probability that it is so. A full argumentative exposition, with the necessary evidence in support of this theory, would occupy more space than is here allotted to me, and I must now content myself, therefore, by offering the following brief sketch of those pathological views of neuralgia which have directly led me to a principle and method of treatment proved, as I have said, by its results to be peculiarly satisfactory.

In order to understand all the phenomena of neuralgia, it is necessary to know what are the chief functional relations of the nervous system to the other parts of the body, which may be summarised in six propositions as follows:—

1. That the chief function of the sympathetic nervous system consists in regulating the diameters of the blood-vessels throughout the body.

2. That when the sympathetic ganglia are in a state of maximum hyperæmia, the nervous effluence from them to the muscular coats of the arteries to which they are severally related stimulates them so excessively as to induce in them a condition of tonic spasm—a spasm so intense as to result in shutting off the blood altogether from a large portion of the peripheral arteries.

3. That when the sympathetic ganglia are in a state of maximum anæmia, the nervous effluence from them to the muscular coats of the arteries to which they are severally related becomes so extremely feeble that a condition resembling paralysis is induced. The muscular coats of the arteries become consequently extremely relaxed, and, as the blood flows in the direction of least resistance, the parts supplied by the arteries in question become suffused with blood to an excessive degree.

4. That when the spinal cord is in a state of hyperæmia cramps of the involuntary muscles surrounding the alimentary tube, as well as cramps, or even convulsions, of the voluntary muscles, which are due to such hyperæmia, are likely to ensue.

5. That every gland and glandular follicle in the body is under the control of one motor nerve (which I call the positive motor) emerging from the cerebro-spinal system, and distributed to its secreting cells in order to regulate its functional activity; and of another motor nerve (which I call the negative motor) emerging from the sympathetic system, and distributed to its artery or arterial twig in order to regulate its blood supply.

6. That in the same manner as glands are supplied with positive as well as with negative motor nerves, so, there is reason to believe, every tissue of the body is thus supplied, and is thus placed and sustained in a state of elective affinity for the elements of the blood requisite for its nourishment and functions.

Now all these propositions are pervaded by one and the same cardinal doctrine—viz., that the outward or eccentric facts adverted to are expressions of inward or centric facts; that within the circumferential or peripheral phenomena of arterial contraction or dilatation of muscular movement generally, of glandular action, and of textural nutrition, there are always operative, and causative of them, central nervous forces seated in some part of either the cerebro-spinal axis or the sympathetic nervous system. And in like manner pain experienced in any part of the organism results from and denotes a modification of state of some part of the nervous centres, the functions of which consist in the reception of impressions and the production of sensation. Therefore in all cases of neuralgia, whatever may be the exciting cause of the disease, there is disorder of a nervous centre, either sympathetic, spinal, or cerebral, the disorder itself being of any grade of intensity—either so slight as to consist of a merely excessive afflux of blood, or so severe as to constitute what is ordinarily understood by the term "organic" disease.

Neuralgia sometimes, but rarely, presents itself pure and simple as pain only, without any assignable origin, and unassociated with any other morbid phenomena; sometimes, though still the sole morbid phenomenon, it is directly traceable to an eccentric cause; but most frequently an attack of the disease comprises pain and more or less disturbance of voluntary muscles, or of involuntary muscles, or of textural nutrition, or of secretion within or adjacent to the area where the pain is experienced. The phenomena associated with the pain differ in different cases, and therefore the varieties of neuralgia are susceptible of

classification according to the nature of the phenomena associated with the pain in each case.

If my conception of the essential nature of the disease be correct, every form or aspect which it assumes is represented by some one or by a combination of two or more of the pathological conditions stated below in numerical order.

1. Disease of sensory nerve-centres without appreciable reflex action in any direction—the pain, which has no obvious cause, being referred to some peripheral point seemingly healthy. This form comprises all those cases which, according to Dr. Downing, are examples of "pure and uncombined neuralgia," and which are designated by Dr. Handfield Jones "non-organic or immaterial." But, according to the doctrine here enunciated, the disease in these cases is not less really organic and material than it is in those in which it is associated with the most striking morbid phenomena at the seat of pain. The essential feature of this form of the malady consists, I apprehend, in its limitation to those centric nerve-cells or tracts of grey matter directly related to the sensory nerve or nerves morbidly implicated. If, as here implied, the malady does not extend centrically to neighbouring nerve-cells related either to other sensory nerves or to one or other of the three kinds of motor nerves referred to in the propositions quoted above, it is not appreciably reflected in any direction, but tells of its existence only by the presence of pain, the seat of which is referred to the periphery of the sensory nerve or nerves related to the affected cells.

2. Disease of sensory nerve centres having an obvious eccentric cause, but associated with pain reflected to some point of the periphery remote from that cause. Cases of this kind, illustrative of what is commonly called "sympathetic action," occur in the experience of every Physician. It was, no doubt, their frequency in the form of reflex actions originating in enteric disorders which caused Sir Charles Bell to form the opinion he held concerning the nature and origin of neuralgia. Swan relates a case in which pains of the fingers were excited by the act of defecation. I have seen several analogous cases; in one of them the region of the lower cervical and upper dorsal vertebræ became suddenly painful whenever the bowels were moved. Cases have been published proving the sudden origin of violent pain in the feet by temporary disorder of the stomach, and its equally sudden abolition by relieving that disorder. Countless illustrations of reflex action of this kind might be adduced. In all such cases the real seat of the disease is the nervous centres related to the sensory nerves primarily affected, and to those terminating at the point where the pain is referred.

3. Disease of sensory nerve centres with reflex action through voluntary motor nerves, causing morbid phenomena of the voluntary muscular system. The disorder first occurring in sensory nerve-centres may of course be extended to those from which motor nerves originate. If the motor-centres thus affected be exclusively related to nerves of volition, the resulting phenomena consist in disorder, more or less pronounced, of voluntary muscles. This symptom is not unfrequently observable in cases of neuralgia. In these cases the essential disorder is obviously central, and by the symptom in question it evinces its affinity with epilepsy, of which, indeed, neuralgia is sometimes the embryo.

4. Disease of sensory nerve-centres, with reflex action through the involuntary ("negative motor," or vaso-motor) nerves, causing spasms of blood-vessels and local anæmia. In cases of this kind, the morbid condition is propagated to motor nerve-centres giving origin to those nerves, the stimulus of which produces the contractions of the muscular coats of blood-vessels. Such cases are most frequently observable when the disease is originated by malarious influence; but independently of this influence, vasic spasms and consequent local anæmia within the area of pain or in neighbouring regions often occur. The resulting phenomena are various, the differences being due to the different character of the structures amid which the spasmodically affected blood-vessels ramify in different cases. This form of vascular disorder is the proximate cause of the following symptoms when they supervene as sympathetic phenomena associated with neuralgia:—Pallor; coldness; anæsthesia when not associated with evidences of inflammation; atrophy of the painful nerve; amaurosis; certain forms of cataract; and, in many cases, opacity as well as other morbid changes of the cornea; partial paralysis of other cerebral nerves, and of the nerves of the extremities; muscular atrophy; and those ulcers which Mr. Paget calls respectively "neuralgic" and "cold."

5. Disease of sensory nerve-centres, with reflex action through the involuntary "positive motor" nerves which effect nutrition and secretion, causing excessive activity of those processes. If the doctrine expressed in the propositions 5 and 6 be well founded, it is evident that when neuralgic disease primarily affecting sensory nerve-cells is extended to those presiding over nutrition and secretion, those processes within the area of the morbid influence must be modified. If nervous centres related to the positive motor nerves of glands be implicated, and, as a consequence of irritation, become the foci of an undue afflux of blood, they will become excessively energetic, and therefore will stimulate the gland-cells over which they preside into morbidly excessive activity. The profuse secretion of saliva by children during teething, which often produces what may be called normal neuralgia, is a forcible as well as an ever-recurring example of the physiological law in question. Facial neuralgia, due to carious teeth and many other causes, is often accompanied by a profuse flow of saliva. Shedding of tears in cases of neuralgia in the neighbourhood of the eye is notoriously common. The nasal mucous glands are often affected in like manner. The glands of the whole alimentary tract are also liable to be so vehemently stimulated as to produce diarrhœa. This occurs in some cases of intercostal neuralgia, but most frequently, and most notably because often fatal, during the tumultuous excitement of the nervous system incident to infantile dentition. Leucorrhœa is often associated causatively with neuralgia affecting the lower segments of the spinal cord. Copious sweating over a circumscribed area, which has been observed in many cases, is also produced in the manner here adverted to. An excessive secretion of urine is very frequently caused by reflex action on the kidneys; and even the testes may be so powerfully acted upon that each neuralgic attack induces an emission of semen.

Again, if nervous centres which act as the originators and sustainers of the processes of textural nutrition be morbidly implicated in the same way as I have just supposed those effecting secretion to have been, there necessarily ensues a morbid intensity of those processes either within the neuralgic region or in some other parts of the body to which the affected nervous centres in question are related. Now, the proposition may be considered as established that inflammation itself is nothing more than excessive exaltation or intensely energetic action of those processes. Therefore, as it appears, undue irritation, with consequently excessive afflux of blood in the nervous centres, related to what I call the positive motor nerves, is the source and cause of local inflammation. It is now well known that excessive afflux of blood in any peripheral part, produced by paralysing the vaso-motor nerves of that part, may be continued for months without resulting in any morbid phenomena beyond those of mere hyperæmia; while, on the other hand, there exist authentic records of a large number of pathological facts proving that irritation of cerebro-spinal nerves is followed by grave disorder of the processes of textural nutrition in the parts to which the affected nerves are distributed. Believing that both excessive nutrition resulting in hypertrophy, and inflammation ending, it may be, in disintegration of structure, are alike caused by morbidly energetic action of "positive motor" nerves, I explain those hyperæmic or inflammatory phenomena which often present themselves as symptoms of neuralgia by asserting that they are the results of a morbidly excessive action of those nerves, and denote morbid irritation, associated with excessive afflux of blood in the nervous centres directly related to them. This doctrine accounts clearly and completely for the following phenomena, which are sometimes associated with neuralgia: hyperæmia, and inflammation of the affected nerve, with excessive tenderness and susceptibility of the neuralgic region; heat and swelling of the same region; excessive nutrition in all grades of intensity induced by reflex action in parts remote from the seat of the disordered sensory nerve; cutaneous eruptions (urticaria and herpes zoster for example); and osseous deposits, which are well exemplified by dental exostoses, but still more notably by those thickenings of the skull which, occurring in certain cases of tic douloureux studied by Sir Henry Halford, came to be regarded by him as the proximate causes, instead of consequences, of the disease.

According to the theory of neuralgia of which I have now given a very brief sketch, the essential seat of the disease is, in all cases, central: in whatever part of the body the pain may be experienced, its existence is exclusively and invariably a consequence of the production of a modification of condition in the sensory nerve centres to which the sensory nerves of the affected parts are related; and, when there are other symptoms besides pain, in those motor nerve centres contiguous to the sensory primarily affected. And, now, the important practical question immediately arises—What is the nature of that modification of condition? Implicitly, and more or less explicitly,

I have already answered this question. The modification consists in an increase of excitement in the morbidly affected centric nerve-cells, which, by virtue of this excitement, attract a greater quantity of blood to themselves than they did before, and thus become hyperæmic. *Ubi irritatio ibi fluxus est.* Becoming in this manner excessively nourished, they become excessively energetic: the feeling cells feel too acutely, the impelling cells impel too powerfully. In the one case pain is the result, in the other morbidly excessive activity of the several parts of the organism over which the several kinds of affected motor nerves respectively preside. Every single occurrence of these conditions originates a tendency to their recurrence, and every recurrence contributes to form a morbid habit which, when once established, Nature herself is, as a general rule, powerless to overcome. The presence of these physiological conditions accords with and explains the well-established fact that neuralgia is accompanied sooner or later, in the majority of cases, with tenderness of that part of the spine corresponding to the points of junction between the nerve or nerves affected and the spinal cord—tenderness easily made manifest by pressure along the spine.

I am aware that the pathology of neuralgia here set forth is wholly opposed to, and irreconcilable with, the neuro-pathological views of Dr. Bland Radcliffe, whose doctrines concerning the proximate cause of pain and convulsions are adopted, as I have already said, by Dr. Anstie in his recently published article on neuralgia, and which, suffusing as they do the articles of several of the contributors to the volume just issued by Dr. Russell Reynolds on the diseases of the nervous system, seem to be becoming, in England at least, the fashionable doctrines of the day. Nevertheless, I hold steadfastly to the pathology which I have now briefly described; and I am encouraged to do so not only by the assurance that it is the only one which, without any straining or sophistry, without any perversion of facts, affords an explanation at once complete and consistent of all the phenomena of neuralgia, but also, and above all, by my therapeutical experience, which proves incontestably that the rigorous application of the doctrines I advocate results in the cure of neuralgia in a proportion of cases so great as to be without precedent in the annals of Medicine.

To be continued.

CASE OF

PARTIAL PLACENTA PRÆVIA, WITH PROLAPSUS OF FUNIS AND ARM-PRESENTATION.

By CLEMENT GODSON, L.M.,

Resident Accoucheur, St. Bartholomew's Hospital.

Mrs. D., 26 years of age, married nine years, pregnant five times, had gone to the full time with three children, two born alive, one dead; tedious labours, slow recoveries; expected to be confined at the end of January. When about one month advanced in her sixth pregnancy, was frightened by some oxen, fell into a ditch, and fractured a rib. On December 17, 1868, at night, while pulling off her boots, she felt something give way, which was followed by a copious watery discharge from the vagina, subsequently by grinding pains which lasted forty-eight hours, with occasional dribbling away of fluid. Being under the impression that labour had commenced, she did not go to bed until the night of the 19th, when all the symptoms of labour had subsided, except an occasional watery discharge. She passed a good night. At 10.30 on the evening of the 27th (eight days afterwards), when two doors from her house, she suddenly lost, while standing, a large quantity of blood from the vagina, which induced her to hasten home, and which continued to flow up to the time of my arrival at 11 o'clock.

It was evident by the state of her clothes, the contents of the chamber utensil, and a large quantity of blood reported to have been emptied away, and above all by her general condition, that she had sustained an alarming loss, and blood was still freely trickling from the vagina. The os uteri was tolerably soft and yielding, and dilated just sufficiently to admit a finger, which detected posteriorly and somewhat to the right side, the margin of the placenta. The liquor amnii had been discharged. I at once plugged with some rag torn up in strips. Brandy was administered, and a hot-water bottle placed to her feet, on account of the rigors, pallid lips and cheeks, and excessive thirst. The hæmorrhage entirely ceased with the plugging. The fœtal heart could be heard in the normal situation, and the placental bruit indistinctly low down in the right iliac fossa. About 5 a.m. (December 28), the general condition of the patient being much improved, I gave her ʒ ss. of tinct. opii, in the hope of still further refreshing her by a little sleep, and left her. At 10 a.m. I found her in much the same state; she had but dosed a little. Having removed the plug, I found on examination the os more dilated, and a knuckle of funis in the vagina. The hæmorrhage returned, and I speedily plugged again, substituting cotton wool for the coarser material. At 2 p.m. I again removed the plug, and discovered a considerable loop of funis in the vagina, with an elbow and portion of the placenta presenting. I again plugged. About 5 p.m., upon removal of the plug, the hæmorrhage returning, and the patient showing symptoms of exhaustion, I determined to at once proceed to deliver. There had been no labour-pains. Having evacuated the bladder and rectum, pushing up the funis within the uterus, I introduced one of Barnes's No. 3 caoutchouc bags, and dilated it to its fullest extent. An assistant having administered chloroform, I proceeded to turn; the os was very yielding, and I succeeded in getting my hand into the uterus without much difficulty, and, seizing the left foot (the right elbow presenting), the delivery was proceeded with easily as far as the head, with which there was considerable difficulty; the child struggled once or twice during its extraction, which was effected in a few minutes, when the cord had ceased to pulsate, and the child was born dead. The placenta followed almost immediately, with scarcely any hæmorrhage. The patient steadily recovered without any bad symptom.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASES TREATED ON THE ANTISEPTIC METHOD.

We are indebted to Mr. Bartlett, late House-Surgeon to University College Hospital, for the particulars of the following cases, and for the method of employing carbolic acid in the treatment of recent wounds:—

Case 1.—*Gunshot Injury of Hand—Secondary Hæmorrhage—Recovery.*

(Under the care of Mr. ERICHSEN and Mr. HEATH.)

Alfred B., cheesemonger, aged 22, admitted October 25, 1868. As he was firing a breech-loader, the barrel burst, and shattered the soft structures of the left thumb. Mr. Heath saw him on admission, and removed portions of the trapezium and trapezoid, and the proximal end of the first metacarpal bone, which was completely shattered; some of the charred tissue was also removed, and the margins of the wound were then drawn together. No ligatures were applied, and the wound was dressed with carbolic acid. Tincturæ opii gr. xxx. were administered at bed-time.

October 26.—Patient has had very little sleep; has not passed his water, which was drawn off by a catheter. There has been only a slight oozing from the wound.

27th.—Still unable to pass water. Carbolic acid dressing continued.

28th.—Hæmorrhage took place in a full jet, leaving the patient much exhausted. The House-Surgeon ligatured the superficialis volæ, with the effect of stopping the hæmorrhage; four days later it recurred in a similar manner, and was arrested by ligature of the radial artery in the wound. The wound was dressed with carbolic acid lotion, and covered with oilsilk in preference to the carbolic plaster which had been previously used. The wound healed well, and the patient was discharged early in December with a useful thumb.

Case 2.—*Severe Injury to the Arm—Amputation—Recovery.*

(Under the care of Mr. ERICHSEN.)

J. P., aged 26, a brewer's engineer, married, a strong healthy man, was admitted on the morning of February 1, 1869, in consequence of a severe injury he had received to his right arm. Whilst engaged in feeding a hop-crushing machine at Meux's brewery, his coat-sleeve became entangled in the sharp end of an Archimedes screw, and was drawn into the machine. He succeeded in freeing himself from the screw, but not until the

forearm had been completely severed from the arm at the elbow; he then descended a perpendicular ladder of forty steps, and walked across a yard before he received any assistance. The arm was tightly bound up above the seat of injury, and the patient walked to the Hospital, taking a glass of brandy at a public-house on the way.

On admission there was found to be but little hæmorrhage, merely a slight oozing, but it was thought desirable to apply a tourniquet as a precautionary measure. The whole of the forearm came away in the coat-sleeve, being completely detached. About two and a half inches of the humerus protruded through the wound in consequence of the retraction of the soft parts, but the bone was perfectly uninjured, the cartilaginous ends appearing quite smooth; there was no dragging out and laceration of the soft parts, as is so commonly seen in machine accidents to the limbs.

Mr. Heath attended in the absence of Mr. Erichsen, and removed a small portion of contused muscle and a portion of the projecting bone, and fashioned a flap. The brachial artery had, of course, been divided in the accident, but this did not give rise to any hæmorrhage in consequence of torsion of the coats having been produced by the machine. Some of the smaller vessels were twisted, continuous wire suture was applied with carbolic acid dressing externally, a small plug soaked in carbolic oil being placed between the flaps at one spot.

February 2.—Has passed a good night, and seems pretty well; temperature 103°; pulse 92; slight thirst. The outer parts of the dressings were removed and fresh ones applied, the inner layers remaining intact; the plug was removed to allow of the escape of any discharge.

3rd.—Temperature 102·8°; pulse 120; general condition satisfactory; dressing as before.

4th.—Temperature 102·3°; pulse 124; wound swollen and painful.

5th.—Temperature 101°; pulse 116. Arm more swollen and painful. Mr. Erichsen ordered the carbolic acid dressing to be discontinued, and a poultice applied if the stump did not improve before night. In the evening Mr. Bartlett opened up the flaps and removed a considerable clot from between them. A poultice and fomentation was then applied to the stump, with great relief to the patient.

6th.—Temperature 102·1°; pulse 120. The swelling had not subsided; the whole surrounding skin was of a dusky red colour, the blush extended to the shoulder, and pain was felt under the scapula. The stump was washed with carbolic acid lotion, and the poultice reapplied.

8th.—The swelling has now partially subsided, and the duskiness is disappearing; the discharge from the wound is healthy.

10th.—Natural colour all but restored; the wound discharges freely; less pain. The patient from this time continued to improve, the flaps united speedily, and he left the Hospital with an excellent stump.

Case 3.—*Incised Wound of the Neck—Recovery.*

(Under the care of Mr. ERICHSEN.)

John B., aged 28, was admitted on February 10, 1869, suffering from an incised wound six inches in length in the back of his neck, extending from just behind the ear to a little beyond the spines of the vertebræ, which could be readily felt on passing the finger into the cut. The wound, which had been made with a penknife, was bleeding freely on admission, and the patient was very weak. The hæmorrhage was arrested by torsion, and the wound was washed with carbolic acid lotion (1 acid to 40 water), then brought together with harelip pins; a plug of lint soaked in carbolic oil was placed in the lower angle of the wound, and the surface was dressed with several layers of muslin dipped in carbolic oil (1 acid to 10 oil), and covered externally with carbolic plaster.

February 11.—Patient slept but little, but has not suffered pain. The plug was removed without any discharge escaping. Pulse 88; temperature 106·6°; tongue clean. On the following day the temperature fell to 100°, and the patient felt comfortable. No discharge appeared through the dressings, but the outer layers were removed from time to time without detaching the lower layers.

On the 15th, the carbolic plaster was left off, and ordinary oil silk was used instead.

On the 21st, all the dressings were removed, and the pins were drawn out. The wound was found to be almost entirely healed, with the exception of a small opening the size of a pea at the lower margin, which was now dressed with red wash. The patient was discharged after being only fourteen days in Hospital.

Case 4.—*Wound in the Neighbourhood of the Knee-joint—Recovery.*

(Under the care of Mr. ERICHSEN.)

Charles R., aged 16, labourer, received a wound on the side of the knee from a carpenter's adze, and was admitted on February 10, 1869. The margins of the wound had been closed by some points of wire suture; but free hæmorrhage had occurred, filling the wound with a large clot. The House-Surgeon, after dipping his finger in carbolic oil, passed it into the wound, and removed the coagulum. The adze had passed in a direction obliquely upwards and across the axis of the thigh to a depth of about three or four inches. The wound was washed with carbolic lotion (1 acid to 20 water); the sutures were also soaked in the same; and externally layers of muslin soaked in carbolic oil (1 in 10), with carbolic plaster, were applied. The limb was placed upon a back splint, and elevated upon an inclined plane.

The patient did not suffer much pain, but was restless. On the third day the outer layers of the dressing were removed, and fresh carbolic oil applied; the parts around the wound appeared very satisfactory. On February 23 all the dressings were removed, and a small superficial ulcer only remained unhealed, all the deep parts of the wound having firmly united. The patient was discharged cured a few days later.

Remarks.—We have on more than one occasion called attention to the inconvenience which sometimes follows the use of carbolic acid dressings to incised wounds—viz., the accumulation of discharges and blood-clot in the deeper parts, which cannot escape in consequence of the rapid union of the more superficial portions. To obviate this objection to the antiseptic method, it has been the practice recently at University College Hospital to insert a plug, consisting of a small roll of lint soaked in carbolic oil, into the most depending part of the wound. This plug is removed on the second or third day without uncovering the surface, so that any discharge which may have accumulated in the deeper parts may escape without there being any danger of setting up septic changes within the wound. Another plan recently adopted by Mr. Marshall, and of which we hope shortly to give the results, consists in uniting the entire surface of the flaps by passing stitches completely through their substance. This not only tends to arrest hæmorrhagic oozing by exercising pressure upon the surfaces, but effectually prevents the accumulation of discharges within the wound. This is, we think, likely to prove a most important auxiliary to the antiseptic method. With regard to the influence of carbolic acid upon wounded surfaces, considered apart from its influence in arresting septic processes, we have already pointed out that it is in itself destructive to animal tissues, and that it appears to stimulate the smaller vessels to bleed somewhat freely, if applied in too concentrated a form, and that the frequent application of carbolic acid lotion to a granulating surface appears to delay cicatrisation. At University College Hospital the mode of employing the antiseptic method is described above in the various cases, and it need only be pointed out that it has been found desirable to change the superficial layers of muslin every second or every third day, whilst the lower layers are left undisturbed until the wound is presumed to be nearly healed, or unless some complication arises. The carbolic plaster is generally applied on the surface over the muslin, but does not seem to present any special advantage over oilsilk, sheet gutta-percha, or tinfoil. The application of carbolic acid seems rather to allay than to excite pain, but patients are often very restless after it has been used. This is especially the case, we think, in children; and as this is probably due to the absorption of the acid, it is necessary to be cautious not to employ it too freely upon large surfaces.

Rabies Canina.—M. Ménecier, in a recent prize essay, observes that his observations and experiments lead him to the conclusion that we are not to expect to find rabies in the half-starved wandering curs of our streets, which, however defective their other sanitary conditions may be, at least have abundance of fresh air and exercise. The victims of the disease are commonly pampered pet dogs, far too well fed and too little exercised; and too stringent police regulations, by compelling greater restrictions being placed upon these animals, and keeping them more indoors, will only have the tendency of increasing the number of cases of hydrophobia.—*Gaz. des Hôp.*, March 2.

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Medical Times and Gazette.

SATURDAY, MARCH 20, 1869.

MEDICAL CONTRACTS AND FEES.

Two cases which appear in our law report, p. 316, are of much interest to the Profession. In the first case, it is to be regretted that so long a course of litigation was thought necessary to determine the issue of a cause which seems to any person of common sense sufficiently clear and defined. The contract was broken on the one part, no doubt, from unavoidable and, we believe, from unforeseen circumstances. However this may be, the contract was substantially and legally unfulfilled by Dr. Parkes. The money paid, and that undertaken to be paid, was on the condition that the plaintiff was to receive three years' introduction as the partner of Dr. Parkes. This he, from ill health, was unable to carry out, and those conversant with such matters will be at no loss to understand why the practice fell off during Dr. Parkes's lifetime, and more considerably so after his decease. The judgment of the Lords Justices appears to us to be based upon the soundest principles of equity and common sense. But we deplore the great law expenses to which the parties interested have been subjected. Surely a little timely advice on the part of some Medical friends might have prevented so sad a result. In the second case, heard before the Master of the Rolls, we cannot say we are so well satisfied with the judgment given. Undoubtedly the charges made by Dr. Clark were in excess of those usually made by Surgeons in general practice, and such as justified the guardians in submitting them to arbitration, if not to a court of equity. To say that the ordinary charges of a gentleman in Dr. Clark's position are a guinea a visit is certainly not correct. Such charges are quite exceptional—indeed, as far as we know, unprecedented. Surgeons in general practice are too generally underpaid for the valuable services they render to their patients; but charges such as those made by Dr. Clark go to an extreme on the other side, and, if they became general would deter patients from seeking Medical assistance, or drive them to obtain it from unqualified and incompetent persons. In the interests, then, both of the public and the Profession, we must protest against such a practice. Seven shillings and sixpence a visit is fair, reasonable, and just. On this point we have no reason to be dissatisfied with the award of the Chief Clerk. Neither would we complain of the award of ten guineas for each visit to Worthing, but we are at a loss to understand why, if the fees for the visits to Worthing were allowed, those for the visits to Brighton were struck out of the bill. Dr. Clark was the best judge whether these visits were necessary or not, and, in the absence of any evidence to the contrary, we must say that on this point he has been harshly treated. But what are we to understand by the concluding remarks of Lord Romilly? Upon what grounds, we should wish to learn, would that learned judge have disallowed altogether the charges for the visits to the seaside? It is admitted that those visits were paid, and it was not proved that they were unnecessary; on the contrary, we assume that they were really required. It is no uncommon circumstance for the Medical attendant in London to make such visits. And he is, of all persons, the most fitting to conduct a case which has been under his care from its commencement to its conclusion. Upon what grounds, again we ask, would the Master of the Rolls have disallowed *entirely* the charges for correspondence, consultations, and interviews with solicitors and other parties interested on this point? The learned judge certainly did not take the example of his own profession as his guide. Do lawyers write letters, hold consultations, have interviews with "parties interested," without fee or reward? If this be the fact, we request, in legal phraseology, to be furnished with "a precedent." There is no such precedent. Neither the written nor the unwritten law would sanction it. Westminster Hall and Lincoln's-inn would be in a ferment if such a doctrine should be allowed. Why is the Medical the only one of the learned professions debarred from making fair and reasonable charges for services so rendered? We should be glad to learn "the reason why."

The two cases under consideration demonstrate, "trumpet-tongued," the propriety of the establishment of some Medical tribunal to which such questions should be submitted. Resort to law proceedings, whether to determine the equitable clauses of a contract or the charges of a Medical Practitioner, ought to be avoided. A Medical tribunal is the proper one in such cases.

PROFESSOR BEALE'S RESIGNATION OF THE CHAIR OF PHYSIOLOGY AT KING'S COLLEGE.

We believe it to be no secret that Dr. Lionel S. Beale has resigned his appointment as Professor of Physiology in King's College, and that his last lecture will be delivered this day (March 19) at the close of the winter session. It is understood that Dr. Beale will deliver the ordinary summer course of morbid anatomy, and that then his connexion with the College as Professor, which has now lasted sixteen years, will cease. He will, however, retain the appointment of Physician to King's College Hospital, and will throw into the work of teaching the students to recognise and to treat disease, all the energy which he heretofore devoted to the teaching of the more purely scientific department. It is not necessary that we should recount Dr. Beale's achievements in minute anatomy and physiology during the term of his Professorship. We may refer to his early labours on the structure of the liver, and to the series of researches which, with the aid of microscopical powers heretofore unknown, he has made into the genesis and ultimate nature of the living tissues. We have no wish to discuss the incident of his resignation as a matter of personal history; we would rather consider the glimpse which it gives of the real internal state of the Medical Profession, and of the existing arrangements for giving the elements of Medical education.

Let us recall to our readers the high-flown language of those most admirable discourses which are read to the students at the beginning of the October session. "Gentlemen," says the orator (the very memory of these discourses throws us into a state of drowsy complacency; we fall back in our well-stuffed chair; our head nods; the pen moves slowly)—"Gentlemen, ours is not a bare empirical art. Medicine has a science; that science is physiology—a knowledge of the composition, properties, and action of the body in health; without this, how can we have a rational and useful knowledge of the nature of disease and the operation of remedies? How vain were our speculations on inflammation before we knew that the blood

circulated! Who does not remember the ridiculous gift of £10,000 by Parliament to an old woman for a remedy for stone at a time when not an atom was understood of the composition of the urine? Gentlemen, all diagnosis, all prognosis, all pathology, and, above all, all therapeutics must be based on physiology; else they are but mere guesses and random blows aimed by a blind man in the dark."

Be it so. Let it be granted that physiology is thus important, and that slowly—little by little—we are conquering a knowledge of the diseases of the vascular and nervous systems through a better understanding of their physiology. And how strange it seems at first sight that a teacher of this master science, in the prime of life and activity, and zenith of his well-earned reputation, should throw up a chair at one of the first schools in London!

The reason is not far to seek. A Physician who has to make his way in the London world cannot do so as a physiologist. Physiology not only does not lead to practice and fees, but it does not obtain the reward due to itself, nor even the opportunity of work. There are too many physiological teachers in London. If, instead of eleven (one at each Hospital school), there were three, each might obtain an income sufficient to induce him to devote his life to science pure, without regarding practice. But if physiology does not bring in money, neither can it, under existing arrangements, bring fame, and it does not give the professor the opportunity of fully teaching and of enlarging the science he teaches. For what Medical School in London would devote a sum of money annually to original physiological research, or would encourage a professor to give a full and complete course? Then, if he did, what would the students say? They would say, "They don't want such physiology at such and such Colleges; we can pass without German minutiæ." If, then, the professor of the science of Medicine *par excellence* finds that he must not only debar himself from repute as a Practitioner, but meet with no facilities for distinguishing himself as a philosopher, who can blame him if he swims with the stream, and throws his energies into clinical medicine? Meanwhile, to the everlasting credit of the London School, physiology must continue to be taught by men who merely hold the chair till they can get something else more likely to bring in loaves and fishes, and who may be thoroughly depended on for not alluring their disciples into any but the safest and shallowest waters.

INTERNATIONAL AID TO THE SICK AND WOUNDED IN WAR.

An international conference of the societies for the aid of sick and wounded soldiers is about to be held in Berlin from April 22 to April 27 next. The programme of the intended proceedings embraces a variety of questions bearing upon the objects of the societies and the best means of carrying their benevolent designs into execution.

A delegate from each central committee of the various countries which have subscribed to the proposals of the Convention of Geneva will make a short verbal statement of all that concerns the Society in his own country, and will add as a supplement a short explanatory memoir in writing, so as to furnish complete information, which will be published with the proceedings. The order in which the various statements are to be read is to be decided by lot. The principal points to be noticed will be the date and circumstances of formation of each society, its rules, the present state and limits of the objects held in view, plans for the future, with special reference to suitable activity in time of peace and the succour to be afforded during naval warfare. A description will also be given of other associations with similar objects in the same country, the operations of which may justify a partial restriction of the action of the central committee. It will also be stated whether the organisation of each society embraces the whole country or only part—whether there are sub-committees or provincial or local societies, and, if so, their number and organisation to be described. The number of members, amount of annual contributions, and the actual financial state of each society will be fully considered.

The present experiences in all that concerns the preparation and collection of *matériel* necessary during war, the organisation of depots on declaration of war, the despatch of equipment and attendants, including female nurses, to the seat of war, the organisation of depots and the care of sick and wounded at the scene of operations, and continuance of such attendance in their own country, the relations between the Society and the military, Medical, and sanitary authorities in peace and war, will all be considered in detail. If the particular circumstances of any society render further information desirable, it is to be supplied.

The central committees of Prussia, Geneva, Austria, Sweden, and Italy have all proposed questions for consideration as regards modes of proceeding during war, the perfect neutrality of the societies, the establishment of an efficient system of field police to prevent pillage and ill-treatment of the victims of war, precautions to prevent unfair use of the international badge of the Society, the burial of the dead, a correct system of registration and of means of identification of sick, wounded, dead, and prisoners, the dissemination of the principles of the Society, chiefly among soldiers, the means of keeping up communications with the aid societies of the enemy, will be fully detailed. The latter is one of the proposals made by the Austrian committee, and, to our mind, is open to almost insuperable objections. The French central committee suggests the free transport by railways of all equipment, stores, and individuals destined for the relief of the sick and wounded, and the Italian committee proposes questions as to pension in case of injury to individuals connected with the Society and to their families in case of death, and also as to whether it is advisable that they should carry arms.

The mode of proceeding of the Society during naval warfare, during and after an engagement, the character of the vessels to be employed, and nature of the international signal, etc., are to be fully discussed.

During peace, also, the objects of the Society in attending the sick, and rendering prompt and organised assistance in cases of public calamity, and the best means of doing so, will be considered. It is thought that for these purposes their efforts should be to aid and favour the operations of the societies of "Sisters of Charity," "Deaconesses," and such corporations and orders as those of St. John and St. John of Malta.

The proposal made by Count Sérurier at the Conference of Paris for the establishment in that city of an international museum of sanitary equipments, has not met with the approval of all the national committees. The international committee of Geneva is to publish in French a monthly record of the progress of the Society in its various branches, and will thereby supply a means of communication between the national committees.

The extent and importance of the subjects to be discussed at the approaching congress are fully indicated by the above selections from the programme. The objects of the Society are philanthropic in the highest degree. If such principles were but universal throughout the nations, we might soon look for the happy time when "wars shall cease;" until then, however, we can only wish to the International Society every success in their efforts for the mitigation of the horrors of war.

We understand that the Society of the Knights of St. John in this country has been in communication with our Government on the best means of providing for the care of the sick and wounded in war, and that Professor Longmore, C.B., will attend the approaching conference at Berlin as the delegate from this country. We are not aware, however, that our insularity has been so far overcome as to lead to any steps having

been yet taken towards organising a central committee of our own.

It is hoped that the conference will be attended not only by the delegates, but by all persons interested in the work, both ladies and gentlemen. The office of the Society (Linksstrasse, No. 4) will be open some days before the meeting for the gratuitous issue of tickets of admission, and for the supply of all information which may be required.

APARTMENTS FOR LADIES.

There exists in London, and we dare say also in other large centres of population in this country, a class of establishments respecting which it is full time some notice were taken by the Government authorities. No doubt they have been long in existence, but of late years they have been pushing themselves forward into public notice somewhat too freely for public decency, and, we make bold to add, somewhat too freely also for public morality. These establishments were formerly probably known only to a select few, who could make known their whereabouts to persons in need of them; but scarcely a day passes now in which an advertisement of one or more may not be read in the appropriate columns of certain of the daily journals. They are advertised as openly and unblushingly as if they were merely the advertisements of persons wishing to let a house or to obtain a situation. The advertisement usually runs something in this style, with variations:—"Ladies about to be confined may be accommodated with comfortable apartments at No. —, —— street. Medical attendance and good nursing." Sometimes it is added, "The baby may be left," or "The baby may be adopted" or "taken charge of." However the advertisement may be precisely worded, it signifies much the same thing. There are innocent people in the world who may perhaps read such announcements without attaching any more specific meaning to them than the language actually expresses; but the fact of their being often more obscurely worded leaves little doubt to be entertained that they are thoroughly understood by those to whom they are particularly addressed; and the Medical man must be an innocent indeed who fails to gather their full meaning. And it is this—that a lady or female of any station in life who has unfortunately committed herself, may, if she can, either herself, or her friends, or her paramour for her, muster sufficient money to satisfy the demands of the person who keeps the house, insure there the requisite privacy until she is relieved of her trouble, and, by a continuance of kind offices, may be saved the disgrace of being known as the mother of a bastard child.

Now, we are quite prepared to admit that women thus unhappily situated are often more sinned against than sinning. From the time that their condition is apparent their very life seems to depend upon its successful concealment. God knows they have often enough to bear without obstacles being placed in the way of their retirement from the view of their friends. Nor are we prepared to deny that those who assist them thus in the path of repentance and reformation are often doing a good and Christian work. What we object to is that this assistance should be made a matter of trade or profession, and the manner in which the trade is carried on. It was only a year or two ago that a Medical gentleman, who desired to get to the bottom of the matter, made it his business to reply to many of these advertisements; and the result of the inquiry he instituted was, as might almost have been anticipated, that women would be taken in, at certain of the houses, in any stage of pregnancy, and even that facilities for procuring abortion might be obtained on a sufficient fee being forthcoming to cover the risk of discovery. The fate of an infant born alive at full term would depend very much upon the demand for babies for adoption; anyhow, it would be "taken care of." We do not wish it to be implied that secret felony constitutes any large part of the business carried on at these houses, or, indeed, any part at all of the business in some of the more "respectable" of them; but it is clear that, whether it does or not, such establishments are all open to suspicion from the very fact of the secresy with which the proceedings in them are invested. What ought to make matters better, but what really makes them worse, is that establishments of this kind commonly manage to get some Medical man to attach himself to them as the regular attendant at the house. We do not for an instant suppose that a gentleman of respectability would knowingly connive at improper practices, but it is evident that where such an arrangement is in force a great many improprieties might be effectually covered by it. We presume that, however proper the establishment, there are few in our Profession who have so little regard for their reputation as to be willing that the fact of such a connexion should be publicly known.

It has been said that such places as we have been speaking of are necessities of our social condition, or rather of our social disorders. Well, possibly they may be, though we have grave doubts upon the subject. Other objectionable places of resort for purposes which will not bear daylight have been excused on like grounds, so we will not enter upon the discussion of the subject. We will admit, for the sake of argument, that they are necessary; but then they ought to be placed under some sort of authoritative supervision; the unfortunate women who resort to them, as well as their illegitimate offspring, should be protected against the unscrupulous suggestions of wicked people, and society should be assured that no acts are permitted within their walls which the law and morality equally condemn. There are female associations for nearly everything: now here is a fair field for the exercise of true womanly charity, such as covers with its comely garment the multitude of sins.

THE WEEK.

TOPICS OF THE DAY.

The contest between the Holborn Union and the Poor-law Board has entered upon a new and probably a final stage. In a letter recently addressed to the guardians of the Union by the Poor-law Board the principle of uniting the Holborn Union with the parishes of St. Luke and St. James, Clerkenwell, is still maintained, but the Board, influenced by "an earnest desire to reduce as far as possible the burdens on the ratepayers, and to promote every economy which is compatible with the paramount object of a better classification of the indoor poor," have abandoned the scheme of erecting a new sick asylum on a new site, and have discovered that "the workhouse of St. Luke's is in many respects suitable for an infirmary," and believe that, "by an extension of the building on the present site, the sick of the entire district can be efficiently and economically accommodated." The other workhouses are to be exclusively appropriated to the healthy paupers. We do not know how this will be received by the Holborn guardians, but it seems a fair solution of the question. Neither side can claim the victory. The Poor-law Board maintain the union of the parishes, whilst the Holborn guardians have saved the ratepayers the enormous burden of a new Hospital.

The death of an unfortunate woman named Mary Scott has taken place at Leeds in consequence of the absorption of arsenic from arsenical applications prescribed by one Richard Atkinson, who is described in one account which we have seen as "a cancer curer," in another as "a private gentleman." This "private gentleman" has been accused of manslaughter, and the case has been heard before the Leeds bench of magistrates, when, in consequence of the "pure motives" from which the accused acted, he was acquitted, the verdict being accompanied by a mild expression of trust that "the perilous and dangerous (*sic*) experiment will never be repeated either by himself or others." Of the cause of death there was no doubt. Dr. Clifford Allbutt proved the condition of the patient before death, the charred blackened condition of the breast produced by the arsenic, and

the benign nature of the tumour as shown by microscopical examination, for which a herb poultice containing a drachm and a half of arsenic had been applied. Moreover, Mr. Scattergood proved that he found, by chemical analysis, arsenic in the liver and urine, as well as in the breast and in the dead skin. Had the accused been a Medical man, he would certainly have been committed for manslaughter and malapraxis. The "purest motives" would not have been allowed to outbalance pure ignorance or recklessness. But the "private gentleman" has escaped scot-free, to continue practising, where the Medical Practitioner would have been visited with imprisonment and fines, and have been utterly ruined for life. A remarkable fact in the case also is that this "private gentleman" has advertised regularly in the Leeds journals.

We are glad to observe that the Governors of the Worcester Infirmary, acting on the recommendation of Earl Beauchamp, have come to the conclusion not to adopt the report of the Committee appointed to investigate the recent death by misadventure of Thomas Price in the Infirmary. The Committee, throwing the whole blame upon John Harding, the dispenser, recommend that he should be prosecuted for manslaughter. There is no doubt that Harding was greatly to blame. He dispensed a prescription of a dangerous character from memory, sent it to a particular patient on guess, not knowing exactly for whom it was prescribed, and not taking the trouble to inquire. But it appears from a letter from Mr. Knapp, the House-Surgeon, published in *Berrow's Worcester Journal* of March 13, that the nurse had been told by him to procure the injection from the dispenser for the patient Freeman, for whom it was ordered by Mr. Budd. This she failed to do, and this disobedience was one of the circumstances which made the unfortunate result possible. In addition, it is clear that the House-Surgeon had dispensed the prescription on one occasion from some carbolic acid kept in a cupboard in the ward, and on the whole it is evident that there was a chain of irregularities, which are not all chargeable to one person. We are therefore glad that the governors have taken a more lenient view of Mr. Harding's case than their committee, the more as he had served the Infirmary irreproachably for ten years, and he is already severely punished by loss of character and position. The whole case is a caution to our Profession not to use the word "injection" in prescriptions, when dangerous drugs are ordered, without specifying the part to which it is to be applied.

The Professorship of Chemistry in the University of Edinburgh is vacant by the resignation of Professor Lyon Playfair. There are many candidates, but we hear that Professor Anderson, of Glasgow, has a good chance of success.

Mr. Heisch, the Lecturer on Chemistry at the Medical School of the Middlesex Hospital, has been appointed Gas Examiner to the City of London.

We are glad to correct a mistake into which we fell in our last week's number, in reference to the confirmation of Professor Humphry's motion by the Council of the College of Surgeons at their meeting on Thursday last week. An opinion adverse to the motion was received from the legal advisers of the College, and in consequence some discussion as to its confirmation ensued, but ultimately it was confirmed, and we have reason to believe will be acted on. That Fellows as well as members of the Council of the College are eligible for Examinerships is expressly provided in the College Charter, and we believe that the rule carried by Professor Humphry, although it refers to so small a matter as giving the members of the Council due notice of vacancies in the Court of Examiners, is a very decided step towards a more liberal constitution of that Court.

The last meeting of the Pathological Society was an unusually interesting one. Mr. Myers, of the Guards, drew attention to the effect of the tight-fitting dress of the soldier in producing heart disease, and exhibited several living examples of heart mischief from amongst the soldiers under his care. He showed that the new tunic would be an improvement on the last as far as the chest itself is concerned, but by constricting the neck by a tight hook-and-eye fastening it is still capable of interfering seriously with the circulation. The Austrian tunic, which buttons over the first bone of the sternum instead of fastening with hook and eye over the supra-sternal notch, is a far easier garment. We are glad to state that the Society has appointed a committee to discuss and decide authoritatively upon a name for the "amyloid," "albuminoid," or "lardaceous" deposit, of which we hear so much now-a-days, and about which so much confusion, at least of words, exists. The committee comprises both a chemical and a pathological element—the former represented by Dr. Marcet, the latter by Drs. Wilks, Bristowe, Wilson Fox, Andrew, and Dickinson. We have heretofore had reason to complain of the mode in which the business of the Pathological Society has been conducted, but we are bound to confess that a marked improvement has of late taken place, and that a new era of advance in the real work of the Society seems to have been inaugurated.

STUDENTS' MICROSCOPICAL SOIRÉE.

A VERY interesting and instructive entertainment was provided for the students at St. Thomas's Hospital on Thursday week by the President of the St. Thomas's Physical Society. An opportunity rarely offers itself for teacher and student to meet and discuss topics of special scientific interest; a certain awe and reticence on the part of the student too often hinders him from seeking the aid of his teachers in the elucidation of any doubtful problem. The regulations of the examining boards, on the other hand, necessitating attendance at a certain number of lectures, tempt him to shirk as many as are not absolutely required for his curriculum. As soon as the student begins to think for himself, his studies no longer appear irksome. The *soirée* provided by Mr. Croft was fully appreciated by the students. Some of the junior members of the staff undertook to provide microscopes and to exhibit specimens. The objects were arranged in series, and frequently changed, so that the students had the opportunity of seeing a great variety in the course of the evening. Some beautiful sections of spinal cord were exhibited at the first table. Various instruments for polarising light were shown at another. We hope to hear of similar entertainments at all the metropolitan Hospitals.

FROM ABROAD.—LUMBAR HERNIA—PARIS MEDICAL FACULTY—INTERNATIONAL MEDICINE.

AT a recent sitting of the Académie de Médecine, M. Hardy communicated an interesting case of lumbar hernia, at the actual production of which he was present while at the St. Louis. A woman, who was an inmate of that Hospital for paraplegia dependent upon compression of the medulla by a syphilitic exostosis, while endeavouring, with great effort, to pass fæces, felt a pain, and observed a swelling make its appearance at the lower and external part of the abdomen. M. Hardy found a little above the crest of the ilium a tumour as large as a couple of fists, which was soft and renitent, the skin over it being unchanged in colour. On pressure, it disappeared through a triangular aperture. He regarded the case as an example of the lumbar hernia of Petit, the reality of which is denied by some and admitted by others. Neither Malgaigne nor Gosselin speaks of it in their works on hernia; but Pelletan and J. Cloquet have each described a case. M. Dolbeau, who saw M. Hardy's case, informed him that he had met with a similar one, which the Practitioner who had been called to it mistook for an abscess. He punctured it, and discharged fæcal matter; but the patient recovered.

At the next meeting of the Académie, M. Larrey related the particulars of a case which had come under his own observation. An officer having been shot in July, 1849, the ball

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penetrated the epigastric region, and, traversing the abdomen, lodged just under the skin at the external edge of the lumbar region, on a level with the second lumbar vertebra. A superficial counter-opening sufficed for its extraction. The wounds cicatrised, and the patient had recovered his strength, when, in March, 1850, while thrusting his body forwards, he suddenly felt a sensation in the lumbar region, a little above and in front of the cicatrix, which apprised him of the existence of a well-defined tumour. This tumour was about the size of a small egg, having a somewhat firm consistence, but being easily reducible. At first believed to be an abscess, it was soon pronounced a hernia, but great difference of opinion prevailed as to its contents, whether these were constituted by a portion of lung, intestine, or omentum. M. Larrey saw the case in October, 1851, when he found that not only was the tumour depressible and reducible, but that there was a deep, irregularly rounded aperture, forming almost a fibrous ring, and constituting the orifice of a true canal through which the hernia had passed. Palpation afforded neither the doughy consistency of omentum nor the elasticity of intestine, while percussion exhibited dulness everywhere. The diagnosis formed was that it was a lumbar hernia probably formed by the omentum, with adhesion of or partial penetration of a noose of intestine. MM. Vidal, Sédillot, and Demarquay all agreed in this opinion. Considerable difficulty was found in adapting an efficacious truss fastened at the base of the chest. M. Hardy observed that, interesting as this case was, it differed from the one he had related in being a traumatic hernia and not an example of the lumbar hernia, properly so called, described by J. L. Petit. M. Huguier observed that in his opinion the term "lumbar hernia" is a misnomer, as an intestinal hernia in the lumbar region is entirely impossible in consequence of the obstacles presented by the bodies and transverse processes of the lumbar vertebræ and the thick layers of muscles and various aponeurotic layers occupying this region. The sole term applicable would be "supra-iliac hernia." Having examined M. Hardy's patient, he believes that the production of the hernia in her case was explicable by a peculiar disposition of that region. In fact, at the seat of the hernia there was observable the cicatrix of an old and extensive abscess, and on a level with this there existed a notch in the ilium four or five centimetres in extent, which did not occur on the opposite side. It was rather through this notch that the hernia had passed than through the triangular aperture described by Petit. It is very possible that this bony deficiency may have been one of the results of the constitutional syphilis for which the patient became a patient of M. Hardy—a deficiency resulting from the bony absorption observed in old syphilis. On the other hand, the lesion may be congenital. However, the case shows that there may be another variety of supra-iliac hernia besides that issuing through Petit's anatomical triangle.

The following are the lectures to be delivered at the Paris Medical Faculty during the summer course of 1869, which commenced March 16:—1. Medical Natural History: M. Baillon, on Medical Botany. 2. Physiology: M. Longet, Functions of the Nervous System. 3. Therapeutics and Materia Medica: M. Gubler, Historical Sketch and General Observations on the Modes of Introduction and Modifications. 4. Surgical Pathology: M. Dolbeau, General Diseases; Diseases of Tissues and Systems; Fractures and Dislocations. 5. Legal Medicine: M. Tardieu, the different kinds of Violent Death, and the Medico-legal Questions appertaining to them. 6. Pharmacology: M. Regnault, a General View of Pharmacology, and a special examination of the principal types of simple and compound medicaments. 7. Midwifery and the Diseases of Women and Children: M. Pajot, on Dangerous Labours. 8. Pathological Anatomy: M. Vulpian, on Changes in the Blood; the Circulatory and Nervous Systems. 9. Medical Pathology: M. Hardy, Diseases of the Apparatus of Circulation and Respiration. 10. Hygiene: M. Bouchardat, Heat, Light, and the Atmosphere; the Excretions; Contagious Diseases and General Hygiene. 11. Clinical Medicine: MM. Paul, Sée, and Peter. 12. Clinical Surgery: MM. Laugier, Gosselin, Broca, and Richet. 13. Clinical Midwifery: M. Dépaul. 14. Supplementary Course on Clinical Diseases of Children: M. Roger. The lecturers on the supplementary courses on Diseases of the Skin and on Ophthalmology have not been appointed.

As we have had so much discussion of late as to the best plans of study, we may transcribe the distribution employed during the summer courses of the Paris Faculty:—*First Year:* Medical Natural History, Herborising, Practical Exercises in the Botanic Gardens of the Faculty, Medical Chemistry and Manipulations. *Second Year:* Physiology, Internal and External Pathology, Practical Exercises in Physiology. *Third Year:* Physiology, Internal and External Pathology, Midwifery, Operations and Apparatus, Therapeutics and Materia Medica, Pharmacology, Pathological Anatomy, Clinical Medicine and Surgery. *Fourth Year:* Internal and External Pathology, Midwifery, Therapeutics and Materia Medica, Legal Medicine, Pathological Anatomy, Hygiene, Clinical Medicine, Surgery, and Midwifery, Practical Exercises, and Operations.

Amongst other forms of "international" reciprocity, Medicine seems to be going to have its turn. A convention concluded between Holland and Belgium authorises the Practitioners of the two countries living within a certain distance of their respective frontiers to practise within fixed limits beyond these. And now Spain, so long the most backward among States, rushes on with red-hot haste on the path of progress, stretching out its friendly arms to Portugal. One of the innumerable decrees issued by her irresponsible Ministry not only establishes unconditional liberty of practice within the Spanish frontiers on the part of Portuguese Practitioners, but admits all strangers, of whatever nation, to pursue their studies at the various Universities and Faculties on exactly the same terms as the Spaniards themselves. Moreover, foreign Medical Practitioners are to be allowed to practise in Spain on presentation of a properly verified diploma and the payment of 200 crowns, without undergoing any additional examination. Strange indeed will it be if such a step should be first taken in the last quarter where it could have been expected. At present it is a mere paper and personal decree, emanating from the somewhat go-ahead Minister of the Interior, M. Zorilla. How it will work, or whether it will ever work at all, is another question.

PARLIAMENTARY.—DISTRICT MEDICAL OFFICERS (BIRMINGHAM)—THE ARMY MEDICAL DEPARTMENT—MEDICAL OFFICERS' SUPERANNUATION (IRELAND).

On Thursday, March 11, in the House of Commons,

Mr. Davenport asked the President of the Poor-law Board whether it was true that the Birmingham Guardians of the Poor had cut down the number of the district Medical officers from eight to five, thereby giving to each district Medical officer an average population of 45,000; whether any memorial of the 20th day of February, 1869, had been sent in from the Medical Practitioners of Birmingham protesting against this alteration; whether the Birmingham Branch of the British Medical Association had sent in a similar memorial; and whether he would lay upon the table a copy of such memorial and the correspondence that had passed between the guardians and the Poor-law Board.

Mr. Goschen said it was so far true that the Birmingham Board of Guardians had cut down the number of their district Medical officers from eight to five, that at the election which was held lately they elected only five of those officers instead of the eight they formerly had. But the question was by no means settled as between the Poor-law Board and the Birmingham guardians. Remonstrances had been made against the proposed alteration of these numbers; and a letter was addressed in consequence by the Poor-law Board to the Birmingham guardians, asking for an explanation of the grounds of the alteration. The guardians did not answer that letter, but on March 4 they elected five instead of eight district Medical officers. On March 6 the Poor-law Board wrote to them again, asking for an explanation of that election having

been held notwithstanding its previous letter, and in that later communication the Poor-law Board said it was at a loss to know what were the grounds on which the proposed reduction in the number of district Medical officers rested, and stating that the Board must refuse its sanction to that reduction unless it could be satisfactorily shown that the duties of the district Medical officers had very materially diminished. That reduction had been made, and officially the Poor-law Board had no information of the circumstances; but he was informed that while the district Medical officers had been reduced from eight to five, their salaries had been increased from £150 to £200, and a public vaccinator—whose duties were previously performed by the district Medical officers—had been appointed; so that the reduction in the number was rather from eight to six than from eight to five. However, unless good grounds were shown for the alteration, it would not be sanctioned by the Poor-law Board. The memorial received on the subject from the Council of the Birmingham Branch of the British Medical Association alleged that the proposed reduction was contrary to the interests of the poor and of the Medical Profession. It was, however, not with its bearing on the interests of the Medical Profession so much as with its bearing on the interests of the poor that the guardians and the Poor-law Board were properly concerned.

In moving the Army Estimates, Mr. Cardwell thus referred to the Medical Department of the Army:—"In the Medical staff there is not so great a diminution as would probably appear to most observers to be called for by the general diminution of the force, and the reason of that is, we were very desirous not to place upon half-pay efficient Medical officers who, having passed their examination at Netley, would have been placed upon half-pay if we had made an immediate reduction. The course we have taken has been to keep them on duty, and to give older men returning from long residence abroad the opportunity of passing through the course at Netley, instead of the pupils, who will be prevented going there by our diminished requirements. The result of that will be a very great advantage to the army obtained at a comparatively small cost, for the time will be short that officers will receive full pay instead of half-pay.

Dr. Brady obtained leave to bring in a Bill to provide superannuation allowances to Medical officers of Poor-law unions in Ireland.

This Bill was brought in and read a first time.

NAVAL MEDICAL REPORTS.

We give insertion to the following communication relating to a question of much importance—the nature, spread, and distant relations of a disease that is still devastating one of our most productive sugar colonies. The circumstances relating to its effects on the crew of H.M.S. *Urgent* interest the Profession, as they indicate atmospheric causes, acting only within the colony, and not affecting the health of the crew by infection of each other. The visit of this ship affords a sort of test on these points; and from it our colonial friends may learn that the causes of the disease are local, and that their energies must be directed to the fullest observance of sanitary laws if they would free themselves from this scourge. It would very often be the means of throwing light on such epidemics as this if naval Medical officers would unfold the secret of the results on the health of their crews from visits to infected ports, as they possess opportunities of observation rare to any other class of the Profession. We have heard that the Health Officers of the Privy Council have estimated as of great value an earlier report on this epidemic from the pen of the late Dr. Pendrith, R.N., who afterwards succumbed to yellow fever at Jamaica. We would encourage by all means the publication of such valuable notations at an earlier date than the annual blue-books of the Department admit of, as much importance is inevitably destroyed by the delay of a couple of years necessary for the completion of the official volumes.

ON THE PROTRACTED EPIDEMIC OF FEVER AT THE MAURITIUS CONTINUING SINCE 1866.

By F. H. Blaxall, M.D., Royal Navy.

In July, 1867, H.M.S. *Urgent* arrived at the Mauritius from Hong Kong, having at the time a large number of invalids on board. She anchored in the Grand Harbour at a distance of 100 yards from the north-eastern shore, and of 600 yards from the opposite side. On the nearer side a large shallow lagoon is separated from the sea by a low island, on which stands Fort St. George. The neighbourhood is low and marshy, but, in consequence of the great heat and drought, it was much dried up and parched, and there was but little water in the lagoon. On the distant side is an extensive burial-ground, which gave convincing evidence of its presence by an intolerable odour. On inquiry, I found that fever had been prevalent in the island for months, but the number of cases was decreasing and the daily death-rate diminishing—gone down from 200 to 40. I wrote a report to the Medical Department of the navy, stating that I considered the fever essentially malarious; that it assumed all the known forms—remittent, intermittent, etc.—and that sometimes it appeared to be fatal in the algid stage by intensity of the poison; that its frightful mortality was caused in a great measure through finding a population predisposed to epidemic disease, inasmuch as the general sanitary state of the island was unsatisfactory, and the condition of the people impoverished and demoralised by bad and insufficient food, by living in a very crowded state in ill-constructed huts, huddled together without any public means being adopted for the preservation of health. These conditions existed throughout the "Indian camps" outside the town, and the town itself was extremely crowded and dirty, so that the people generally were predisposed to any epidemic disease. We remained seven days, and no case of fever showed itself on board the *Urgent*, in consequence of that visit. On November 10, 1868—sixteen months later—we again arrived at the Mauritius, taking up the same anchorage as before. Fever still existed—indeed, after our last visit, when it was on the decline in the cool season, it showed renewed vigour on the approach of hot weather, and it continued severe during all the hot months, till March, 1868, when the mortality from fever reached 1903. Then, as the cooler weather set in, it again abated till October, when it was down to 277. In November, 1868, the hot season commenced, and in that month there were signs of the fever again increasing, and the occurrence of cases on board this ship proved the existence of a wide malaria. In 1867 the leeward side of the island was alone affected; but in January, 1868, it appeared in the district of Grand Port, on the windward side, where also there exists, topographically, every circumstance favourable to the formation of malaria, and likewise the same sort of ill-fed densely crowded population for it to prey on. After a stay of five days, we sailed on November 15, with the 32nd Regiment on board, which had suffered considerably during their stay on the island, and many of those fever-stricken men had paroxysms of intermittent fever during the passage across to East London on the south-east coast of Africa, where we arrived on November 24, 1868. On November 27—the twelfth day after our departure—T. F., aged 27, was put on the sick list; and on the 29th—the fourteenth day after our departure—W. G., aged 23, both belonging to the ship's company. The disease proved to be intermittent fever of the quotidian type. As the cases were not extreme, I purposely abstained from giving quinine till the repeated paroxysms made me feel confident as to the nature of the malady. On December 3 I gave W. G. fifteen grains, and about one hour and a half afterwards he had a paroxysm two hours before the usual time. On the 4th I gave T. F. and W. G. each fifteen grains, repeated on the following day; then gave smaller doses, and neither of them had any attack afterwards. T. F. was discharged to duty on December 13, and W. G. on the 17th, so that their illness lasted respectively sixteen and eighteen days. T. F. was again put on the sick-list for intermittent fever (quotidian) on December 29, disease yielding immediately after the administration of quinine, and in twelve days he was discharged to duty. On January 2—forty-eighth day after departure—Mr. T., aged 25, an officer belonging to the ship, complained of headache, giddiness, indistinctness of vision, with a quick (102) rather full pulse, and coated tongue. On the 5th he had a paroxysm, and the disease proved to be intermittent fever of the tertian type. On the 10th I administered twenty grains of quinine, then gave smaller doses, and he had no further paroxysms, and was discharged to duty on January 19. It is difficult to account for these cases occurring after our second visit, as there had been no bad results after the first visit, although the invalids then on board the *Urgent* were from China, where some of them had suffered from malarious disease, which renders men more susceptible of it again. The wind during each visit was principally from the S.E., but there was a

considerable difference in the temperature, for in November, 1868, the thermometer ranged between 74° and 86° Fahr., whereas in July, 1867, it was only from 68° to 75°. July is one of the cooler months, and in it the fever was decreasing, but November is the commencement of the hot season, and in that month of 1867 the epidemic showed renewed vigour, and I fear it has done so again in 1868. Thus probably the *Urgent* was exposed to a more intense poison on the last occasion than during the first visit. The individuals affected were all delicate men, and therefore were predisposed. W. G. had had a sharp attack of continued fever at Alexandria in May, 1868, from exposure to the sun. T. F. appears frequently on the sick list for cynanche, catarrhs, etc., and Mr. T. is pale, thin, and delicate-looking. All were inordinately susceptible. I consider these cases interesting for the following reasons:—

The individuals attacked had never suffered from malarious disease before going to the Mauritius, and consequently derived it there.

Secondly, none of them left the ship during our stay. The men slept in their usual billets under the forecastle, having others lying between them and the open ports, and the officer slept below, where there is no opening in the side of the ship, the place being ventilated by air-shafts from above.

Thirdly, in the case of the officer a long period elapsed between exposure to the poison and the appearance of the disease, which showed itself within the limits assigned by Drs. Watson and Tanner, and is of some value, as cause and effect are distinctly allied.

Fourthly, although the cases were of intermittent fever, yet they showed the same irregularity which is characteristic of the present epidemic of the Mauritius. And in these cases also the nervous system was particularly affected.

Fifthly, they prove that malaria still existed in November, 1868, and they tend to confirm the opinion I expressed in July, 1867, of the malarious nature of the epidemic, which is confirmed in the report of the sub-committee on the epidemic fever published in October last. All who are interested in the Mauritian epidemic should peruse that report, as it contains much information not only about the nature and cause of the disease, but about the topography and meteorology of the island, and the state of the inhabitants, and it offers suggestions for improving the sanitary condition, and of the means to be adopted with the view to prevent the formation of malaria.

In conclusion, I would recall attention to the facts that this fever appeared in the Mauritius in 1866, assumed an epidemic form in 1867, and has continued ever since; that fever appeared at Port Elizabeth, Simon's Bay, and Cape Town about the middle of 1867, differing in character, but still epidemically. At Port Elizabeth it was malarious, at Simon's Bay typhoid, and in Cape Town generally continued.

Finally, this fever of the Mauritius appears to me to be of a mixed type, from the co-operation of the essential causes of paludal and of typhoid fevers, which was first pointed out by Dr. Smart, Deputy Inspector-General, R.N., as having produced the anomalous type of fever that prevailed among our forces in the South of China in the war from 1857 to 1859, particularly among those quartered around the city of Canton.

LETTSOMIAN LECTURES

DELIVERED BEFORE THE MEDICAL SOCIETY OF LONDON IN 1869.

By WILLIAM ADAMS, F.R.C.S.,
Surgeon to the Royal Orthopædic and Great Northern Hospitals, etc.

Lecture III.

STRUMOUS DISEASES OF THE JOINTS; THEIR PATHOLOGY AND TREATMENT. ALSO THE TREATMENT FOR THE RESTORATION OF MOTION IN CASES OF STIFF JOINT, OR PARTIAL ANCHYLOSIS.

Strumous diseases of the joints were first considered in reference to their general pathological characters, which Mr. Adams described as—1st. The essentially chronic character of the inflammation—chronic, or, at the utmost, subacute from the beginning, and maintaining this character through the whole duration of the disease, generally extending over several years; and 2nd. The tendency of the inflammation towards the destructive processes of suppuration and ulceration in the soft tissues, and to caries and necrosis in the bones, thus invading all the structures of the joints.

In this class of joint diseases we see inflammation occurring essentially as a destructive process, leading to the complete destruction of the joints, and, unless arrested in its early stage by judicious treatment, terminating in loss of all the functions of the joint and anchylosis, as its most favourable result; and in a large proportion of cases leading either to amputation of the limb or the more modern operation of excision of the joint, as the only chance of saving the limb or life of the patient.

As to the order in which the several structures are invaded and the liability to primary inflammation, the general tendency of Surgical opinion is to the belief that strumous disease of the joints most frequently commences in the cancellous structure of the articular extremities of the bones; and this is probably due to the teaching of Sir B. Brodie, who laid so much stress upon this form of disease.

Mr. Adams' observation, however, has led him to the opinion that strumous disease of the joints commences most frequently in some of the ligaments of the joint, as the result of an injury, and that from these structures it extends to the synovial membrane. Next to the ligaments he believes that strumous disease most frequently commences in the synovial membrane, as the result of exposure to cold and damp; and thirdly, in order of frequency, that strumous disease commences in the cancellous structure of the articular extremities of the bones, as the result of exposure to cold and damp, and that the disease then generally takes the form of necrosis.

Dissections of hip-joint disease in the first stage, recorded by Aston Key, Mr. Coulson, and Mr. Adams, were adduced as examples of disease limited to the round ligament and adjacent synovial membrane, without general synovitis, ulceration of cartilage, or disease of the bones; and Mr. Adams observed that in a large number of such cases a reliable history of some accident is given as preceding the joint affection, and in all probability laying the foundation of the disease.

With regard to the curability of strumous disease of the joints, there can be no doubt that so long as the affection is limited to the synovial membrane, in the ordinary form of chronic inflammation, and the ligaments have not been destroyed, it admits of being cured, with restoration of motion to the joint, although the treatment may be very tedious, extending from a few months to perhaps two or three years. When the articular cartilages are to any considerable extent destroyed, it is no longer possible to restore motion, and the best result obtainable is fibrous anchylosis, leading ultimately to bony anchylosis.

From the disposition of the bone disease to advance when this texture is much implicated, the prospects of anchylosis are remote and uncertain. Under favourable circumstances it may sometimes be obtained, but frequently fails, and amputation or excision must be resorted to. Amongst the poor, operative means may be adopted at an earlier period than in the wealthy class, time being a more important object, and Mr. Adams prefered excision at a comparatively early period, and before the local disease had exhausted the powers of the patient.

The treatment of strumous diseases of the joint in the early stage, during which it is alone possible to obtain complete restoration of the joint, must be both constitutional and local. All active local treatment is at once negatived when the strumous constitutional condition of the patient is recognised, and these cases, Mr. Adams considered, were no longer to be treated by leeches, blisters, issues, moxas, the actual cautery etc., but all these methods of depletion and counterirritation, still adopted by some Surgeons in England, and more frequently by our Continental neighbours, should be laid aside, and the object of local treatment limited to securing rest to the joint, by means of gutta-percha splints, etc., together with the application of perpetual warmth and moisture by wet lint covered with oiled silk, aided by the use of the local vapour bath for a quarter of an hour three times a day. In this way local rest, or rest to the joint affected, is always secured, whilst general exercise is at the same time permitted.

In disease of the ankle-joint or its neighbourhood, the use of a wooden leg contributes best to this result, and in disease of the knee or hip-joint the use of crutches should be insisted upon as early as possible.

It is only in the later stage, when there is no decided increase of heat in the inflamed joint, that Mr. Adams resorts to the application of blisters, tincture of iodine, Scott's ointment, etc.

The constitutional treatment consists in the administration of cod-liver oil, iron, quinine, and strychnine. Mr. Adams entertaines a high opinion of the usefulness of the hypophosphite of lime, in doses of from five to ten grains, with ten or twenty drops of the tinctura ferri in water three times a-day, directly after meals. He also advises residence at the seaside, on chalk hills, or in mountain air. With these hygienic

advantages and mild local treatment, the disease may be arrested in a large number of cases.

The next subject discussed was the

TREATMENT FOR THE RESTORATION OF MOTION IN THE STIFF JOINT, OR PARTIAL ANCHYLOSIS, BY FORCIBLE FLEXION AND EXTENSION UNDER CHLOROFORM.

After alluding to the history of this operation, Mr. Adams stated that when appropriate cases are selected, having reference especially to the constitutional condition of the patient and the cause of the anchylosis, and when the operation is done with proper precautions, and with less violence than is sometimes used, there appears to be no risk whatever of inflammatory mischief following the operation. The absence of inflammation, and especially of suppurative inflammation, as a result of the operation, is in a great measure to be explained by the subcutaneous nature of the injury inflicted, and in this respect it may be classed in the same category with dislocations and simple fractures, which are seldom, if ever, followed by suppurative inflammation.

One of the principal points which had engaged Mr. Adams's attention had been to determine the particular class of cases to which this treatment is applicable, and those in which it is either attended with danger or in which it would probably fail in its object of restoring motion; and, with this view, he arranged all cases of partial anchylosis or stiff joint in three classes—viz., 1st, strumous; 2nd, rheumatic; and 3rd, traumatic.

With regard to the *first class*, the strumous, the result of Mr. Adams' experience has been to prove that they are the most unfavourable for treatment by forcible extension. In any scrofulous disease of a joint where there is reason to believe that the articular cartilages and other textures of the joint have been much damaged—and in scrofulous diseases the articular cartilages are, as a general rule, destroyed to a greater or less extent—a stiff joint is certainly the best possible result for the patient; and to obtain this should be the object of the Surgeon, every care being taken to secure anchylosis with the limb in the most useful position. Any attempt to recover the lost mobility can only be made at the risk of producing serious inflammation; and if free motion should be obtained under chloroform, and no serious inflammation follow the procedure, the motion will not be permanently retained, owing to the damaged condition of the joint. Stiffening will gradually return, and the case must be considered a failure.

With respect to the *second class of cases*, the rheumatic, the result of Mr. Adams' experience has been as favourable as it has been unfavourable in the strumous class. In a large proportion of cases of stiff joint, or anchylosis, occurring in young adults after rheumatic fever, or as the result of that severe form which occurs during the progress of gonorrhœa, free and useful motion may be restored by forcible rupture of the adhesions and thickened ligamentous tissues.

There is one great peculiarity in the rheumatic form of inflammation, in whatever organ or structure it may occur—viz., a remarkable indisposition to suppuration; and this is in the highest degree favourable to the operation of forcible extension of joints, the tendency of rheumatic inflammation being to the adhesive form.

In the *third class of cases*—viz., the traumatic—the results of forcible extension are also generally favourable, though more uncertain, and, on the whole, not quite equal to the results obtained in the rheumatic class.

The conclusions arrived at by Mr. Adams are as follows:—

1st. That forcible flexion and extension under chloroform of a stiff or partially anchylosed joint—false or fibrous anchylosis—is a procedure attended with very little risk in properly selected cases, and when the force employed by the Surgeon and the subsequent movements are not excessive, more especially at the first operation.

2nd. That the cases should be selected with reference more especially to the constitutional condition of the patient, and the integrity of the articular cartilages.

3rd. That cases of partial anchylosis resulting from scrofulous disease of the articulation, and those preceded by suppurative inflammation within the joint, whether occasioned by phlebitis, febrile affections, or external injury, are the least favourable for treatment.

4th. That cases of partial anchylosis produced by acute rheumatic inflammation, especially when occurring in the adult, and those resulting from gonorrhœal or genital rheumatism, are the most favourable for treatment.

5th. That traumatic cases, or those resulting from external injury, when occurring in the adult and unaccompanied by suppurative inflammation, are also favourable for treatment in a large number of instances.

REVIEWS.

Micro-Chemistry of Poisons, including their Physiological, Pathological, and Legal Relations. By THEOD. G. WORMLEY, M.D., Professor of Chemistry and Toxicology in Starling Medical College, and of Natural Sciences in Capital University, Columbus, Ohio. With seventy-eight illustrations upon steel. Pp. 702. New York: Baillière. 1867.

On the Sublimation of the Alkaloids. By W. A. GUY, M.D., Professor of Forensic Medicine, King's College, London. (Reprinted from the *Pharmaceutical Journal* for 1867.)

On Microscopic Sublimates, and especially on the Sublimates of the Alkaloids. By WILLIAM A. GUY, M.D., F.R.S., etc. (Reprinted from the *Trans. Microsc. Soc.* vol. xvi.)

WE must plead guilty to an entire ignorance of Starling College and Capital University until we saw their names on the title-page of Mr. Wormley's very handsome volume: nor had we, to tell the truth, ever previously heard of Mr. Wormley himself. If the present is his first attempt at authorship, it is highly creditable to him, and we are glad to have the opportunity of making the Ohio Professor's labours better known in this country. His work is divided into two parts, treating respectively of inorganic and organic poisons. The first part does not contain very much that is new to the English reader, except a considerable number of poison cases from American literature. Thus, for example, in the chapter on arsenic we read of a case recorded in Wood's United States Dispensatory in which at least a drachm of arsenious acid had been taken, and where the symptoms of poisoning were delayed for *sixteen hours*. This is probably the most protracted case on record. The author likewise gives a case in which a wash composed of a mixture of arsenious acid and gin, applied to the head of a child with porrigo favosa, proved fatal in thirty-six hours, the symptoms being swelling of the face, purging, and tenesmus, with paralysis of the lower extremities. In his observations on Reinsch's test he observes that the metallic deposit on the copper "is not, as was formerly supposed, from metallic arsenic, but a composition of this metal and copper. M. Lippert maintains that it has a constant composition, being a definite alloy, consisting of 32 per cent. of arsenic and 68 per cent. of copper, its formula being Cu_2As. The large proportion of copper contained by the deposit adds very much to the delicacy of the test." (P. 270.)

On turning to the chapter on strychnine, in the second part of the book, we find some interesting cases illustrating the varying period that may occur before any symptom follows the swallowing of a poisonous dose. In a recent case, reported by Dr. Barker, a dose of about six grains, given to produce abortion in a healthy young woman, was followed by violent symptoms in *three minutes*, and by death in half an hour. No case has been previously recorded in which the symptoms appeared so rapidly. On the other hand, Dr. Thomas, of Alliance, Ohio, has reported a case in which a man swallowed five grains of strychnine, and *one hour and three-quarters* elapsed before there were any symptoms, and, under the use of emetics, the patient recovered. Two singular cases are given which show how the effects of strychnine may be modified by the presence of another poison. In one case three grains of strychnine, a drachm of opium, and an indefinite quantity of quinine were taken: twelve hours afterwards the patient only felt "queer," but he finally died in a state of stupor forty hours after the mixture was taken. In another case, a would-be suicide swallowed, at 8.30 p.m., nearly ten grains of nitrate of strychnine in an ounce of bitter-almond water; a little later he took an additional dose of twelve grains of strychnine; feeling nothing peculiar at 9 p.m., he took ten grains of acetate of morphia in an ounce of bitter-almond water, and lay down in bed. Ten minutes later he poured some chloroform on his pillow. Partial insensibility now manifested itself, and continued for about an hour and a half, when he was seized with violent cramps and cessation of respiration, but without pain. Loss of consciousness then supervened, but he soon revived, and had another attack of convulsions. Emetics and tannic acid were now administered, and in two days afterwards no trace of the poisoning remained. The recovery in this very remarkable case was ascribed to the fact of the patient having been partaking freely of soup containing cranberries and flour before he commenced his toxicological experiments; the tannic acid of the cranberries possibly tending to neutralise the strychnia, while the farinaceous matters, by enveloping the poison, may have prevented its absorption.

It is well known that, independently of the remarkable case just quoted, recovery is not very rare after large doses of this poison have been taken. Our author gives instances in which (1) a young man recovered after taking two pills containing ten or twelve grains, (2) in which a young man recovered in fifteen hours after taking about two scruples, and (3) of a man with delirium tremens who took over twenty grains, and was convalescent in eighteen hours; but in all these cases there was early vomiting.

Dr. Wormley's observations on the treatment of this form of poisoning contain a good deal of original matter. After pointing out the necessity of emptying the stomach (if possible) by an emetic or the stomach-pump, he mentions the internal administration of chloroform, as first employed by Dr. Dresbach, of Tiffon, Ohio. He quotes four cases in which this remedy, given either internally (in one instance to the extent of two drachms) or by inhalation, or both combined, proved successful. He refers to the experiments of Dr. Kurzak, of Vienna, who found that in animals tannic acid suspended the action of the poison, twenty-five parts of the acid being required for one of the alkaloid; but he gives no evidence in its favour further than is afforded by the case above quoted in which the young man took cranberry soup before making his final arrangements. The following paragraph, in which he puts to the test Professor Haughton's view that strychnine and nicotine are antidotes to one another, is deserving of attention:—

"For the purpose of testing the antidotal properties of nicotine, we administered to each of thirteen healthy cats half a grain of pure strychnine, the poison being passed in solution into the stomach by means of a stomach-tube. In some instances, as soon as symptoms of the poison appeared an infusion of twenty grains of tobacco leaves was administered in the same manner as the poison, whilst in others the tobacco infusion was given along with the strychnine, the two solutions being thoroughly mixed. In some few cases the dose of tobacco was repeated. As the result of these experiments, one of the animals, which had taken the mixed solutions, immediately fell prostrate, breathed with difficulty, in three minutes voided urine, in eight minutes vomited a frothy mucus, and in ten minutes was able to run, with, however, a stiff gait. After an hour the animal appeared perfectly well, excepting a slight stiffness in walking. With this single exception all the animals died, and in most instances within the usual period. One of them, however, that had taken the mixed solutions manifested no symptom whatever for thirty-five minutes. In some instances the strychnine symptoms appeared to be not in the least affected by the tobacco, but in others they were of a compound nature. Several of the animals vomited. Before performing these experiments it was ascertained that an infusion of twenty grains of tobacco given alone would produce serious symptoms, but in no instance in six experiments did it cause death."—S. 545.

In one respect we are much disappointed in this volume. We had little doubt from its title that in the part treating of the poisonous alkaloids we should have found a full account of the method of testing for these poisons by sublimation—a subject which has been studied with very considerable success both in this country and in Germany during the last few years. In the year 1864 Dr. Helwig, of Mayence, made the discovery that the alkaloids might readily be made to yield a sublimate which had characteristic microscopical appearances, and in the following year published a work entitled "The Microscope in Toxicology; a Contribution to the Microscopical and Micro-Chemical Diagnosis of the most important Metallic and Vegetable Poisons; with an Atlas of Photographs of Microscopic Preparations." About two years later, another German toxicologist, Erhard, published a work on "The Poisonous Vegetable Alkaloids," which we have not seen, but which, we believe, is mainly devoted to sublimation-tests. Meanwhile, our own countryman, Dr. Guy, after studying the sublimates of the volatile metals and a few other volatile substances, was led by the perusal of Helwig's book to repeat and extend the observations of that microscopist. Those who are in the habit of attending the scientific *soirées* of the College of Physicians, Pharmaceutical Society, etc., have probably seen for themselves the beauty of his sublimates of the alkaloids. Going far beyond Helwig's limits, Dr. Guy has extended the course of his inquiry "to such animal products as the constituents of the urine and the stains of blood, and, indeed, to all volatile and decomposable matters, whether of vegetable or animal origin." We regret that our limited space compels us to refer our readers to the original sources for an account of Dr. Guy's method of procedure, and conclude this article with the following remarks which he has made on the "practical utility" of his process.

"To turn this simple method of procedure to practical account in chemistry and toxicology, three things are necessary. The results obtained should be characteristic; the quantities which yield them should be extremely small; and the method should admit of application, not only to the substance itself, but to the deposit from its solutions. All these conditions are fully satisfied, not only in the case of such simple matters as arsenious acid and corrosive sublimate, but also in the cases of the principal poisonous alkaloids, such as strychnine, morphine, and veratrine. I will illustrate these three conditions by instances in point.

"As examples of characteristic changes of form due to the application of heat, I may instance the complete dispersion in white vapour of arsenious acid and corrosive sublimate; the change of colour, melting, fuming, and deposit of carbon, which marks the alkaloids as a class; the deposit of carbon and reduction of silver from the tartrate of silver; the explosion of the oxalate of silver; and the quick, rosy discoloration of alloxan. As examples of characteristic sublimates, I may mention the brilliant octohedral crystals of arsenious acid, contrasted with the radiating and projecting groups of needles of corrosive sublimate; the jointed plates and prisms of cantharidine; the crossed twigs of solanine; the detached rhomboidal crystals of veratrine; and the compound crystals and radiating patterns of strychnine, morphine, cryptoria, etc. As examples of characteristic reactions, I may specify that of morphine with distilled water and with dilute hydrochloric acid, and those of strychnine with the solutions of bichromate of potash and carbazotic acid."—Guy, on "Microscopic Sublimates," p. 3.

Bible Animals: an Account of the various Birds, Beasts, Fishes, and other Animals mentioned in the Holy Scriptures. By the Rev. J. G. Wood, M.A. Copiously illustrated with new and original designs. Parts I. to XV., one shilling each. London: Longmans.

This is an interesting book, which treats of all animals mentioned in the Sacred Scriptures, beginning with the ape and ending with the sponge. It may be said to teach natural history through the Bible, and to explain the Bible through natural history; besides, it contains an immense amount of collateral information bearing on general literature. We may instance the account of the Lämmergeier or ossifrage, which has the habit of mounting in the air with bones, which it lets drop on hard rocks so as to smash the bone and get at the marrow; and it is suggested that the "eagle" which mistook the bald head of the poet Æschylus for a polished stone, and killed him by letting a tortoise fall upon it, was probably a Lämmergeier. This bird having weak feet, incapable of holding a struggling animal as the eagle does, is obliged to kill its prey by some stratagem. Should it see a goat near the edge of a precipice, it will swoop upon it and knock it over with a blow of its wings, and then devour it when maimed by its fall. In the chapter on the sheep we have an interesting account of the ram's horn, which was used as a vessel for oil, like the old English powder-horns, and which was also fashioned into the trumpet, or *shoufar*, which has been used from the days of Moses to the present time in certain parts of the Jewish Ritual. Here the author is indebted to our learned *confrère*, Dr. Hermann Beigel, for an account of the mystical tones, the *Teruah*, *Tekchah*, and *Shevorim*, which are blown on the *shoufar* in the Jewish synagogues on the day of the New Year and the Day of Atonement, and he quotes Dr. Beigel's singular discovery that these antique notes are a portion of the nightingale's song. The mystical *Reem* (a word which the modern Jews refuse to translate, rendered *unicorn* in the A.V.) is identified with the *Urus*, or aurochs; the *To*, or wild bull, with the oryx, a powerful antelope of large size. All students of the Bible must be under obligations to the author for his assistance in enabling them to understand the plain literal sense of the text. No wholesome use or application can be made of a misinterpreted passage. For, as Bishop Lowth says, "Whatever senses are supposed to be included in the Prophet's words, spiritual, mystical, allegorical, analogical, or the like, they must all depend upon the literal sense"—just as we may say that with an uncertain or wrong diagnosis there can be no sure prognosis nor effectual treatment. A somewhat ludicrous example is given by the Bishop of the necessity of natural history in order to draw the right moral from certain passages. There is a clause in Isa. li. 20, rendered in the A.V., "Like a wild bull in a net." This passage is translated in the Septuagint, "Drowsy, like parboiled beet," and by certain ancient commentators is rendered, "Like an oryx," which was declared to be *a bird*. Hence, out of one and the same passage one commentator de-

clared that the Prophet complained of his countrymen for their drowsiness and flaccidity, as if they were like half-boiled vegetables; another blamed them for being like a bird caught in the snares of the devil; whilst the true meaning seems to be that they exhibited impotent rage like an oryx in a net. It is needless to say that not more than one of the three interpretations can be the right one.

GENERAL CORRESPONDENCE.

REGISTRATION OF DISEASE.

Letter from Dr. Gavin Milroy.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the notice in your impression of February 27 of my paper "On the Medical Topography and Chronology of the Metropolis," read at a recent meeting of the Association of the Medical Officers of Health, it is intimated that I shall probably publish it elsewhere in full. As I have no intention to do this, will you oblige me by allowing me to state, in your columns, that the main object I had in view was to urge the importance of initiating some simple scheme whereby the desiderated materials for the exposition of this subject might, in my opinion, be best obtained? At the present time it cannot be discussed with any advantage from the sheer want of available data. Since the publication (now fifty years ago) of Bateman's "Reports on the Diseases of London from 1804 to 1816," no similar yearly records of the sort have been undertaken; and yet every one must perceive how extremely valuable continuous annals of sickness in the metropolis would be, for practical as well as for scientific purposes. The enormous increase from year to year of the population only renders the want of such a work the more to be regretted, and the necessity for some endeavour to supply the defect the more pressing. Moreover, the means and sources of information which might be turned to account are now far ampler and more exact than were at the command of Bateman and of his predecessor Willan. For the last thirteen years, the whole of the metropolitan area has been under the constant oversight of able Medical men, whose annual reports of their respective districts (thirty-seven in number, I believe) show how large an amount of evidence, illustrative of the varying prevalence of the principal epidemic diseases over this wide and populous field, is being regularly collected, and recorded with greater or less precision in separate publications. Take the instance I cited in my paper, that of the Marylebone district. From Dr. Whitmore's report for 1867, we learn that in the practice of the parochial Medical officers, of the Middlesex Hospital, and of two or three dispensaries, 337 new cases of small-pox, 894 of measles, 788 of scarlatina, 734 of hooping-cough, 390 of fever, 227 of erysipelas, and 7800 of alvine flux, including five of Asiatic cholera, were treated in the course of the twelve months. Such authentic data obviously furnish the means of judging of the approximative prevalence of these diseases among that very portion of the community whose health-condition from year to year it is so important to determine. The population of the Marylebone district does not much exceed a twentieth part of that of the whole metropolis.

Now, as similar information is afforded in many, if not in all, of the annual reports relating to other districts of the metropolis, it is clear that there actually exists in printed documents (which are unfortunately but little known out of their own localities, and of which no complete series can be found anywhere) much important scattered evidence illustrative of the epidemiological "topography and chronology of the metropolis," if the data were only brought together and co-ordinated. It has often occurred to me that the Association of the Medical Officers of Health might, through the medium of a small committee of their number, effect a large amount of Professional good in this direction, with comparatively small labour, if they would take this subject in hand. It is a work that can only be done properly by associated and concerted action. Let but a beginning be made, and this at first from a single source of information, as from that of the indoor and outdoor paupers, and the favour with which the effort will be universally received will, I am confident, encourage its continuance. I take it for granted that the journalism of our day would willingly give their co-operation to the work by making known, once a year, to the Profession a summary of such authentic information relating to the Medical annals of this great metropolis.

I am, &c.

March 12. Gavin Milroy, M.D.

COMMUNICABILITY OF PHTHISIS.

Letter from Dr. Ernest Elliott.

[To the Editor of the Medical Times and Gazette.]

Sir,—My attention has only recently been drawn to Dr. Cotton's letter in the *Medical Times and Gazette* of February 6 commenting on a paper which I read on the "communicability of phthisis," in which he states that his observations and published reports, which I had not seen, as regards the nurses at the Brompton Hospital, are different from what I had stated. In this paper I said that I had heard that the nurses were frequently affected with phthisis; but I am quite ready to accept Dr. Cotton's statement that such is not the case, as I am sure he would not make it without sufficient grounds for doing so, and doubtless that establishment is supplied with all the appliances of plenty of space, free ventilation, etc., the very opposite to the essentials which I advanced as apparently giving rise to the communication of phthisis from diseased persons in the advanced stages to healthy ones—viz., "crowded, ill-ventilated rooms, sleeping in the same bed, and inhaling the breath of the sick." I am the more confirmed in this opinion from the testimony of other Practitioners since attention has been directed to the subject; and more recently Professor Castan has published in the *Montpellier Médicale* some papers in order to prove these facts, exactly agreeing with the opinions which I advanced in the paper I read.

I am, &c. Ernest Elliott, M.D.

Warwick-house, Southsea, March 15.

A NEW COMPRESSOR FOR FEMORAL ANEURISM.

Letter from Mr. M. W. Hilles.

[To the Editor of the Medical Times and Gazette.]

Sir,—The very great success which has of late years attended the treatment of external aneurism by means of compression leads to the hope that in a very short time we shall be enabled to treat all such cases solely by pressure, and thus supersede a surgical operation.

The principal obstacle in most of these cases hitherto has been the difficulty of applying continuous pressure without interrupting the general circulation of the limb, either through the anastomosing branches of the arteries or the venous system.

All the methods used and instruments resorted to have acted by means of general pressure on the limb, as in bandaging; by circular pressure, as in the common tourniquet; or, as in the more improved pressure, by a fixed counter pressure on the least objectionable part of the limb. But all these are liable to the serious objections already stated, and to the additional one that they cannot be borne for any length of time by the patient.

Pressure by means of the fingers of skilled assistants has been the least objectionable of all the means used, but to continue this for days is extremely trying, and can seldom be accomplished.

To supply the deficiency, I have designed an instrument which may be named the "arterial compressor." In this a strong belt is fastened round the pelvis, and well secured on the ossa innominata. On the anterior surface is attached an iron plate, from which a steel plate, about one inch and a quarter in breadth, and from twelve to sixteen inches in length, descends towards the patella; on this a number of sliding pads, with screws, are placed so as to be easily shifted from one part to another.

If we suppose the case to be one of popliteal aneurism, the vertical plate is fixed over the course of the femoral artery, and the required number of pads screwed down upon it—one, two, three, or ten, if necessary. By this means continuous and gradual pressure may be maintained for almost any length of time on the artery, from Poupart's ligament to Hunter's canal, and this without inconvenience to the patient, who may be instructed to slacken and tighten the screw-pads as may be agreeable to him. In this way the whole course of the femoral artery may be obliterated if desired.

I shall not trespass on your pages by entering more minutely into this subject, but shall leave it to the consideration of the Profession, at whose hands I have no doubt it will receive justice. I have not had an opportunity of trying it in practice. I beg to place at your disposal a sketch of the instrument, in case any further inquiry should be necessary.

I am, &c. M. W. Hilles, F.R.C.S.

356, Strand, London, February.

CARBOLIC ACID AND HOSPITAL MORTALITY.

[To the Editor of the Medical Times and Gazette.]

SIR,—In answer to your correspondent who inquires as to the effects of carbolic acid on the statistics of Hospital mortality, I would beg to refer him to the annual reports of the Glasgow Royal Infirmary, the last of which, for 1868, has just been published. If he will take the trouble to calculate the mortality from the primary and secondary amputations of the thigh, leg, arm, and forearm before and after the introduction of carbolic acid into that Hospital, he will find that the results are not in favour of the so-called antiseptic plan of treatment. In the years 1860, 1861, and 1862—before the introduction of carbolic acid—I find 126 of the amputations I have mentioned recorded. Of these 126 there died 41, which gives a mortality of 1 in 3. On the other hand, in the years 1867 and 1868—or since carbolic acid has been used so extensively in that Hospital—there were 73 amputations of the same kind. Of these 30 died, giving a mortality of 1 in 2½.

The results are even more unsatisfactory if we take the compound fractures, which are the cases reported to be most benefited by the carbolic acid treatment. I find in the three years already mentioned that there were 114 compound fractures treated in the Infirmary, of which 26 died, or nearly 1 in 4½. In 1868—a year in which, as I have been told, all the Surgeons to the Hospital used carbolic acid—there were 59 compound fractures treated with a mortality of 20, or more than 1 in 3. Your correspondent may digest these data at his leisure. I am, &c. M.D.

March 16.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, FEBRUARY 23, 1869.

SAMUEL SOLLY, F.R.S., President, in the Chair.

A PAPER, by Mr. FURNEAUX JORDAN, was read on a

CASE OF SEVERE WOUND OF THE KNEE-JOINT TREATED SUCCESSFULLY, AND WITHOUT SUPPURATION, BY EARLY, EXTENSIVE, AND REPEATED COUNTER-IRRITATION OF THE THIGH AND LEG: AN ILLUSTRATION OF A NEW MODE OF TREATING INFLAMMATION.

A young man was admitted into the Queen's Hospital, with an incised gaping wound at the front of the right knee-joint, two inches and a half in length. The wound was closed with silver stitches, the joint compressed with cotton-wool and bandages, and a splint applied. Inflammatory symptoms occurred on the second day, and blistering over the femoral and anterior tibial arteries was immediately resorted to, and counter-irritation was kept up by the use of iodine. After counter-irritation was established, not a single unfavourable symptom occurred. Mr. Jordan observed that inflammation is everywhere the same, but the remedies are numberless. We ought to use the best remedies in all inflammations. The best remedies are those which suspend the conditions which permit inflammation to exist. Those conditions he considered to be, briefly, these:—Extended space—no part can inflame it restrained within its physiological space; increased quantity of blood—no part can inflame with the blood of health. Other and less essential conditions are that there should be no other prosperous inflammation; that there should be unrest; and that there should be a cause. These conditions should be removed in every inflammation by pressure on the inflamed part, counter-irritation over the next vascular territory, rest, elevated position, and—where practicable—removal of the cause. It is in our power to make any given inflammation be the less prosperous of two inflammations. We may do much to prevent probable and expected inflammations by counter-irritation. We might prevent cardiac inflammation in acute rheumatism, peritonitis in wounds and operations opening the abdomen, suppurative synovitis in wounds of joints, etc.

Mr. CHARLES MOORE wished to ask why the counter-irritation was applied over the artery.

Mr. CARR JACKSON said that he had treated a few cases of orchitis in the manner recommended by Mr. Furneaux Jordan, by painting the scrotum with a strong solution of nitrate of silver (two drachms to an ounce), and with very good results.

Mr. BRAMWELL observed that the paper contained much which required careful consideration, but that the sermon was, he thought, carried beyond the limits of the text. A single successful case treated by blistering was very interesting; but should we therefore lay aside all other remedies? Mr. Bramwell referred to three cases of wound of the knee-joint that had done well under his observation, and remarked upon the differences between individuals with regard to their powers of repair. The history of Mr. Jordan's patient showed him to be a man not of irritable disposition or inflammatory habit.

Dr. ANSTIE inquired why the two essentially different remedies, a blister and the actual cautery, should be called by one name. The amount of disturbance produced was very different in the two cases. Assuming that the action of the actual cautery was analogous to that of a blister, he still objected to the word "counter-irritation" as hiding a false idea, as being a barbarism in language and mischievous to thought. With regard to the situation of the blisters, Mr. Jordan appeared to select a contiguous independant vascular tract, under the belief that some influence upon the calibre of the vessels was exerted directly through the sympathetic; but it was more probable that the vaso-motor nerves were influenced by a reflex action through the sensory filaments.

Mr. SAVORY said that the scope of the paper was far too wide for the debate of a single evening; but he wished to raise one or two questions. He doubted that incised wounds of the knee-joint were so hazardous as the author supposed, and referred to the operation for the removal of false cartilage. He thought that of all the remedies used against inflammation pressure was the most hazardous and the most mischievous, and urged that pressure made by the Surgeon must always be incomplete—always less complete, for example, than the pressure produced in a case of inflamed bone.

Mr. BIRKETT said that wounds of the knee-joint were very rare, but less dangerous, according to his experience, than in that of the author. He referred to three cases, two of incised wound and one of contused wound, in which recovery took place.

Mr. SOLLY's experience of forty years enabled him to confirm Mr. Birkett's statement with regard to the curability of such cases. He (Mr. Solly) attached great importance to the administration of an efficient purgative soon after the injury, so as to remove all irritating secretions from the bowels.

Mr. BRUCE related a case of very severe injury to the knee-joint, that he saw when visiting the Belfast Hospital. The patient fell upon the edge of a kerb-stone, and cut the joint open transversely, through the middle of the patella. In clearing out coagula from the joint, the fingers of the Surgeon came in contact with the crucial ligaments. The wound was dressed with carbolic acid, and pressure was applied to the femoral artery. A good cure was the result.

Mr. THOMAS SMITH thanked the author for his paper, but differed very much from his opinions. He related a case in which Mr. Paget had removed the entire patella, and which did well. He inquired how Mr. Jordan applied his method to common inflammatory diseases *e.g.*, to boils and carbuncles.

Mr. WEEDEN COOKE mentioned a case in which a blister to the back of the thigh appeared to arrest inflammation of the head of the tibia.

Mr. FURNEAUX JORDAN replied at great length. He said that he usually blistered in stripes, and that he applied these stripes along the course of main arteries in order to obtain sheltered positions, and also because he thus hoped to influence both the vascular and nervous trunks. He attached no importance to the term counter-irritation, and would gladly accept a better one from Dr. Anstie. His idea was to excite another inflammation; and perhaps "distant irritation" might convey this idea. He regarded contused wounds of the knee-joint as being far less dangerous than simple incised wounds. The bruising and laceration of the soft parts around acted as a counter-irritant to preserve the joint from destructive inflammation. He believed there was no inflammation in which moderate pressure was not useful—pressure that stopped short of producing pain. In treating common inflammation, such as a boil or carbuncle, he would surround it with a broad belt of artificial irritation at some little distance; and in erysipelas of one thigh he would blister the other. He was not accustomed to open the knee-joint for the removal of false cartilages, but employed a subcutaneous incision. If he wished to open the knee-joint, he would prefer making a bruised wound to an incised one.

Mr. SOLLY referred to Mr. Jordan's treatment of carbuncle,

in order to express his own unshaken belief in the value of incisions.

A paper, by Mr. John Birkett, was read, giving a

DESCRIPTION OF A DISLOCATION OF THE HEAD OF THE FEMUR COMPLICATED WITH ITS FRACTURE: WITH REMARKS.

The injury occurred to a female, 25 years old, and was produced by a fall from a height. The indications of displacement of the head of the femur on to the dorsum ilii were apparent. The woman was killed by injuries inflicted on the brain; and, after death, the head of the left femur was found resting on the dorsum ilii, a little above the acetabulum. A piece of the head of the bone was broken off, and lay in the acetabulum, retained there by the ligamentum teres, which was very slightly torn. The author alluded to the rarity of the injury, the mechanism of its production, and its clinical importance.

Mr. Solly said that he had at one time doubted the possibility of fracture of the head of the femur together with dislocation, but that he had recently heard of a case. He pointed out that the complication might be suspected when the dislocation could be reduced but not retained in position.

Mr. Birkett made some observations upon the probable direction of the force by which the injury had been caused.

Tuesday, March 9.

Dr. Burrows, F.R.S., President, in the Chair.

The President, before taking the chair for the first time, stated how highly he prized the honour they had done him in electing him to fill the post of President, especially when he thought of some of the men who had filled it before him, and some of whose effigies looked down upon them from the walls of that room. He was not insensible of his duties, and he would vie with his predecessor in advancing the interests of the Society. He felt that the welfare of the Society depended not so much on the Chairman as on the Fellows of the Society, who had the opportunity and ability to reap the fruits of Hospital duties. From the papers and from the discussions the prestige of the Society was to be upheld. He trusted every one would do his utmost to advance the interests of this old and honourable Society.

A paper, by Dr. Arthur Ernest Sansom, was read on

SOME NEW DOUBLE SALTS OF CARBOLIC ACID, PARTICULARLY CONSIDERED AS AGENTS FOR THE TREATMENT OF DISEASE.

Modern research has established with a near approach to precision the doctrine that zymotic diseases are due to the influence of minute organised germs upon the body. In the case of vaccinia they seem to be demonstrable as minute granules. By inference, if not by observation, much can be learned concerning the physical qualities of these disease-producing organisms. They are capable of destruction by various chemical agencies; on this circumstance is based the theory and practice of disinfection. The agencies which destroy them are, however, not always chemical; some bodies which can be proved to have no chemical influence whatever have the peculiar property of arresting the vitality of organised bodies. Though means have been long adopted, in order to prevent the spread of disease, to neutralise disease-producing agencies externally to the living body, it is only lately that a plan of treatment has been pursued with the object of killing the vitally endowed disease-producing particles when once they have entered the living organism. The plan of treatment by the sulphites recommended by Professor Polli no doubt destroys germs, sulphurous acid and the sulphites acting upon them not as chemical, but as vital poisons. Perhaps the most powerful agent known possessing a like property is carbolic acid. This, however, in regard to its administration, presents many practical difficulties. The difficulties have been overcome by the discovery and employment of salts obtained by the neutralisation of sulpho-carbolic acid ($C_6H_6SO_4$) with the alkaline, earthy, and metallic bases. The first compound salt, sulpho-carbolate of potash, was obtained by Mr. Crookes, F.R.S. The author has succeeded in producing, in addition, the following salts, all having the characters of true double salts, and possessing brilliant and decidedly crystalline form: sulpho-carbolate of sodium, of potassium, of ammonium, of magnesium, of zinc, of copper, and of iron. An inquiry instituted with the view of determining the relative efficiency of the various salts in staying fermentative action established the following results—1, the sodium salt; 2, magnesium; 3, potassium; 4, ammonium. It was shown from experiments upon the lower animals, as well as from the results of administration to the human subject, that the following was an outline of the plan of action of the sulpho-carbolates. They are absorbed with great rapidity, exert no toxic effect (the human subject readily taking drachm doses every four hours), are decomposed in the system into—*a*, carbolic acid, which, traversing the system, is exhaled by the breath; *b*, sulphate of soda, which permeates the tissues, and is excreted by the urine. Though carbolic acid cannot be detected in the tissues after death, it is shown that an influence enabling the body to resist putrefaction has been exerted: the urine passed also resists decomposition. Prolonged courses of sulpho-carbolate of sodium given for two months to phthisical patients show that the drug could be administered not only with impunity, but with considerable advantage. Of 35 cases, 13 greatly improved, 15 considerably improved; 9 cases gained in weight an average of 2½ lbs. The author had employed the sulpho-carbolate of sodium in the treatment of zymotic disease for the past twelve months. He had not met with one death, and his conviction was that the plan of treatment thus indicated might be hoped to yield results of great importance. He claimed, however, no more than to have made out an *à priori* case. Individual experience is powerless to solve the great problem of the treatment of zymotic disease. Systematic and organised observations only can attain this end.

Mr. J. Wood was only able to give a limited experience of the sulpho-carbolates. He had mostly used the sulpho-carbolate of zinc, and had used it for about a year and a half in all manner of wounds and abscesses after operations for erysipelas and pyæmia, as well as an injection in gonorrhœa and a lotion for venereal sores. In these last he had experienced more success than with any other application. It acted like sulphate of zinc, and had besides the power of diminishing smell. Under its use gonorrhœa generally gives way in a fortnight. He had used the soda salt in two cases of pyæmia, one of which did well, the other not. He looked on this as an improvement on the simple salt, chiefly as regards smell. It was better than Lister's oil, which excited inflammation round the sore, and better than carbolic acid lotion, which evaporated.

Dr. Fuller hoped the results would confirm the expectations entertained of the use of the salt; but he was inclined to doubt its value in zymotic disease, in many of which carbolic acid had been given without the slightest benefit. In one class of cases, which had not been mentioned, carbolic acid was of very great service—that was in certain forms of indigestion. Some people did not like carbolic acid, and if this would have the same results, the discovery would be valuable. In some of these cases carbolic acid acted like a charm.

Mr. Spencer Watson said he had used the soda salt in one case of pyæmia, but did not see any special influence; it was very much like that of citrate of potass. He thought they would do better in such cases by watching the temperature than by thinking of destroying germs.

Mr. Nunn said the arguments brought forward were based on the existence of certain molecules, and that the destruction of these cut short the disease. He had, with this view, tried sulphite of soda in all cases where pyæmia was likely to occur; in some it appeared even where the salt had been given from the beginning.

Mr. H. Lee had tried the sulphites in pyæmia, but was not satisfied that they had any good effect. In a lecture he delivered at St. George's Hospital he had given Polli's authority only.

The President having recalled the meeting to the subject of discussion,

Mr. Carter said that this guinea-pig's leg had lain for a long time without change. Had there been any experiments as to the value of this substance in preserving meat? Attempts had been made to introduce a process, founded on the use of carbolic acid, in America; but if this substance was as good a preservative, its use would be much easier.

Mr. Heywood Smith said he had used the salt in nearly all the cases of small-pox and scarlatina he had come across. The cases did well. In one case of chronic agne it gave vertigo.

Dr. Salter remarked that it was said, when the carbolic acid was given by itself, it appeared in the urine; when in composition, not so. What was the explanation?

Dr. Fuller said Dr. Salter perhaps referred to what he had said as to the presence of carbolic acid in the urine. He was not prepared to say that it was there unchanged.

THE PATHOLOGICAL SOCIETY.

TUESDAY, MARCH 2, 1869.

R. QUAIN, M.D., F.R.S., in the Chair.

DR. LANGDON DOWN exhibited a child presenting certain peculiarities which he thought were common to a class. The child was 5 years old, and looked like one of 9 months. He had seen twenty or thirty like her—alike as to physical conformation, character, and mental endowments. There was an arrest of development after the ordinary period of dentition, and they remained in the same condition till they were 19 or 20 years of age in some instances. Their skin appeared as if too large for them. They had large stomachs, and vascular tumours on both sides of the neck. All of them had been procreated under the influence of alcohol, and that appeared to be the only recognisable cause of this extraordinary state. The father in this case was a skilled mechanic, the mother a healthy woman. Neither had ever had syphilis. Their first child was born healthy, after which the father became dissipated, going to bed every night drunk. The next two children were born while he remained in this condition; both of these have presented the peculiar characteristics referred to. After this the father reformed, and the last child born is healthy. In at least five or six this was the only probable or possible cause as far as he could make it out.

In reply to Dr. BASTIAN, Dr. DOWN stated that there was nothing very striking about the children at birth. One could generally tell idiotic children even at birth, but not so with these. In reply to Mr. W. Adams, said that the mother was healthy. The oldest example of this kind of abnormity he remembered was 22 years.

Dr. GREENHOW said he would like to know something of the family history. Such things often run in families, although the parents might be healthy. He thought they should see such beings more frequently if Dr. Down's conclusions were correct.

Dr. DOWN felt there was a degree of improbability in what he said, yet he had made careful inquiries, and could assign no other cause than the one given.

Mr. BRUCE showed for Mr. Erichsen a very large Mulberry Calculus which had been removed from a boy, aged 14, who had suffered very greatly from both bladder and rectum. He gradually improved until the operation became possible, when the lateral operation was performed, and the stone, measuring five by six inches in circumference, was with great difficulty removed.

In reply to Mr. Hulke, Mr. BRUCE stated that he was not aware the case had already been published.

Mr. BRUCE then showed the Œsophagus of a man, aged 67, who first complained in January last year of difficulty in swallowing which gradually increased. He had fits of choking, for the relief of which tracheotomy was performed. He died four days after the operation. A stricture was found in the œsophagus opposite the cricoid, and another lower down had ulcerated into the right lung.

Dr. MURCHISON remarked that full clinical details had been furnished, but nothing as to the pathological condition, and

Mr. SIDNEY JONES asked if the lower stricture of the gullet was not a bougie abscess.

Mr. BRUCE said he had not yet been able to examine it carefully enough.—Referred.

Dr. LEGG then exhibited the parotid glands of a boy who died of albuminuria during an attack of mumps. They were larger than natural, pale grey in colour, and contained a thin opaque fluid with many rounded cells in it. There were many epithelial cells blocking up the acini. There was no reddening, although all say the gland is red in inflammation. All the arteries were atheromatous, and the kidneys were contracted. Such a condition is rare in a boy of 16.

Mr. BRUCE had seen one inflamed gland at Dresden; it was very vascular and highly inflamed. The man died of pyæmia.

Dr. THEODORE WILLIAMS presented a Cancerous Thyroid Body enlarged chiefly on the right side. The tissue all round was infiltrated, and the trachea was infected by extension, exhibiting a wartlike body in its interior. There had been much dyspnœa. An abscess behind the trachea had pushed aside the œsophagus. It was a question as to what was the direct cause of death: the man appeared to waste away rather than otherwise.

Mr. HULKE said primary cancer of the thyroid was so extremely rare that it would be advisable to know whence the disease had sprung.—Referred.

Mr. FAIRLIE CLARKE exhibited a drawing of a Gangrenous Foot. An infant eleven months old had been brought to him with its toes black. Three weeks previously there had been a bright blush on the surface. Four or six days before being seen, the foot had become black, hard, and dry. In twenty-eight days the foot dropped off at the ankle, leaving the joint exposed. He afterwards made a useful stump. He was unable to give any satisfactory account of the arterial supply.

Dr. T. H. GREEN exhibited a specimen of lung from a woman who had died of chronic pneumonia. The woman was aged 56. She had coughed a long time, and her expectoration had been extremely fœtid. She had been in bed for two months. The right lung was adherent by its lower lobe to the wall of the chest; it was indurated and tough, and its tissue filled with large cavities. Fibrous bands spread in all directions. The upper portion of the lung was emphysematous. He could not say whether this was the result of pneumonia or bronchitis. There was no evidence of dilated bronchi.

Dr. POWELL had seen lobular pneumonia cleared out in this manner.—Specimen referred to Drs. Greenhow and Powell.

Dr. HICKMAN exhibited specimens illustrative of transposition of the viscera, removed from the body of a woman aged 28. She had been ailing for ten years, and had suffered from rheumatic fever. Ultimately violent vomiting set in; she gradually became insensible, then comatose, and finally died. The heart was on the right side. The left lung had three lobes, and the right two. The liver was on the left side, stretching far into the right side. There were nine small spleens, each having an artery in its pedicle, on the right. The pancreas formed a lump near the pylorus. The colon began on the right side, and ascended and descended in the abdomen so as to form four parallel lines. The pulmonary veins entered both auricles. The ventricles of the brain contained a large clot.

In reply to Dr. Church, it was stated that the woman had her peculiar red complexion and erythema durum of the face from the time Dr. Hickman first saw her.

Dr. CHURCH then proceeded to show a specimen of Carcinoma of the Skull and Dura Mater. The patient suffered from what seemed to be facial palsy when he came to St. Bartholomew's Hospital, most marked on the right side, but with impaired sense on the left. There was no pain. After death a nodule was found on the forehead, and one at the angle of the mouth, with another on the scalp. On the skull itself were many more medullary-looking masses. The dura mater and inside of the skull were covered with granulations, and hæmorrhage had occurred into the arachnoid; otherwise the brain was pretty healthy. The ribs and sternum were affected like the skull. Nearly all the internal organs were affected; there were deposits in the mediastinum and pericardium, but none in the lung. The spleen was not affected. Such a case rather went against the notion of infection from one spot.—Referred.

Dr. DICKINSON showed a specimen presenting Rupture of the Chordæ Tendineæ of the Mitral Valve. Mechanical injury to the valve was diagnosed during life. A young labourer, aged 21, had been in good health till six months ago; while lifting a heavy load, he felt something snap in his chest, which was followed by great dyspnœa and blueness of face. There was a loud mitral systolic murmur all over the heart, with much pulmonary engorgement. He was bled with temporary relief. The chordæ tendineæ attached to the posterior third of the valve were broken off not very far from the heart.

The PRESIDENT remarked that such cases were not very common, especially where there had been no prior disease.

Dr. MURCHISON said Dr. Peacock had collected seventeen such cases.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, MARCH 3, 1869.

Dr. GRAILY HEWITT, President, in the Chair.

THE following gentlemen were elected Fellows of the Society:—Dr. Brishane, Mr. Cass, Dr. Farquhar (Bangalore), Dr. Sidney Hayward, Mr. Morgan (Travancore), Mr. Barnard Spaull, and Mr. Thompson (Chingleput).

Dr. ROUTH exhibited a new Intra-uterine Pessary to correct deviations and to keep the canal patent after the use of the hysterotome. The instruments most in use—those of Dr. Greenhalgh and Dr. Meadows—had two common defects: first, being too long, and so pressing against the fundus, the part of the uterine cavity which bore pressure with least impunity; and, secondly, being too heavy. Dr. Meadows's glass

pessary was most easy of application, and from the character of its surface gave rise to less disturbance, but it often fell out, and was not always retained *in situ*. Dr. Greenhalgh's did for a time keep itself *in situ*, but the lateral pressure it produced gave rise sometimes to severe hæmorrhage and to so much pain that it could not always be borne, and he had had cases in which he had been compelled to withdraw it five minutes after insertion, although in some cases it answered very well. The instrument he now produced was made of ebonite, and was excessively light. Its shape was in keeping with the shape of that part of the uterine cavity in which it was to fit. That part of the cavity was not shaped like the letter V (as it ought to be to suit Dr. Greenhalgh's instrument), but like the letter Y, with the upper armlets somewhat concave, the concavity looking downwards. His instrument was constructed to fit this shape. Inferiorly there was a round disk, as in all uterine pessaries. The stem was made up of two parts, that lying between the external and internal os straight and like a quill, the straight inferior portion of the Y then divaricating into two very thin armlets with their convexity looking upwards. It was introduced with the armlets in apposition, exactly as Dr. Greenhalgh's, by a stilette. This stilette passed through a hole in the disk, and then outside the stem, not inside, as in Dr. Greenhalgh's. When the stilette was removed, owing to the spring the armlets separated and rested on the sides of the uterine cavity, so keeping the instrument *in situ*. The instrument had some resemblance to Dr. Aveling's, and yet was very different from it. So far as he had tried it he was very pleased with it, as it appeared to be borne very comfortably, and, in his hands, had not yet given rise to irritation. He did not say it would not do so in some cases, but he did say, from its shape and lightness, it appeared to him to possess several advantages over those at present in use. It is made by Coxeter.

Dr. Brunton exhibited a specimen of Knotted Cord.

Dr. Murray exhibited a similar specimen, the knot being of a very unusual character.

Dr. Rasch exhibited a case of Hydramnios, in which one of the twins had died from twisting of the cord close to the umbilicus. The sac of the dead fœtus was considerably larger than that of the fœtus which was born living. A short history of the case was given.

The President remarked that this case raised the interesting question as to the influence of the death of one fœtus in cases of twins in producing dropsy of the amnion—a question which could only be determined by the collection of a large number of cases. In the case which he had brought before the Society at its last meeting, it was the sac of the living fœtus which contained the largest quantity of liquor amnii.

Dr. Madge read a paper on a case of Hydronephrosis of the Fœtal Kidneys, impeding labour. The mother, who during her pregnancy had had some kidney affection, was taken in labour with her first child on January 23. It was a breech-presentation, and the labour was tedious, the difficulty being caused by an enormously distended condition of the child's abdomen. The child was stillborn, and, on examination, the distension was found to be due to two greatly enlarged kidneys. Each lobule was converted into a serous sac, and on holding the kidneys up to the light they appeared transparent, all the secreting structure having disappeared. The supra-renal capsules were healthy. The renal vessels and ureters were either obliterated or had dwindled away. The bladder was empty, but with a small catheter it was possible to distend it with air, the distension extending freely along the urachus to the ligatured extremity of the umbilical cord. The colour of the fluid in the kidneys was that of pale healthy urine; reaction neutral; sp. gr. 1010. It coagulated on boiling, and on adding nitric acid it became completely decolorised. Neither urea nor uric acid could be obtained from it. By the microscope fragments of uriniferous tubes, crystals of triple phosphate, fat globules, and broken epithelial and other cells were found in it. Here and there, also, bodies were observed in the fluid resembling Malpighian bodies—that is, granules closely packed together and enclosed in a capsule. Indirectly the case would go to prove the absence of urea in the fœtal system; for, although the child was otherwise well developed, there had been for some considerable time no kidneys to separate urea from the blood. The labour in this case had been assisted by a silk handkerchief passed round the groin of the presenting buttock, and Dr. Madge threw out the suggestion that he thought the blunt hook in common use might be made a more efficient instrument if the arm of the hook were larger and covered with some soft substance, as india-rubber or washleather. Dr. Madge then exhibited the preparation of the kidneys, and made some remarks on the physiology and pathology of the fœtal kidneys, and gave details of the very few cases of hydronephrosis recorded by English authors.

Dr. Martyn read a paper on a case of Extra-uterine Pregnancy, and exhibited a preparation of the parts concerned. Mrs. W., aged 34, second pregnancy, after an interval of fifteen years. Early in her pregnancy she complained of pains in her abdomen of an uncommon kind, and sometimes of severe neuralgia in her right arm. Frequent sickness. In due time the child was felt, and there was an increase of abdominal and pelvic pain up to the seventh month. The suffering being now extreme and quite unusual, Dr. Martyn made a careful examination of the case. The abdomen was of ordinary size and form, perhaps rather less prominent in the mesial line than usual; child very distinctly felt through the abdominal walls; fœtal heart-sounds 152 per minute, very clear, low down on right side. Per vaginam, the os was found large and cushiony, not dilated, some cervix remaining; the uterus much enlarged. The mammary areolæ were well marked, and milk was found on pressure. On the day after this examination Dr. Martyn was summoned in haste to the patient, who was said to have fainted, and as he arrived she gasped her last. He proposed at once to open the abdomen, but was not permitted to do so. At the post-mortem a large quantity of blood and clots were found in the abdominal cavity, also a full-grown child covered by intestines. The umbilical cord, traced through a rent in a large cyst (formed in left appendages of uterus), was attached to a placenta of ordinary size and appearance. The cyst referred to probably was formed in the left ovary. The Fallopian tube, elongated to nine inches, lay on the upper margin of the cyst, and was pervious throughout. The cyst wall was very thin, and large vessels coming from the uterus were traced on its surface. The uterus was perhaps six times its natural size, considerably elongated, walls thickened, os as largely developed as at term in an ordinary pregnancy. The interior of the uterus was covered with a secretion consisting of epithelium and oily matters, but without any appearance of a membranous deciduum. The os was plugged with the usual gelatinous matter. The fact of extra-uterine pregnancy was not established before death, but the possibility was not overlooked.

Dr. Routh referred to a paper by Dr. Robert Lee on the state of the uterus in these cases. In nearly every case which he (Dr. Lee) had examined in museums or elsewhere, he found a deciduous membrane existed. In the present case there appeared to be none. Had the examination been made at an early period and the extra-uterine pregnancy diagnosed, the question of gastrotomy might at least have been entertained.

Dr. Playfair said that, on looking at the preparation, it could not be doubted that it was within the limits of an operation, and that, by operation, she would have had a better chance of recovery than by allowing the cyst to rupture. The difficulty of diagnosis in these cases must, however, always stand in the way of operation.

The President observed that, in most cases of extra-uterine pregnancy, the uterus itself enlarges considerably, and, as the os participated in the changes going on in the uterus, its condition was of little diagnostic value. The diagnosis of these cases during life was undoubtedly extremely difficult.

Mr. Scott suggested that when there was a well-grounded belief in the existence of extra-uterine pregnancy, the sound might be used to determine whether or no the uterus was empty. The specimen was referred for further examination to a committee consisting of Dr. Martyn, Dr. Phillips, and Dr. Madge.

Dr. Brunton read a paper on Twin Pregnancies, detailing seventeen cases of twins observed in his own practice, and nine cases obtained from friends. Of these cases sixteen had children of the same sex (males or females), with two amniotic sacs. Nine had children of opposite sexes (a male and female) in one sac; and in one case there were two sacs, and one male and one female child. The conclusion at which he arrived was that, if a male ovum came down from each ovary at one and the same time, conception taking place, we had here an explanation of the existence of twin males, and so for female ova. But if two ova came down from the same ovary, conception taking place, we had twins of opposite sexes (male and female), and this pointed to the function of the ovary—viz., that probably the ova cast off from each ovarium are alternately male and female—in other words, each ovary casts off at one and the same time a male, or each a female ovum. In no case were the twins of the same sex in one bag of membranes.

Dr. Playfair remarked that Dr. Brunton had overlooked the cases of conjoined twins, which were never of different sexes, and yet must have had but one sac.

Dr. Brunton replied that he could not see that this fact disproved his theory. His observations were of natural cases. Moreover, in the case of conjoined twin-monsters, there might have been a coalescence of the ova (males or females) from each ovary, producing a double monster of the same sex.

Dr. Cory gave the particulars of a case of Abscess of the Female Urethra.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Saturday, February 20, 1869.

Dr. Druitt, President, in the Chair.

The President alluded in feeling terms to the death of Mr. Orton, Medical Officer for Limehouse. He was present at the last meeting, but having caught typhoid fever in the discharge of his duties, as it is supposed, died in the course of a very few days. The deceased gentleman was the son of Joseph Orton, Esq., of Holsworth-hall, Warwickshire. He studied under Mr. Clement Shaw, of Tamworth, and afterwards with Mr. Hawkesworth, of Barton-under-Needwood, Staffordshire. He was a pupil of Charing-cross Hospital, and, after obtaining his diploma, practised for four years in Gloucestershire before settling in the East of London.(a)

Mr. Liddle called attention to the difficulty of carrying out the Artisans' Dwelling Act. It was important to consider what class of houses ought to come under the Act; these, he thought, were such as could not be structurally improved.

Dr. Vinen reported the result of the conference of the Medical officers with Mr. Redgrave, her Majesty's Inspector of Factories. One result was the drawing up of a common form to be sent round for employers to fill up.

Dr. Ballard believed they would never be able to work the Act, not having the power to enter premises.

Dr. Vinen said Medical officers had already power to enter as sanitary officers, and the Act implied such power in the officer who had to carry it out.

Dr. Guy then read a paper "On Indiscriminate Almsgiving as a Source of Disease and Crime." An analysis of this paper was given in the *Medical Times and Gazette* for February 27, 1869.

Mr. Taverner, Poor-law Guardian of Marylebone, cordially thanked Dr. Guy, and only wished he had gone a step or two higher. He referred to the supplementing of parochial relief by the clergy and benevolent ladies, which enabled people to live in idleness. This was a source of the greatest difficulty to the guardians. Another source of evil were the night refuges. At Marylebone Workhouse they had casual wards good enough for any one. But they were not taken to like the refuges—and why? Because the guardians insisted on the casuals taking a bath before they went to bed, and doing two hours' work in the morning. Both these things were highly distasteful to the genuine tramp.

Mr. Liddle believed that the liberal charities and comfortable workhouses of London attracted people from all parts, who came to live without work. Too ready accommodation was given to thieves and bad characters in houses which were built for quite a different class. Attention should be given to the houses erected, and the shortcomings of our forefathers might then be dealt with more easily. The expense would be found lighter in the end.

Dr. Stallard thought Dr. Guy's estimate of 75,000 persons living on casual charity in London too small; he believed 1,000,000 was nearer the truth. He proceeded at some length to show what large sums were expended in charity besides parochial relief. The public Hospitals must bear their share of blame. He did not see, however, how these sources could be closed until the guardians gave adequate relief. His plan was that the metropolis should be divided into districts; that each institution should keep a correct register of those relieved, which should be open to all; and that more unity of action should be aimed at.

Dr. Webster quite agreed with Dr. Guy that indiscriminate almsgiving was a cause of idleness and crime.

Dr. Gibbon concurred with Dr. Stallard's remark in reference to Hospitals, and was sorry that Mr. Gladstone's Bill taxing their institutions had been abandoned.

Dr. Hodgson hoped the contents of Dr. Guy's paper would be well ventilated.

Mr. Holland thought one had no right to withhold alms, or persuade others to do so, until efficient relief was given.

The President said that Dr. Guy did not mean to rob the poor, but to show that the recipients of indiscriminate almsgiving were not proper objects, and diverted alms from those who were proper objects of relief. The pauper and criminal classes could not exist if there were not low dens fit for their reception. On these grounds he was strongly opposed to the obnoxious theory of equalisation of rates. For the most part relief given by the parish goes into the pockets of landlords; it would, therefore, be unfair to call upon St. George's, Hanover-square, to contribute to pay for the benefit of landlord guardians at the East-end. He could not imagine anything more communistic than the Poor-laws, which allowed men to act as they liked, do as they liked, and then come and dip their hands into the pockets of the ratepayers.

Dr. Guy said he had not dealt with Hospitals, because they did not come under the heads which he had laid down at the commencement of his paper. With regard to punishing givers as well as beggars, a law was made in Edward III.'s time for that purpose, and he saw no reason why it should not be revived. He was decidedly of opinion that the Poor-law was most communistic. It was peculiar to England, and if we were wise we should abolish it. He considered it disgraceful that the law should tolerate that a man should be able to say with impunity in open court, that "he never did work and never would work." He thought that even if the Apostle Paul were present he would answer him with the alternative, "Then shalt thou die." With regard to Hospitals, there was the test of sickness, and his remark applied only to alms given where there was no test. Still he thought that out-patients ought to pay something, say 1s., which was about the cost of the medicine. Dr. Guy concluded by exhorting those present to aid in prevailing upon people to abstain from almsgiving indiscriminately, seeing the evils to which it gave rise.

(a) Although best known from having (almost single-handed at first, although afterwards powerfully supported by Dr. Letheby) opposed the theory which ascribed the cholera epidemic of 1866 to the East London water supply, yet his attention had been fruitfully directed to many other scientific subjects. He suggested the collation of the weekly returns of the mortality, etc., of the metropolis with those of other capitals and large towns, which has since been so ably carried out by Dr. Farr. In 1862 he published a series of cases in the *London Medical Review* on poisoning by arsenical wall-papers, referred to by Dr. Taylor in his "Medical Jurisprudence." He introduced a cheap and efficient respirator (from the sale of which he derived no profit) for use in white-lead factories. When cholera broke out in 1866, it is only saying the simple truth, that, in proportion to the number and severity of the cases, none of the eastern districts were so economically and efficiently provided for, as regards the Medical supervision and separation of cases and house-to-house visitation, as the district over which Mr. Orton presided. The whole of the arrangements were made under his care, and his unwearied exertions laid the foundation of ill-health, from which he never really recovered. His kindly, courteous manners and liberality to the poor cause him to be generally and deeply regretted wherever he was known.—(From a MS. memoir with which we have been favoured by Dr. Woodman.)

LEGAL INTELLIGENCE.

COURT OF CHANCERY, Lincoln's-inn, March 12.

(*Before the* Lords Justices of Appeal.)

MACKENNA V. PARKES.

This was an appeal from Vice-Chancellor Malins. The plaintiff, Dr. Mackenna, in February, 1863, entered into an agreement for a partnership for 21 years with the late Dr. Parkes, who resided in Great Marlborough-street, where he carried on the business of a Medical Practitioner. The plaintiff was to pay by instalments £1250 for a half share in the business, and Dr. Parkes was to give him a three years' introduction to his patients. There was also contained in the partnership agreement an option, in the event of the death of one partner, for the other partner to purchase the deceased partner's share at a valuation. At the time when this agreement was entered into Dr. Parkes was suffering from a serious disease, and in the middle of August, 1863, he was compelled to leave London, and in December, 1863, he died. Dr. Mackenna afterwards gave notice of his intention to exercise his option of purchasing Dr. Parkes's half share of the business. At the time of the death of Dr. Parkes, Dr. Mackenna had paid £600, part of the £1250, and had given bills for the remainder. On being sued upon those bills by the widow of Dr. Parkes (who is better known to the public as Miss Amy Sedgwick), Dr. Mackenna filed the bill in this suit against Mrs. Parkes, the principal object of the suit being to assert the plaintiff's right to have a reduction in the amount of £1250 agreed to be paid by him, on the ground that the state of Dr. Parkes's health was improperly concealed from the

plaintiff when the agreement was entered into. Vice-Chancellor Kindersley held that the plaintiff was entitled to an abatement from the £1250, and the matter was referred to Chambers to determine what amount should be deducted, and also what sum the plaintiff ought to pay for Dr. Parkes's half share of the business. The Chief Clerk found that £825 ought under the circumstances to be deducted from the £1250, and that the plaintiff ought to pay £425 for Dr. Parkes's half share. On the application of the plaintiff the Vice-Chancellor varied the Chief Clerk's certificate by directing the £425 to be struck out, and so in effect giving the plaintiff the whole business for the sum of £425. From this order Mrs. Parkes appealed.

The evidence showed that the business had fallen off very much after Dr. Parkes had been obliged to leave, and still more after his death.

Mr. J. H. Palmer, Q.C., and Mr. W. W. Cooper appeared for Mrs. Parkes; Mr. Lindley for the plaintiff.

Their Lordships were of opinion that, under the circumstances, it would be fair that the plaintiff should pay £170 in addition to what the Vice-Chancellor had directed. They consequently varied the Vice-Chancellor's order to that extent, but gave no costs of the appeal.

ROLLS' COURT. Chancery-lane. March 15.

(Before the Master *of the* Rolls.)

SANGER v. SANGER—EX PARTE LR. JAMES CLARK.

This was a claim adjourned from Chambers of a Medical man upon an estate in course of administration in the above suit in respect of attendance upon two wards of Court, who were plaintiffs in the cause. The case was of some interest, involving as it did the question upon what scale Medical men who practise as general Practitioners, and dispense their own medicines, are entitled to charge for their professional services. In 1865 the plaintiffs, who are two young ladies, then aged 17 and 10 respectively, were at school at St. John's-wood, and Dr. James Clark, of 3, St. Mark's-square, Regent's-park, M.D. of Edinburgh, but practising as a general Practitioner, and dispensing his own medicines, was called in to attend them professionally, the elder for some trifling complaint, the younger for measles and other ailments which endangered her life for a time, and required his continuous care and attention for many weeks. Dr. Clark paid in all 125 visits, and went twice to Worthing and thrice to Brighton to attend his younger patient when removed thither for change of air, besides meeting Sir William Jenner thrice in consultation. His bill against the elder patient was £20 9s. 6d., being at the rate of one guinea per visit, or half a guinea when he saw her sister also. His bill against the younger patient was £289 16s., being at the rate of a guinea per visit, besides the following items:—Thirty guineas for each visit to Worthing, twenty-five guineas for every visit to Brighton, six guineas paid to Sir William Jenner for the consultations, and a final item of forty guineas for correspondence and sundry consultations and interviews with the solicitors and other parties interested in the cause. The guardians resisted Dr. Clark's claim, which amounted to £310 5s. 6d., and offered one hundred guineas, which Dr. Clark refused to accept, and carried his claim before the Chief Clerk, who awarded him £82 13s., being 7s. 6d. for every visit, or £46 17s. 6d.; ten guineas for each visit to Worthing; and six guineas paid to Sir William Jenner for the consultations, with some other items, and disallowing the visits to Brighton and the final item of forty guineas altogether. The claim was thereupon adjourned into Court by Dr. Clark. It was submitted on his behalf that the charge of a guinea per visit was reasonable, considering the care and skill applied, the dangerous nature of the disorder, and the means of the patients. Affidavits were read from Sir William Fergusson, Dr. Russell Reynolds, and other eminent members of the Profession, to show that half a guinea per mile, the rate at which the visits to the seaside were charged, was a usual and reasonable charge, and that he was justified in paying those visits under the general authority to attend the patients. On the other hand, the guardians, admitting that all the visits had been paid, and acknowledging the skill of Dr. Clark and the value of his services, insisted that the charge per visit was too high, and that the visits to the seaside were not specially authorised, and repudiated the final item entirely.

Mr. Jessel, Q.C., and Mr. F. H. Colt, in support of the claim, acknowledged that the charges were large, but submitted that a general Practitioner was not to be governed by any fixed scale of charges in making out his bill, which must depend on the circumstances of the patient and the care and attention required; and that in the present case the charges were justified by the unusual amount of attention required and given, and that, at any rate, Dr. Clark was entitled to more than the Chief Clerk had allowed, and was the proper judge, under the general authority given him, as to whether the visits to Brighton and Worthing were or were not necessary.

Mr. Jessel, Q.C., and Mr. Colt having been heard, his Lordship asked whether the other side would repeat their offer of one hundred guineas. This being acceded to,

His Lordship said.—I think that this sum is even more than Dr. Clark is entitled to, and I must dismiss his summons, with costs from the time when he rejected the guardians' offer of one hundred guineas. I think it right to add that if the case had not ended as it has I should have disallowed the visits to the seaside altogether, as well as the concluding item, and have materially reduced the allowance for visits.

Sir R. Baggallay, Q.C., and Mr. John Chester were for the guardians; Mr. Southgate, Q.C., and Mr. W. W. Cooper for the infant plaintiffs.

NEW BOOKS, WITH SHORT CRITIQUES.

The Surgical Treatment of the Diseases of Children. By T. Holmes, M.A. Cantab., late Surgeon to the Hospital for Sick Children, Surgeon and Lecturer on Surgery at St. George's Hospital, etc. Second edition. London: Longmans. Pp. 687.

*** The rapidity with which a second edition of Mr. Holmes's book has been demanded indicates the public opinion of its value. It is, indeed, the most complete of the treatises of this kind which we possess. It embodies the fruits of many years' experience and much reading, and this edition is more perfect than the preceding, as it contains chapters on subjects not hitherto handled. The most important addition is no doubt that on Orthopædic Surgery, which had not been included in the last edition. In his preface Mr. Holmes speaks of the peculiarities of children's diseases as compared with those of adults.

A Treatise on Syphilis, Historical and Practical. By Dr. E. Lancereaux, head of the Clinical Department of the Faculty of Medicine in Paris, etc., etc. Translated by G. Whiteley, M.D. Vol. II. New Sydenham Society. Pp. 379.

*** The portion of Lancereaux's great work included in this volume deals with the tertiary stage of acquired syphilis, that characterised by gummy deposits. Congenital syphilis is also treated, and is divided into precocious and tardy congenital syphilis. The varieties, the symeiology, the etiology, and the treatment of syphilis also come in for their share of attention. The latter division includes the questions of prevention and general hygiene. We need hardly say that Lancereaux is an advocate for the proper use of mercury.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, March 11, 1869:—

Atkins, Francis Day, Dalston-lane, Dalston.
Coombe, Robert Gorton, Burnham, Essex.
Ennals, Charles Thomas, Littleport, Cambridgeshire.
Laking, Francis Henry, Addison-road, Kensington.
M'Clean, George, High-street, Poplar, E.
Peacock, Edwin, Oldbury, Worcestershire.
Turner, George Edward Waine, Stockport.
Welsh, Joseph, Clun, Salop.

As Assistants in compounding and dispensing medicines:—

Hughes, Hugh Davies, Gurner-street, Walworth.
King, Alfred, Blackman-street, Borough.
Luff, William, Cornmarket-street, Oxford.
Thrower, Edward Arthur, Diss, Norfolk.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Buckell, Francis J., M.B. Lond.—Honorary Medical Officer to the Holloway and North Islington Dispensary, *vice* Dr. Ducat, resigned.

Lewis, William Bevan, L.R.C.P. Lond., M.R.C.S.E., L.S.A.—Assistant-Medical Officer to the Bucks County Lunatic Asylum, at Stone, near Aylesbury.

Maccall, William N., M.B., C.M.—House-Surgeon to the Clinical Hospital and Dispensary for Children, Park-place, Cheetham-hill-road, Manchester.

Maunder, C. F., F.R.C.S.—Surgeon to the London Hospital.

Wilson, J. B., L.R.C.P.E.—Assistant House-Surgeon to the Sheffield General Infirmary, *vice* J. B. Ward, B.A., M.B. Cantab., resigned.

NAVAL AND MILITARY APPOINTMENTS.

13th Foot.—Assistant-Surgeon Charles Christopher Piper, from the 9th Foot, to be Assistant-Surgeon, *vice* Isaac Heysted, who exchanges.

Medical Department.—To be Staff Assistant-Surgeons: James Chatterton, M.D.; Alexander Haldane Stokes, M.B.; George Roderick Triphook, M.B.; William Henry Saunderson, M.D.; James Scanlan, M.B.;

John Joseph Crean, gentleman; George Corry, gentleman; Francis Arthur Davy, M.D.; Francis George Clyde-Curran, M.B.; Horatio Edmund Maunsell, M.B.; Thomas Edward Carroll, gentleman; Alexander William Duke, M.D.; Robert Mark Bradford, gentleman; Henry Stannard, gentleman; John George Thornley, M.D.; Edward Cleaver Maxwell, gentleman; John Holden Webb, gentleman; Richard Dawson Bennett, gentleman; Thomas Faris, M.B.; William Sharpe, M.D.; Hugh Brady White, gentleman.

1st Newcastle-upon-Tyne Artillery Volunteer Corps.—Thomas Patterson Wood, to be Assistant-Surgeon, *vice* Brown, resigned.

BIRTHS.

Bullock.—On March 16, at Spring-grove, Isleworth, the wife of Henry Bullock, F.R.C.S., of a daughter.

Hocken.—On March 9, at Wood-green, Middlesex, the wife of Chas. E. Hocken, M.B., M.R.C.S., of a daughter.

Moore.—On March 13, at Cambridge-heath, N.E., the wife of Dr. E. H. Moore, of a son.

Southey.—On March 9, at Colnbrook, Slough, the wife of Albert James Southey, M.R.C.S., of a son.

Watson.—On March 8, at 27, Montague-street, Russell-square, the wife of Spencer Watson, F.R.C.S., of a son.

MARRIAGES.

Air—Tiddy.—On March 16, at Camberwell New-road Congregational Chapel, A. Cummings Air, M.R.C.S.E., of 33, Lorrimore-square, S.E., to Mary, youngest daughter of the Rev. W. P. Tiddy, of the Grove, Camberwell. No cards.

Averne—Watson.—On January 1, at Christ Church, Bhaugulpore, Fred. Morris Averne, Esq., Executive Engineer P.W.D., to Jane, daughter of George Churchill Watson, M.D., Chester.

Leacock—Law.—On February 23, at Antigua, C. G. Leacock, M.R.C.S., second son of W. H. Leacock, Esq., London, to Jesse Florence, fourth daughter of the late James Law, Esq., of Green Castle, Antigua.

White—Roche.—On February 8, at Bombay, India, Staff Assistant-Surgeon Wm. O'Bryne White, third son of the late M. E. White, M.D., of Killoughter and Ballynahinch, county Wicklow, Ireland, to Katie Mary, third daughter of Wm. Roche, Esq., of Harcourt-street, Dublin.

DEATHS.

Barham, T. F., M.B., of Newton Abbott, Devon, on March 3, aged 74.

Boxall, Wm., M.R.C.S.E., of Swindon, Wilts, on March 5.

Calvert, Emily, relict of Robert Calvert, M.D., Deputy-Inspector of Army Hospitals, at the residence of her son-in-law, T. E. Brisley, 3, St. John's-road, Brixton, on March 14, aged 69.

Edwards, Jane, widow of the late Henry Edwards, M.R.C.S.E., at the house of her brother-in-law, 34, Fore-street, City, on March 16, aged 68.

Else, John Ogle, M.R.C.S., at his residence, Walham-green, on March 12, aged 66.

Everett, Benj. George, M.R.C.S.E., L.S.A., at Tillwood House, Pitchling, Sussex, on March 2, aged 31.

Hamlyn, James, retired Surgeon, Madras Army, at Lockyer-street, Plymouth, on March 6, aged 61.

Hull, Hannah, widow of the late Robert Hull, M.D., at her residence, St. Michael-at-Plea, Norwich, on March 11, aged 59.

Hulseberg, Mina, the only daughter of Staff Surgeon John W. Hulseberg, at Fort Pitt, Chatham, of bronchitis, on March 14, aged 2 years and 9 months.

Ley, William, M.R.C.S., late Superintendent of the Asylum, on March 7, at Littlemore, at the Superintendent's lodgings, in his 63rd year.

McDonnell, Mary M., wife of Dr. Robert McDonnell, of 14, Lower Pembroke-street, Dublin, at Clonbeala, King's County, on March 8.

Olliffe, Sir Joseph Francis, M.D., Physician to her Majesty's Embassy at Paris, at 12, Chichester-terrace, Brighton, on March 14, aged 61.

Peacock, Cornelia, the beloved wife of T. B. Peacock, M.D., at 20, Finsbury-circus, on March 11, in her 42nd year.

Perry, Barbara Linoley, relict of the late Sampson Perry, M.D., at the residence of her son-in-law, Spring-villas, Tottenham-green, on March 11, in the 85th year of her age.

Porter, John Vining, M.R.C.S. and L.S.A., at his residence, Bloomfield Lake, Isle of Wight, on March 4, aged 50.

Pursell, John, M.D., after a short illness, at Brighton, on March 12, in his 66th year.

Wood, Herbert, Surgeon, at Ashton-under-Lyne, on March 7, aged 27.

Wride, George, M.R.C.S., L.S.A. (late of Fovant, Wilts), at Merton Lodge, Cowley-road, Brixton, on March 15.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Arowick and Ancoats Dispensary, 94, Mill-street, Manchester.—Junior House-Surgeon; must be duly qualified and be registered. Applications and testimonials to J. P. O. Gorman, House-Surgeon, at the Institution, on or before the 20th inst.

Camberwell Provident Dispensary.—Resident Dispenser and Secretary. For further particulars, apply to M. D., Mr. Ward, stationer, Denmark-hill, S.E.

Chester General Infirmary.—House-Surgeon; must have both Medical and Surgical qualifications. Applications, with testimonials, to the Chairman of the Board of Management on or before the 31st inst.

Dowlais Iron Works.—Assistant-Surgeon; must be a Welshman, legally qualified, and unmarried. Applications and testimonials to Peacock R. Cresswill, Chief Surgeon, Dowlais, Merthyr Tydfil.

Farringdon General Dispensary and Lying-in Charity, 17, Bartlett's-buildings, Holborn.—Honorary Surgeon; must be F. or M.R.C.S.E., and not practising midwifery or pharmacy. Applications and testimonials to Mr. S. Green, St. Michael's House, St. Michael's-alley, Cornhill, on or before March 29. Election on April 6.

Gray's Hospital, Elgin.—House-Surgeon. Testimonials to Fife Duff Robertson, Town Clerk, Elgin, on or before April 27. The duties will commence on May 15. The gentleman who holds the above appointment is usually elected Medical Officer to the Lunatic Asylum for Elginshire, which adjoins the Hospital.

Hospital for Sick Children, 49, Great Ormond-street, W.C.—Physician; must be F. or M.R.C.P.L. Applications to S. Whitford, Esq., Secretary, on or before March 24.

King's College Hospital.—Assistant-Physician; for particulars apply to J. W. Cunningham, Esq., Secretary at the Hospital

Leeds Fever Hospital.—Resident Medical Officer; must have both Medical and Surgical qualifications, and have had some experience in the treatment of fever. Applications and testimonials to Dr. Eddison, 16, Park-square, Leeds, on or before March 22.

Liverpool Infirmary for Children.—House-Surgeon (unmarried); must have both Medical and Surgical qualifications, and be on the Medical Register. Applications and testimonials to John Calder, Esq., Hon. Secretary, on or before March 22. Selected candidates will receive notice requiring their attendance.

London Surgical Home for Diseases and Accidents of Women.—House-Surgeon. For particulars, apply to Mr. Baker Brown, 136, Harley-street, Cavendish-square, W.

Royal Orthopædic Hospital, 315, Oxford-street, W.—Assistant-Surgeon; must be M.R.C.S.E. (not practising pharmacy or midwifery). Applications and testimonials to the Secretary, on or before the 24th inst. Further information may be obtained from the Secretary.

Royal South London Dispensary, St. George's-cross, S.E.—Honorary District Surgeon. For particulars, apply to Mr. Hentsch, at the Dispensary.

St. Alban's Union.—Medical Officer for the Second District, comprising St. Peter's, Smalford, and Sandbridge. Candidates must be legally qualified. Applications and testimonials (stating age) to the Clerk to the Guardians, St. Alban's, on or before March 25. Election on the same day at 12 o'clock.

St. Giles's District Board of Works.—Medical Officer of Health; must be legally qualified. Applications and testimonials to the Clerk of the Board, Stone-yard, 199, Holborn, endorsed "application for the appointment of Medical Officer of Health," on or before the 27th inst. Residence in the district will be required.

St. Ives (Hunts) Union.—Medical Officer for the Somersham District. Candidates must be registered under the Medical Act, 1858, and have the qualifications prescribed by the Poor-law Board. Applications and testimonials to Mr. E. A. Wallingford, St. Ives, Hunts, on or before March 30. Election on March 31.

Stepney Union.—Medical Officer for the Ratcliff, Shadwell, and Wapping District; candidates must be legally qualified. Applications and testimonials to Mr. W. H. Swepstone, York-street, West Ratcliff, E., before 12 o'clock on Monday, March 22. Notice will be given to any candidate whose attendance may be required.

Sunderland Infirmary.—House-Surgeon; must possess both Medical and Surgical qualifications, and be registered. Testimonials and diplomas to the Secretary, on or before May 1. Election on May 10.

Towcester Union.—Medical Officer; must be legally qualified. Applications and testimonials to Mr. J. H. Sheppard, Towcester, on or before March 22. The duties will commence on Lady-day. The gentleman appointed will be required to reside in Towcester.

Victoria Hospital for Sick Children.—House-Surgeon and Secretary; must have a registered qualification. Applications and testimonials to the Managing Committee, Gough House, Queen's-road, Chelsea, on or before March 27. Election on March 31.

Warrington Dispensary.—Resident Surgeon-Apothecary; must have a diploma of one of the Royal Colleges of Surgeons of London, Edinburgh, or Dublin. Applications and testimonials, stating whether married or single, family, etc., to Joseph Davies, Esq., at the institution, on or before the 24th inst.

Westbourne Dispensary, Queen's-road, Bayswater, W.—Resident Dispenser; must be duly registered. Applications and testimonials, stating whether the applicant is married or unmarried, to Mr. E. G. Turner, Hon. Sec., 59, Princes-square, Bayswater, W., on or before March 22.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Luton Union.—Mr. E. T. Williams has resigned the Markyate-street District; area 11,085; population 3853; salary £50 per annum.

Rotherham Union.—Dr. Clarke has resigned the Wentworth District; salary £20 per annum.

Steyning Union.—Mr. C. V. Willett has resigned the Second District: area 6369; population 2586; salary £40 per annum.

Woburn Union.—Mr. Thomas Mayor has resigned the Toddington District; area 11,791; population 4687; salary £85 per annum.

APPOINTMENTS.

St. Pancras Parish.—John W. Barnes, F.R.C.S., M.R.C.S., L.S.A., to the Fifth District.

Wallingford Union.—Jacob Pickett, M.R.C.S.E., L.S.A., to the Wallingford District and the Workhouse.

The Levée.—At a levée held on Friday, March 4, at St. James's Palace, by his Royal Highness Prince Arthur, on behalf of her Majesty, Sir Edward Hilditch was presented on his appointment as honorary Physician to the Queen by the First Lord of the Admiralty. The following gentlemen attended the levée:—Sir William Jenner, Drs. William Carr and Sall, Messrs. White Cooper, James Paget, etc.

ROYAL COLLEGE OF SURGEONS.—The proceedings of the Council of this institution on the 11th proximo have just been suspended in the hall, in pursuance of the resolution to that effect. There is, however, little to announce more than has already been communicated to the readers of the *Medical Times and Gazette*. The only matter of any importance is the division which took place on Professor Humphry's motion respecting elections into the Court of Examiners, which was seconded by Mr. Prescott Hewett, and on whose demand, in conjunction with Mr. Charles Hawkins, the names of those voting for and against the motion were directed to be entered on the minutes. For the motion there were 13, viz. :—Messrs. Cock and Solly (Vice-Presidents), and Messrs. Adams, Busk, Curling, Clarke, James Paget, Hawkins, Hewett, Birkett, Simon, Humphry, and Holden. Against the motion, 3, viz. :—Messrs. South, Lane, and Turner. The motion was consequently carried.

THE Senate of the University of Cambridge have just passed a grace for the admission of "unattached students"—that is, for permitting students to reside, keep terms, attend lectures given by the Professors, etc., without their being members of Colleges. This will diminish the compulsory expenses of a University course which are already not very high.

PROFESSIONAL PAY AT GUILDFORD.—The *Parochial Critic* states that the Guildford Local Board give their Medical officer the handsome stipend of £10 per annum, and, as they have been giving their surveyor £80 per annum, a committee of inquiry recommend "that a considerable reduction should be made in his salary."

THE junior students of Charing-cross Hospital have just united to present to Mr. Pearce, the Assistant-Demonstrator of Anatomy, a case of Surgical instruments and an address engrossed on vellum indicative of their high sense of Mr. Pearce's endeavours to make them familiar with osteology. Mr. Pearce is one of the senior students of the Hospital. Such kindly feelings between teacher and taught speak well for a school and well for its pupils.

THE Manchester Medical students have, for the purpose of mutual instruction, united among themselves to constitute the Athenæum Medical Students' Association. The inaugural address was delivered by S. M. Bradley, Esq., Demonstrator of Anatomy in the Manchester School.

THE GREAT NORTHERN HOSPITAL.—The biennial dinner of this charity took place under the presidency of Lord Houghton on Wednesday evening, at the Freemasons' Tavern. Lord Houghton in the course of the evening said that from personal inspection he could speak in the highest terms of the condition of the Hospital. The donations and subscriptions announced during the evening amounted to £2171.

THE next meeting of the Metropolitan Association of Medical Officers of Health will be held this (Saturday) evening, at half-past seven, at the Scottish Corporation Hall, Crane-court, Fleet-street. The result of the returns of scarlatina during 1868 will be stated. Mr. Liddle will introduce the subject of the class of houses desirable to place under the provisions of the Artisans' and Labourers' Dwellings Act. Mr. Sharpe will exhibit models of improved sanitary dwellings. A discussion will be invited on the out-patient system at Hospitals and Dispensaries.

DR. ROBERT LEE has just placed in the Anatomical Museum of the University of Cambridge a large part of his valuable collection of anatomical and pathological specimens, comprising the series of the much-discussed dissections of the ganglia and nerves of the heart, dissections of the nerves of the uterus, and specimens illustrative of the healthy and morbid condition of the ovum, as well as the specimens described in his papers on uterine phlebitis. They are a very instructive group, and constitute a valuable addition to the Cambridge collection. They are accessible without difficulty to those who may be desirous of examining them.

CONVERSAZIONE AT THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—On Thursday evening, March 11, Dr. Churchill, President, received his Excellency the Lord Lieutenant, K.G., a large number of distinguished visitors, and most of the members of the Medical Profession in Dublin, as well as many from the provinces, at a very brilliant *conversazione* in the College Hall. Numerous articles of scientific and general interest were exhibited by Sir W. R. Wilde, Dr. Carte, Dr. John Barker, and Dr. Frazer; and, in particular, a very beautiful collection acquired by Professor E. Perceval Wright during his recent visit to the Seychelles, attracted general attention.

METROPOLITAN COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—A meeting of the Committee on Parliamentary Bills, etc., will be held at 37, Soho-square, W.C., on Tuesday, April 6, to consider the Pharmacy Act Amendment Bill, the Poor-law Medical Officers' Superannuation Bill (Ireland), the Draft Medical Acts Amendment Bill, etc. All communications on subjects affecting the interests of the Profession in Parliament should be addressed to Dr. A. P. Stewart, 75, Grosvenor-street, or to Dr. Septimus Gibbon, 39, Oxford-terrace.

POOR-LAW MEDICAL SERVICE.—*Shoreditch.*—The Board of Guardians adopted the recommendation of the Infirmary Committee that a redivision of the parish should be made for the purposes of Medical relief in proportion to area and population. The method of supplying expensive medicines, which the guardians have undertaken to provide, will be considered at the same time. The Medical officers advised the board to have a dispensary and a dispenser of their own for this purpose. *Poplar.*—The guardians have determined to discontinue the services of the assistants of Drs. Brain and Gale, and to form another Medical district, the salary to be £120, without any extra fees being allowed. *Birmingham.*—The Poor-law Board have refused to sanction the reduction of the number of Medical officers from eight to five, and ask what reasons the guardians have for such a step, considering that the population has been constantly on the increase. The matter will come on again at the next meeting.

THE coolness of the following, which we should gladly have copied last week had our space permitted, is, to say the least of it, amusing as well as refreshing. The editor of the *Californian Medical Gazette* thus apologises for his negligence in bringing out a number of his journal:—"We much regret that we were unable to bring out our Gazette last month, and we tender our sincere apology to our subscribers. The only excuse we have to offer is the simple truth—we were so much overwhelmed with other business that we had not time. This kind of proceeding, and this kind of apology, is, we think, without precedent. Subscribers at home may grumble, but those abroad will, perhaps, excuse us, in the idea that the fault is a venial one in a Californian." This journal, which was started, according to its editor's account, because Medical opinion was not properly represented by the previously existing organ, edited by Dr. Gibbon, and which we, more than once, have had occasion to quote, must surely occupy an infinitely secure position if its editor can thus afford to neglect his duties.

THE *Indian Medical Gazette* for February contains a valuable report on the value of a certain so-called specific against snake poison, from the pen of Professor Fayrer. A native said he knew of a substance which was a certain cure in all cases of snake-bite, and the point was to discover the value of this antidote, which had been favourably reported on by Colonel Shower. Dr. Fayrer made only one experiment, but that, as far as it went, was conclusive. The antidote appeared to be utterly valueless. Of course from a single experiment the conclusions cannot be absolutely indisputable; still they serve to show that the so-called antidote is not infallible. There is nothing we can more highly commend than the recent researches instituted by our brethren abroad as to the results and means of antagonising snakebite. The subject had been far too long neglected, but we may now be permitted to hope that it will before long be brought to the level of other and perhaps not equally accessible domains of physiological knowledge. The recent communication by Dr. Weir Mitchell which appeared in our columns, cannot fail to be encouraging to our Eastern observers. By the bye, has any one seen the peculiar bodies described by Dr. Halford as existing in the blood of those poisoned by snakebite? A good many observers have now declared that they have never been able to see them.

THE Pharmacy Act would not seem to be so very popular with "the trade" as we might have imagined. The first symptom of this is the publication of the first number of a journal entitled the *Chemists' and Druggists' Advocate*. Many members of our Profession may not be aware that before the introduction of the Pharmacy Act there were two powerful bodies antagonistic to each other, and that it was only by dint of good management that a bill acceptable to both bodies of chemists and druggists was introduced. A certain section of them now complain that the Pharmaceutical Society have taken advantage of the Bill, while going through committee, to introduce clauses which render it practically inoperative, except in a repressive sense, as far as regards their division of the trade. To avenge their grievances, this journal, which would seem to be only a continuation of their old organ, has been instituted.

Our readers know how highly we appreciate the *Pharmaceutical Journal* by the valuable extracts we have from time to time made from its columns. It would only be fair that we should do something of the same kind for this new applicant for public favour. We accordingly extract the following:—"Vicq d'Azyr and Lavoisier, having been requested by the Academy of Sciences of Paris to compare with respect to their relative mortality the Hôtel-Dieu and La Charité, have signed a report in which the following passage occurs," etc. We take for granted that our readers are aware of Lavoisier's execution during the first French Revolution, and that he is not alive at the present day, as the paragraph would imply. By the time the new Society is consolidated, the ideas of the *Advocate* will be clearer.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Subscriber.—Apply to the nearest respectable Surgeon.

A review of Dr. Duncan on Perimetritis and Parametritis is in the printer's hands.

Dr. Gordon's papers on Army Sanitation in India will be continued immediately.

The Levée on March 5.—In our account of the presentations to her Majesty, the name of Deputy-Inspector-General Charles W. Pickering, presented by the Secretary of State for India, was accidentally omitted.

Dr. Oldfield.—In reference to Mr. Porter's case of vesical calculus, we have received a letter from that gentleman from which the following is an extract:—

"A section has not been made of the calculus; I therefore cannot say if it contain a nucleus, or is composed wholly of triple phosphate. There was no pyelitis while the patient was under my care."

Vulcan, Darlington.—Artificial eyes can be obtained from any Surgical instrument maker. The best are made in Paris. If the foundation on which the artificial eye rests be thoroughly healed, they give rise to no pain or inconvenience, and the other eye does not suffer. The price is generally twenty-six shillings. You can obtain them from Messrs. Weiss, Strand, London.

M. Sherburn.—What you state with regard to Laville's Gout Liquid is of much interest. The substance is, we have reason to believe, esteemed by many as a valuable but highly dangerous remedy for gout. The composition assigned to it is essentially a solution of colocynth with quinine and cinchonine in a strong sherry; but this is generally looked upon as a blind. There are also some anti-gout pills bearing the same name of Laville, the assigned composition of which appears to be equally apocryphal. We have asked one of our staff to make some further inquiries into the matter.

On the Study of Science by Women.—An able paper on this subject by Miss Becker appears in this month's *Contemporary Review*. Miss Becker writes clearly and fluently. It must also be admitted that, as one of the class of female writers to which belong Miss Martineau, Miss Carpenter, Mrs. Somerville, Frances Power Cobbe, etc., she has done, and is doing, good service to her sex and to humanity. It is, however, rather amusing to see such an argument as the following advanced by a female philosopher on behalf of association of the sexes in classes for instruction in the sciences. Speaking of supernumerary "women's classes," Miss Becker observes—

"There are not a sufficient number of women as yet roused to the interest of such subjects to afford material for the promotion and continuance of such isolated classes, and the fact of their exclusion from the companionship of the other sex acts as a damper on their spirits. They would not care much for social pleasures if they were only admitted to women's balls, women's dinner parties, women's croquet parties, and women's concerts; and if they are only allowed to participate in intellectual pleasures on these exclusive terms, they will certainly not derive from them either the advantages or the healthful stimulus which these are capable of affording."

Another passage, elucidated by the above, is really too good and piquant to be passed over. She likens the efforts made by the London University to assist women up the ladder of learning to the earlier attempts of Mr. Frank Buckland to facilitate the progress of salmon up rivers over obstructive weirs and dams placed there by man, by means "adapted to their special tastes and capacities;" "but the ingrateful beasts would not go in." Mr. F. Buckland at last found out exactly what the salmon wanted, and the moment arrangements were made in accordance with its needs, off it went like an arrow up stream on its way to the mountains.

"Now, if those who are sincerely, but perhaps somewhat blindly, trying to open the way to a higher life for women will be as wise as Mr. Frank Buckland in seeking to adapt their means to the real feelings and wishes of those whom they are striving to benefit instead of to what they imagine women ought to feel and admire, they will be as successful as he was in setting the struggling creatures free, and in peopling the stream of life with fish worth catching instead of leaving nothing for the angler but the minnows and sticklebacks of the period."

We can have no objection in the world to Mr. Edward Flint, who writes to us from the University of Edinburgh, saying that he is not the Mr. Flint referred to in our article on Homœopathy in Birmingham. Mr. E. Flint says he has nothing to do with homœopathy, and has never been to Birmingham. He was formerly, we believe, a meritorious student at the London Hospital.

A Fellow.—The charter states that "Examiners shall be elected by the Council of the College either from the members of the Council or from the other Fellows of the said College." We have referred to this elsewhere.

Dr. McM., Liverpool.—It is stated in Dod's "Peerage," in the chapter on Precedence, that the University of Oxford, founded in 886, takes the precedence, followed by Cambridge, 1110; St. Andrews, 1413; Glasgow, 1450; Aberdeen, 1494; Edinburgh, 1582; Dublin, 1593; London, 1836; Durham, 1837; and Queen's University, Ireland, 1850.

Dr. A. O'C., Bengal.—Your letter has been received. This journal shall be sent as directed. Only by examination, although the charter of the College prescribes that it shall be lawful for the Council to admit annually to the Fellowship, without examination, two Members of twenty years' standing. The fee is ten guineas.

Argus, Clapham.—The person mentioned has been deprived of the qualification, consequent upon his conviction for forgery. He has dropped one of the names by which he was so well known.

A Student.—The lectures will be brought to a close on the 2nd proximo See our advertising columns.

Wards of Court and Medical Charges.

*** At the last moment of going to press we have received the following letter from Dr. James Clark:—

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—As you will no doubt report the case of Sanger *v.* Sanger in your current number, I shall feel much obliged if you will insert this note to inform the members of the Profession that in a few days a statement of all the facts will appear. The case affects every ward of Chancery and every Physician and Surgeon in the kingdom, and I must ask you and the Profession to stay the expression of any opinion in the matter until my statement is before the public. I am, &c. James Clark.

Regent's Park-road, N.W., March 18.

Child-bearing late in Life.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—At our Board of Guardians, Okeharupton, on Saturday, application was made by a man and his wife for relief, their ages respectively 69 and 70. They have several children, but the last was born nine and a half years ago, so that the woman must have been in her 60th year and the man in his 61st. Is it not rather a rare instance for a child to be born so late in life? They have also a child upwards of 30 years of age.

I am, &c. M.

*** We shall be glad to have further particulars.—Ed.

Pipe for Opium Smoking.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Would you be so good as to inform me where I can procure a pipe for opium smoking, spoken of in one of your late numbers in the news "From Abroad?" I am anxious to try the effect in a case of asthma; the difficulty seems to be in obtaining a pipe for that especial purpose.

March 10, 1869. I am, &c. H. R.

[*** At Farmer and Rogers', 179, Regent-street, price 10*s.* 6*d.*, with all appurtenances, including a lamp, a vessel for oil, boxes for the opium, etc. Those Chinese pipes which are commonly supposed to be for opium, are really for tobacco.]

Hysteria?

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have lately seen a very remarkable case, for which I solicit the favour of a space in your columns at your earliest opportunity. It is one which I think will be found to be equally important in point of possibility and credulity. A girl, aged 12 years, was taken ill about two years ago with severe pain across her chest and in her bowels. A Medical man was called in to see her, but could give her no relief, and afterwards a great many Medical men were consulted, but none of them could do her any good. She was suffering, too, occasionally from "swooning fits," as her parents call them, and so she does now very often. But now we are coming to the chief point in her case. She has been confined to her bed for the last eighteen months, and, the most remarkable thing, without taking anything either to drink or eat except a single drop of water on her lips every few days. Nothing has she evacuated from her bowels ever since that time. She passes about a drachm or two of urine every nine days. She is only able to move herself in bed very little. Her face is plump and rosy; pulse moderately strong, quite regular; her breathing is quite free, except when she is in a fit, and then she appears as if she were quite dead. She can read quite loud, and is exceedingly fond of it. She can compose first-rate pieces of poetry. I have heard her myself rehearsing some of these. She knows almost all the Bible by heart. Her parents (respectable farmers) deny *in toto* that she has taken anything during the above space, and are quite willing for any two men to go and watch her day and night for any length of time they please, to see whether she is taking anything at all. Hundreds, if not thousands, of very respectable men have been to see her, and can testify to the above statement. Now I should like to know if any of your readers have heard or seen of any similar case; also if it can be possible for any human being to live so long without taking anything to support nature. I am, &c.

South Wales, March 17. Inquirer.

*** Our correspondent, a Medical Practitioner, must be well aware that there are several instances on record of hysterical girls pretending to live without eating. Careful watching has always solved the mystery.

Disease of the Nails.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I shall feel exceedingly obliged by your informing me where I can obtain full information on the subject of disease of the nails, as I have had a patient under my care for the last year and a half whose case bothers me very considerably. The disease commenced with the formation of a pustule beneath the free margin of the nail. This, on discharging, left a small space between the nail and its bed, which gradually extended until it reached the border of the lunula, where it remained stationary for some weeks, until at length the nail began to grow afresh in a perfectly healthy manner; but just as the cure appeared complete a fresh pustule appeared—this time beneath the centre of the nail—which rapidly brought matters to the old condition. This apparent cure and rapid relapse has occurred four times, and as two fresh nails are now implicated, the matter is becoming serious. I have tried long courses and full doses of iodide of potass., hyd. bichlor., arsenic, mineral acids, vegetable tonics, etc.; whilst locally I have applied nitric acid, acetic acid, nitrate of silver, nitrate of mercury, carbolic acid, pitch, liq. potassæ, perchloride of iron, cold water, and simple ointment, without finding the slightest benefit from either. I treated the patient for syphilis, followed by mild secondaries, four years ago, and he is a strong, healthy, athletic young man.

Any hints will be most gratefully received by

Yours, &c. Nails.

COMMUNICATIONS have been received from—

Mr. William Adams; Mr. Thomas E. Amyot; Mr. J. Chatto; Dr. B. W. Richardson; Dr. E. Ballard; Dr. Wilks; Dr. Gavin Milroy; Dr. Gervis; Dr. Holman; Dr. Walters; Mr. W. N. Maccall; A Subscriber; Dr. Heginbotham; Dr. Humphry; Dr. E. L. Hussey; Mr. F. Churchill; Mr. C. F. Maunder; Dr. J. B. Wilson; Dr. L. P. Madden; Mr. F. G. Beer; Mr. C. W. Pickering; Dr. E. H. Moore; Dr. F. J. Buckell; Dr. Dudfield; Mr. A. Bruce; Mr. P. R. Cresswell; Dr. Ernest Elliott; Dr. Phillips; Mr. A. Polano; Mr. C. Gooson; Dr. Whitmore; Experimentalist; Inquirer; Dr. W. H. Arthur; Dr. T. S. Dowse; Mr. J. B. Langley.

BOOKS RECEIVED—

Reigate Cottage Hospital Report—Archiv für Ohrenheilkunde—Devonshire Hospital Report—Glasgow Royal Infirmary Report—Villemin on Tuberculosis—Indian Medical Gazette—Philadelphia Medical and Surgical Reporter—The History and Working of the Irish Poor-law Medical System—Abbotts Smith on Affections of the Throat and Lungs—Lancereaux's Treatise on Syphilis, vol. ii.—Barff's Introduction to Scientific Chemistry—Kidd on Uterine Polypi—Girtin's Structure and Functions of the Human Body—Pennsylvania Hospital Reports, 1869—Carson's History of the Medical Department of the University of Pennsylvania—British Journal of Dental Science, November, 1868—Trench's Report of the Health of Liverpool—Revue Bibliographique Universelle, part 3—Langley's Via Medica, third edition.

NEWSPAPERS RECEIVED—

Lincoln Journal—Yorkshire Post—New York Medical Gazette—Leeds Mercury—Medical Press and Circular.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 13, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending Mar. 13.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Mar. 13.	Temperature of Air (Fahr.) Highest, during the Week.	Temperature of Air (Fahr.) Lowest, during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tens per Acre.
London (Metropolis)	3170754	40·7	2240	1462	1519	45·9	27·3	35·6	0·04	4
Bristol (City)	169423	36·1	121	76	*80	48·8	25·7	36·5	0·17	17
Birmingham (Boro')	360846	48·1	297	175	142	46·4	28·0	35·7	0·10	10
Liverpool (Boro')	500052	99·7	418	295	235	46·7	29·5	35·8	0·05	5
Manchester (City)	370892	82·7	282	210	*233	48·0	28·0	35·5	0·05	5
Salford (Borough)	119350	23·1	96	60	63	46·4	27·3	35·3	0·13	13
Sheffield (Borough)	239752	10·5	183	126	169	46·0	27·0	35·2	0·03	3
Bradford (Borough)	138522	21·0	109	71	72	49·4	31·5	37·5	0·09	9
Leeds (Borough)	253110	11·7	172	129	132	47·0	31·0	37·7	0·17	17
Hull Borough	126682	35·6	82	59	68	45·0	24·0	34·5	0·49	49
Newstl-on-Tyne, do.	130503	24·5	138	69	68	40·0	27·0	32·8	0·94	95
Edinburgh (City)	178062	40·2	129	86	117	45·7	30·0	35·4	0·30	30
Glasgow (City)	458937	90·6	391	268	389	45·2	28·6	36·6	0·10	10
Dublin City and some suburbs	320762	32·9	175	158	191	50·6	26·6	38·1	0·69	70
Total of 14 large Towns	6546587	35·5	4833	3244	3536 Week ending Mar. 6.	50·6	24·0	35·9	0·24	24
Vienna (City)	(1863) 560000	...	...	...	...	Week ending Mar. 6. ...	...	...	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·505 in. The barometrical reading decreased from 30·14 in. at the beginning of the week to 29·24 in. on Wednesday, March 11. The general direction of the wind was N.E.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 13, 1869.

BIRTHS.

Births of Boys, 1131; Girls, 1105; Total, 2240.
Average of 10 corresponding weeks, 1858-67, 2046·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	775	744	1519
Average of the ten years 1858-67	737·8	710·4	1448·2
Average corrected to increased population	...	...	1593
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	1	4	3	1	14	11	4	...
North	618210	3	3	6	1	14	23	4	...
Central	378058	...	5	2	1	15	5	3	...
East	571158	...	3	21	...	19	13	1	...
South	773175	3	12	7	3	19	11	7	...
Total	2803980	7	27	39	6	81	63	19	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·505 in.
Mean temperature	35·6
Highest point of thermometer	45·9
Lowest point of thermometer	27·3
Mean dew-point temperature	30·4
General direction of wind	N.E.
Whole amount of rain in the week	0·04

APPOINTMENTS FOR THE WEEK.

March 20. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Metropolitan Association of Medical Officers of Health, 7½ p.m. The Result of the Returns of Scarlatina during 1868 will be stated. Mr. Liddle will introduce the subject of the Class of Houses desirable to place under the provisions of the Artisans' and Labourers' Dwellings Act. Mr. Sharpe will exhibit Models of Improved Sanitary Dwellings. A Discussion will be invited on the Out-Patient System at Hospitals and Dispensaries.

Royal Institution, 3 p.m. Prof. Odling, "Hydrogen and its Analogues."

22. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London. 8 p.m.: Casual Communications. 8½ p.m.: The Discussion on Dr. Jno. Thompson Dickson's paper "On 'Matter and Force' in relation to Mental and Cerebral Phenomena."

Royal College of Surgeons of England, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

23. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Ethnological Society, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8 p.m. Dr. Wm. Ogle, "Case illustrating the Physiology and Pathology of the Cervical Portion of the Sympathetic Nerve," etc.

24. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Hunterian Society, 8 p.m. Mr. Bryant, "On some Points in the Treatment of Diseases of the Joints." Dr. Daldy, "On Death in Scarlet Fever from Coagula in Right Side of Heart."

Royal College of Surgeons of England, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

25. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

26. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

CHOCOLAT-MENIER.

(Manufactured only in France.)

ANNUAL CONSUMPTION EXCEEDS 5,000,000 lb.

The healthiest, best, and most delicious Aliment for Breakfast known since 1825; defies all honest competition, unadulterated, highly nutritious, and pure.

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"The chocolates of the Compagnie Coloniale boast themselves with justice on high quality, careful preparation, no admixture save sugar, and moderate price."—Medical Times and Gazette.

Sold by all the principal Houses.

LIEBE-LIEBIG'S NOURISHMENT IN SOLUBLE FORM,

For INFANTS, WEAK CHILDREN, and CONVALESCENTS.

Prepared by J. PAUL LIEBE, Apothecary, Dresden.

No indigestible husk, no wood fibre, can derange the child's stomach, and no difficulty in cooking will impede the salutary effects of Baron von Liebig's formula.

Sold by all Chemists. Wholesale from all Wholesale Drug and Patent Medicine Houses.

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This food entirely differs from all kinds of farinaceous mixtures, with or without Liebig's name. By simply dissolving it in milk and water in given proportions, it yields a food, as experience has proved, and as testimonials can show of a highly satisfactory nature. Price 1s. 6d. and 2s. 6d.

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DIABETES.—GLUTEN BREAD and BISCUITS are the only good

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have been approved by the Profession and by Diabetic patients, contain no starchy matter, and are highly palatable and agreeable.

Country orders punctually attended to.

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See Pharmaceutical Journal of May 1, 1856.

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,, Battley & Watts.	,, Evans, Lescher, & Evans.	,, Hodgkinson, Stead, & Treacher.	Mr. James Woolley.
,, Burgoyne & Burbidges.	,, Samuel Foulger & Sons.	,, Langtons, Scott, & Edden.	Messrs. Wright, W. V., & Co.
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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

HYSTERIA.

(*Concluded from page 279.*)

As in hysteria the nervous system is deranged, so every part of the body may suffer—the function of every organ may be disturbed, as well as the nerves themselves disordered in all possible manners. Let us look to some of these irregularities. First, the nervous system proper may suffer.

The motor system may be depressed or excited; thus paralysis is a very common hysterical symptom, affecting more especially the lower limbs. A leg cannot be moved, or both legs are the subject of paraplegia. As, in such cases, the cause is want of nervous energy, so you will perceive the peculiarity of these cases—that rousing of the will is often sufficient to put fresh vigour into the system and cure the complaint. A sudden alarm has often cured the patient who has been considered as hopelessly paralysed, and this gives us an insight into the correct treatment. I need not dwell further on this subject, as I have already on more than one occasion shown you the importance of the moral treatment of hysteria. A young lady has a complaint of an imaginary kind, and you visit her daily, and treat it as if it were a reality; the consequence is that it is perpetuated, and you have assisted in making it a perpetuity. You understand the real seat of the complaint—you attack that, and cure your patient. When I have had under my care here cases of paraplegia of years' duration, most assiduously treated by medicine, and at length cured by moral means, I cannot speak too highly of the method. These cases are not often difficult to diagnose, since in a real paraplegia the patient grows thin, bedsores appear, paralysis of the bladder and rectum may be present, and the patient feels ill, whilst in the case of hysterical paraplegia the patient remains plump; there is no trouble with the bladder, or if any, it is retention of urine; the abdomen is tympanitic, bowels confined. The physiognomy of the patient and her surroundings sufficiently indicate the nature of the case. She has taken to her bed as if for the remainder of her days, and all is arranged accordingly—the stitching, the embroidery, the religious books where they can be comfortably reached, and she generally receives more sympathy from the clergyman and the lady visitors than do cases of real illness. The fact is that there are no painful and loathsome circumstances attending her case, and, from her conversation and industry with her hands, it is regarded as an "interesting" one.

Then, besides loss of motion, there is perversion of motion, and we witness sometimes, as a result of hysteria, some of the strangest movements which you can conceive. These are not of that irregular kind which we witness in chorea, but are usually of a rhythmical character; thus, instead of the body or arms being constantly writhed about in various directions, they are more slowly or regularly bent in a given manner. Thus a girl was in the clinical ward two years ago who sat in a chair, and was constantly bending or bowing forward, as if saluting all those present. This continued for several months before she got better. In this case, as in all others, the greatest discomfort was produced by the use of any forcible means to restrain the movements; the cause lies in the centres within, and no approach to a cure is produced by attacking the effect. In several other cases the arm is in constant and regular motion, as if acted on by clockwork. This form has received the name of malleation. I remember a case of Dr. Barlow's where the woman had constant quick breathing, and, what is remarkable, every inspiration occurred with a beat of the heart. This continued for weeks. I have quite lately been visiting a child who has died with this form of hysteria. After having various strange symptoms for some months, she took to sitting at the side of the bed, and having some person or object before her which she could continually keep thumping with her fists or head all day long. Any restraint only added to the irritation. Chloroform, opium, conium, and other remedies, in large doses, produced only a temporary effect, and she at last died utterly exhausted and wasted almost to a skeleton. There was no disease found in the brain.

Then, again, we meet with permanent spasm as an hysteric symptom, seen more especially in the hand, which is firmly clenched, the tendons becoming rigid and the muscles contracted when the hand is forcibly opened. Then, again, the whole body may be affected after the manner of tetanus. This is more often seen in an acute attack of hysteria, but the lockjaw may remain as a very troublesome and constant symptom. I draw your attention to the fact, for it requires often all our acumen in order to distinguish a real disease from an hysteric one. Then also you may have that remarkable condition known as catalepsy. This in its purity is not very common, although I have seen two cases of it in the Hospital. One of my patients would sink into a kind of swoon or deep sleep, during which condition she would stand perfectly still in the middle of the ward, or, if in bed, would remain in any position in which you chose to place the body. Minor degrees of the cataleptic state are frequently met with, and not uncommonly in the epileptic of both sexes, especially after the occurrence of a fit. During the drowsy stage which follows you will frequently find that the patient's limbs will remain in any posture in which you place them. You will observe, in fact, that the whole nervous system is deranged in hysteria. You will have evidence of irritation of the cerebro-spinal system in the movements I have mentioned, and in the strange mental vagaries; then also of the deadening of the centres, as seen in the paraplegia and in this disposition to lethargy. We are sometimes called in to a person lying perfectly insensible, and apparently as if near her end, but it is a mere phase of hysteria. An extreme form of this condition, when continued, is usually styled trance. The whole nervous system may be so lowered in tone that the person lies helpless and insensible, but the functions of life slowly go on. This state may last for a great length of time.

Then as regards the nerves of sensation, it may be said that invariably these are in some way altered in hysteria. More commonly there is hyperæsthesia of some of the senses. The patient cannot bear the light, or the least sound troubles her, but more usually it is the common sensation which is affected. Thus, sometimes no part of the body can be touched without the patient shrinking—I mean the body proper, as the chest and abdomen. Often it is some particular part, the more usual spots being those which are tender in many persons when their "nerves are low," as the middle dorsal vertebræ, the vertex, and the left side. You will find many nervous persons flinch when you touch them in these places. Then there may be some particular spot to which the whole attention of the patient is directed until that place is believed by her to be the seat of actual disease; I allude to the hysterical breast of Astley Cooper and the hysterical joint of Brodie. It is not always that the patient complains of pain, but an exquisite tenderness when the part is touched.

Then, again, there is the opposite condition of anæsthesia, where, owing generally to some violent commotion of the nervous system, the sensorium is thrown into a lethargic state, and the senses are sealed. A girl to whom I was once called received a great fright, had an hysteric attack, and fell into a state of lethargy; during this time she appeared to have lost altogether the sense of touch. The absence of sense of pain whilst that of touch remains I have already referred to, and is very commonly met with in hysteric women.

Now, besides this hyperæsthesia or oversensitiveness, our hysteric patients complain of and suffer pain. You must not think, because your patient is hysterical, that she does not feel pain, for assuredly the suffering of many hysteric women is real. There has been, and still is, much controversy as to the seat and cause of these pains. Are they merely subjective, and due, as is the hyperæsthesia, to a morbid sensibility of the sensorium, or have they a local seat? and, if the latter, are they situated in the nerve and neuralgic, or in the muscle and myalgic? We have had writers who have contended strongly for one view or the other, but in all probability both are correct. I think, however, we are much indebted to those Physicians whom I have before mentioned who have directed attention to the frequent existence of myalgic or myosalgic pains. Thus, the pains in the side and in the head so frequently met with are said to be muscular, and more especially the pains which occur in the chest or abdomen. Two good cases of the kind I now have under my care in Mary Ward. The one a young girl who lies in bed or sits in a chair, leaning forward, complaining of great pain at the epigastrium. She cannot bear it touched, and says she feels as if a load were oppressing her, and which will presently suffocate her. She is sometimes so bad that her mother thinks she will die, but at the same time she is well developed, stout, and has apparently no real disease upon her. The other case is that of a woman well known to all students on account of the trouble which she has imposed upon them.

Before she came under me she was in charge of one of my colleagues for several months. Her complaint is a most excruciating pain at the left side of the abdomen, which draws her double, and which hitherto has not succumbed to the medicines which have been taken in vast quantities. The only relief she has obtained has been by the subcutaneous injections of morphia, which have now been practised for many months. The woman is in good condition, and does not look as if she suffered from any organic disease. On examination of the abdomen, the left side is full, rather rigid, and highly sensitive when touched. She complains, when the paroxysm of pain is on, of a most distressing bearing down and irritability of the bladder. She stated that she had passed blood in her water, and thus the case was treated as one of calculus of the kidney and ureter. At the present time opinions are divided between this diagnosis and one of hysteria, where the pain is due to a spasm of the abdominal muscle. My own opinion inclines to the latter view, perhaps being somewhat prejudiced by the fact that the great master Sydenham takes such a case as illustrative of one of the forms of hysteria, and which I will read:—"When this disease seizes one of the kidneys, it plainly represents, by the pain it causes there, a fit of the stone, and not only by that sort of pain and by the place it rages in, but also by violent vomitings which accompany it, and also for that the pain sometimes extends itself through the passage of the ureter; so that it is very hard to know whether these symptoms proceed from the stone or from some hysterick diseases, unless perchance some unlucky accident disturbing the woman's mind a little before she was taken ill, or the vomiting up of green matter, shows that the symptoms rather proceed from an hysterick disease than from the stone. Neither is the bladder free from this false symptom, for it not only produces pain there, but it also stops the urine just as if there were a stone, whereas there is none. But this last kind seizing the bladder, happens very seldom, but that which resembles the stone in the kidneys is not so rare."

Then, besides hysterical pains, we have disturbances of all the various organs of the body. Palpitation of the heart is very frequent. Then the breathing may be affected, and we have a kind of nervous asthma. The larynx may be affected; at one time there is a want of power to articulate, and neurophonia is one of the commonest symptoms of the hysteric condition. At another time the larynx is over-sensitive, and we have that troublesome and most annoying symptom, the hysteric cough. Some, however, have considered this due to a kind of chorea or spasm of the diaphragm. You may recognise it by the loud hollow or barking character, want of expectoration and any evidence of disease in the chest, or, to give the description in the words of Sydenham, which is both precise and accurate:—"Sometimes it (the hysterick disease) seizes the lungs, and the patient coughs almost without intermission, but expectorates nothing; and though this sort of cough does not shake the breast so violently as that which is convulsive, yet the explosions are much more frequent."

Sickness is one of the most troublesome and obstinate of all hysteric disorders, because the organ having got into the bad habit of discharging its contents upwards can with difficulty be broken of it. It is remarkable that in these cases of daily vomiting the characteristic of the hysteric condition, the plumpness or absence of emaciation, still persists. One mode by which we diagnose such cases as hysteric is that no medicine is of any avail; in real disease, even in such organic maladies as cancer, our ordinary remedies afford relief, but here the cure must be attempted through the nervous system. I believe the best method is to starve the patient for a while, or to use injections, so as to preserve the stomach in absolute quiet for some days, and then to commence with the smallest quantities of food.

The bowels, again, are, to use Sydenham's expression, seized upon by hysteria. Thus, prolonged and obstinate constipation is a not uncommon phase of the disease. This is only to be cured by the Medical man having his patient well in hand, and by letting her know that he is quite aware of the want of importance of her malady. The regular plan is for such a patient, like others of the kind, to be taken from Doctor to Doctor, who write the usual prescriptions, and with the usual result. The influence which can be produced on hysterical patients by Physicians and attendants is well seen by some of the cures which occur under the direction of one of our "sisters," who introduces herself to her patients with "No nerves in Esther Ward."

As regards the nervous influence on the kidneys in the production of a large amount of water, the fact is one of importance in a diagnostic point of view. Sydenham says:—"Among all the symptoms which accompany the disease this is the most proper and almost inseparable—viz., a urine as clear as rock-water, and this hysterick women evacuate plentifully, which, I find by diligent inquiry, is in almost all the pathognomonick sign of this disease, which we call hysterick in women and hypochondriack in men; and I have sometimes observed in men that presently after making water of a citron colour (yea, almost the next moment), being suddenly seized with some violent perturbation of the mind, they presently void water as clear as crystal, and in great quantity. Three years ago a nobleman sent for me who seemed to be suffering from an hypochondriack colick. Visiting him one day, I looked upon his urine, which was of a citron colour. He was then merry and cheerful, and said he had a craving appetite; but one coming in at that very moment vexed him so much that suddenly being taken ill he called for a chamber-pot, which he almost filled with urine as clear as crystal."

Indeed, if I were to detail all the disturbances to which the body is liable in hysteria, I might occupy you for a month, or, to quote Sydenham once more, "Nor is this disease only frequent, but so strangely various, that it resembles almost all the diseases poor mortals are inclinable to. For, in whatever part it seats itself, it presently produces such symptoms as belong to it, and unless the Physician is very skilful he will be mistaken, and think those symptoms come from some essential distemper of this or that part, and not from any hysterick disease."

The only objection I can make to Sydenham's idea of hysteria is that he appears to connect it with hypochondriasis. This may be owing to the long and supposed necessary usage of the term for an affection of women, whilst a corresponding disease of the male he would call hypochondriasis. I should, however, discriminate between the terms and their corresponding maladies, making each sex liable to either, whilst admitting at the same time the greater liability of women to hysteria, and men to hypochondriasis. A few more words on the latter.

I have told you already that the hysterical patient is often weak-minded as well as being over-sensitive, and thus a strong-minded person would be able to subdue all hysterical promptings. The hypochondriacal is by no means necessarily deficient in either mental or physical vigour, and yet may fall a prey to his own feelings, and be at times the most wretched of mortals. There have been many men of historical renown who have performed deeds famous in their country, and yet suffered from this nervous ailment. I have already alluded to the hypochondriacal patient, and what a plague he is to the Doctors, how he presents them with a whole sheet of paper written all over with a description of his symptoms, and how he reads Medical works, and first imagines he has this disease and then that, until a moment's reflection sometimes tells him that many of these maladies are incompatible, and so his disease works its own cure. These hypochondriacal patients really suffer from dyspeptic symptoms, as they complain mostly of flatulence, eructations, and palpitations, and thus, I have no doubt, they feel really ill. They look upon their bodies, as I before told you, like a piece of machinery that wants their hourly superintendence lest it should go wrong. I have a patient who tells me in the most earnest manner what he eats for breakfast, measuring off the size of his piece of toast on his fingers, then the time he goes to the water-closet with other full particulars, what he eats for dinner, and the amount of wine he drinks, which he first pours into a measured vessel, and so on, as I before detailed to you. A standing grievance with him is the coldheartedness of society at large, for a friend meets him, says, "How d'ye do?" and commences in the same breath to speak of some irrelevant subject, never waiting to hear of the complaint which he is about to pour into his ear. When I say there are plenty of men of mark who have been hypochondriacs, I do not mean that they are those individuals whom I would select for great powers of intellect, for hypochondriasis closely borders on insanity. The complaint which a patient suffers is often a delusion. When a person is solely occupied by a trouble so as to prevent him occupying himself in business, the complaint certainly borders very closely on monomania, and thus those who like distinctive names have called it *nosomania* or *nosophobia*. There can be no doubt that in a natural state a man should be occupied, his mind should be away from himself, and a knowledge of his feelings is morbid. No wonder that a certain nation believed that the happiness of heaven was activity without consciousness. In an unhealthy state man becomes sensible of the working of the machinery within, and in an extreme degree in the state known as hypochondriasis we have (to use an expression which I have somewhere seen) a meditation "of man on his own health." The feeling of illness has no direct relation to disease; it may exist, as I have said, without any real disease, and on the other hand

fatal maladies may progress and the patient declare that he is not really ill. The amount of depression which the patient experiences is not the measure of his illness.

Ordinary hypochondriasis is a disease very commonly met with amongst our private patients, but it would only be seen within the wards of the Hospital when existing in an excessive degree—if then, indeed, it can strictly be styled by the name. I allude not to those cases where the patient has a variety of maladies, but where there is a constant complaint of a never-ceasing torment in some part of the body, mostly in the abdomen at the upper part. You have seen three patients of mine suffering in this manner. One man has a constant pain at the epigastrium, which is often so bad that he calls up his friends and says he shall not survive the night. This has been for eight years. Another man has a constant burning at the epigastrium, and declares he has got a worm inside of him. The third patient is a woman, who has a fixed pain in the left side of the abdomen. She has had it for years, but is fat and looks well. I have just seen a private patient, a woman, who has such indescribable sensations over the region of the cæcum that she constantly awakes her husband in the night to send for the Doctor. She has had some of the best opinions in London, and no one can discover any disease; in fact, there is none, but she has what I called a "mad cæcum." It would seem that a certain class of persons, especially those who are inclined towards insanity, have a number of morbid sensations, but how these are to be accounted for is not very clear, whether the sensorium—that is, the brain—is at fault, or whether some intermediate structures, such as the sympathetic ganglia, may be in a morbid state is doubtful, but you must distinguish them from feigned pains—these patients do not sham, as the pain is real to them. If a person have an impression, it is the same to him whether that be a real or false image, but the Medical man would say the impression from a reality was natural, but the other was morbid, and would style it a delusion. So, if a patient have a pain, and we can discover an external cause, we call it a reality; if none exist, it is a delusion, although quite the same to the patient. At least, I suppose it is all the same to him whether he has a pain or thinks he has a pain.

I can scarcely tell you how to treat these people. Occupation and diversion for the mind are no doubt the most essential elements in any treatment, but they are just those which you cannot enforce. The worst part of the therapeutical system is this, that not only will the patient not take your advice, but by prescribing for him you are assisting in perpetuating his illness. You might think that a patient who was always ailing and got no relief would not trouble Medical men any further, but it is very remarkable that it is that very man who takes our physic. He will sit down and tell you of the number of Medical men he has seen, and show you a bundle of prescriptions, declaring that they have done him no good, and yet he will ask for another. On asking one of my lady patients why she came to me when I and others had never done her any good, she exclaimed, "I come to you because I never feel any the worse for what you prescribe for me." You gain nothing by offending such patients, because they go elsewhere for sympathy, and this is what they want. I have observed, however, where a Medical man, as the regular attendant, has had sufficient courage to give his patients a good scolding they have always been better for it. If the patient has been a woman, and has not tamely submitted to this correction, but denounced the hardheartedness of those around her, and subsequently had a "good cry," she will be observed to be considerably better for some days after. The hypochondriac wants sympathy, and he generally gets it, from his friends disinterestedly, who believe in his maladies, and from the Doctor, who is paid for treating them as realities. The prospect of cure is thus very remote. With reference to judicious treatment, I will quote Sydenham for the last time:—"One of our reverend bishops, famous for prudence and learning, studied too hard a long while, and fell at length into a hypochondriacal disease, which afflicting him a long time, vitiated all the ferments of the body and wholly subverted the concretions. He had passed through long steel courses more than once, and had tried almost all sorts of mineral waters, with often-repeated purges and antiscorbutics of all kinds, and a great many testaceous powders, which are reckoned proper to sweaten the blood, and so, being in a manner worn out, partly by the disease and partly by physick, at length he consulted me. I presently considered that there was no more room for medicine, and I advised him to ride horseback. Had he not been a judicious man, he would not have been persuaded to try such a kind of exercise. I entreated him to persist in it daily, going further and further, till at last he went so many miles without regard to meat and drink or weather, like a traveller. He continued this method until he rode many miles a day, and at length not only recovered, but also gained a strong and brisk habit of body."

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

ON THE CAUSE AND PREVENTION OF SEPARATION OF FIBRINE IN THE BODY.(a)

(Continued from page 244.)

It is common, in writing of blood, to speak of the water as belonging to the serum, as though, indeed, the blood corpuscles and fibrine in the blood were in suspension or solution in the serum, and as though the fibrine, when the blood-corpuscles are removed, were in solution in the serum, constituting the liquor sanguinis. This, however, does not convey a correct idea of the relationship of the water of the blood to the various parts while the blood is in the body and in motion, for then there is really no serum and, strictly speaking, no liquor sanguinis within the chambers and tubes of the circulatory system: but the water is divided in some given proportion amongst all the parts, the crystalloid matter having its proper proportion, and the colloidal matter—the albumen and fibrine—its proper proportion. To arrive at a correct estimate in regard to this division, or rather distribution, of water in circulating blood is an almost impossible task, because we cannot isolate fluid fibrine. We have first to remove the fibrine in the solidified condition, and during the act of solidification there is free exudation of water with the still soluble albumen and the soluble salts, these together forming the secondary and, as it may properly be called, the post-mortem product, serum. Even in the coagulated or solidified state the fibrine itself is charged with water, which may be removed by evaporation or by pressure, and when entirely removed is found to represent from eighty-five to eighty-eight per cent. of the mass. The red corpuscles, on the other hand, are by comparison feebly charged with water. Collected in the moist state, they yield not more than from sixty-five to sixty-seven parts of water.

If we could calculate on one thousand grains of blood as it is flowing along the vessels, and if we could learn how the 780 grains of water of that thousand grains of blood is disposed of, we should be obliged, at least, to give over 250 grains to the fibrine alone and 90 to the corpuscles; the rest to the albumen and salts. But the estimate would not be correct, because as yet we do not know in what condition the fibrine exists in solution in the blood, how much water it requires for its solution, or how much it parts with when it solidifies. In fact, this firm white stringy mass which I hold in my hand, and which we call separated fibrine, is largely water itself—water, in a sense, solidified. Once the really solid matter of this mass, the fibrine proper, was dispersed through or dissolved in the water, so as to form with it a fluid; but whether it was dissolved in the water it now holds, and no more, or whether it was dissolved in a much larger quantity of water, we have no direct proof. We may, nevertheless, from analogy, infer that the quantity of water at present in the mass was quite sufficient to hold it fluid. The analogy is this:—I have, in this vessel, a clear thin fluid, like water itself. It has a specific gravity of 1020 at 60° Fahr. It is a solution of silicate of potassa and soda. In another vessel by the side of the solution there is, as you will see, a gelatinous mass, solid, transparent, firm. This is actually nothing more than a part of the same solution of silicate in a new state. The relationship of the silicate and water has changed, and what was fluid is now in the condition of a solid. The weight is the same in the solid as in the fluid, and I could evaporate off all the water from the solid as water, and leave the residne of dry silicate, as I could, from the fibrine, evaporate all the water, and leave the residne of dry fibrine. Here, then, we have proof direct that, by the change of water in combination with a very small quantity of solid matter, we may have, as in subjecting water to change of temperature, two distinct conditions of matter, without change of weight. From this observation it is just to infer that the mass of fibrine now so solid and firm in my hand was once in solution in the same quantity and weight of water as that with which it is now charged.

(a) Delivered on Tuesday, January 12.

I do not wait here to inquire what is the precise physical nature of the charge by which the water becomes so immobile and solid. This will form a subject for study at a future time. I wish simply to point out now that there is such solidification of water around a very small quantity of solid material, and I proceed at once to consider what are the modified conditions of blood under which this change takes place in the different classes of disease to which I have directed attention.

Fortunately for us, these changes of blood have been studied with a minuteness and care which cannot be prized too highly. Nothing in Medical research has, indeed, been more independent, more consistent, or more truly scientific than this research. The men who have joined in it have not been numerous, it is true, but they have all been scholars of the first order—earnest scholars who have had no desire to make out hypotheses of disease, but a fixed determination, at any and every cost, to investigate the natural facts of disease. Working in this spirit, the results of their researches are singularly trustworthy, and I may add, in the main, singularly unanimous. To render what I have to say clear and simple, I have taken pains to go over the records of all the best analyses of blood in disease that have been made since the mode of conducting such analyses has been reduced to something like a common principle. The inquiries of Andral and Gavarret, Becquerel and Rodier, Rodier and Gueneau de Mussy, F. Simon, Lecanu, Popp, Heller, Glover, Joseph Jones, and Busk have been compared, and the results classified. To these, where the place for the record is open, I have added such observations as have been made by myself. My labours have been immensely lessened by the use of the admirable tables of analyses of blood in disease which have been constructed by Dr. James Jones, Chemical Professor of the Medical College of Georgia, in his work on malarial fever, and which are now before us.

Specific Gravity.—In considering the four classes of cases in which we have separation of fibrine, we ought first to study the specific gravity of the blood. The natural specific gravity of healthy blood in the human subject is 1059, and of the serum 1030. In the diseased conditions under notice these figures change. In the first class of case, the inflammatory class, the specific gravity of the serum and of the blood altogether is reduced, the mean reduction in such cases being three degrees for blood—viz., to 1056, and for serum four degrees—viz., to 1026. You will perhaps remember a fine specimen of blood, sent by Mr. Wells, which had been drawn from a patient during the progress of inflammatory fever after ovariotomy. In that specimen there was a free separation of fibrine, which formed a crust of considerable thickness and tenacity. In that specimen the specific gravity of the serum was reduced as low as 1025.

In those cases which constitute our second class—I mean cases where there is separation of fibrine from simple stasis—the density of the blood is not necessarily modified. In the third class of cases, where there exists extreme cachexy, the reduction of the specific gravity both of the blood and of the serum is most determinately marked. The density of the blood in the best marked cases of the type—cases of malarial fever—shows a mean of 1047, and of the serum 1021.

In the fourth class of cases, on the other hand—cases of cholera affording the purest examples—the specific gravity of blood and of the serum also is greatly increased, the blood rising up to 1074, and the serum to 1042.

Relation of Fibrine.—In the first series of cases—the inflammatory—there is a marked increase in the quantity of fibrine circulating in the blood. This increase is so distinct and so determinate that F. Simon, to express the condition, has applied the term "hyperinosis." The fibrine in these cases may rise in quantity from the normal standard of 3 parts in the 1000 to even 10 parts. Popp, indeed, has recorded an observation in which, during rheumatic fever in a girl 19 years old, the fibrine reached to 13·34 parts in the 1000. In the blood drawn from Mr. Wells's case, and which came before us, the proportion of fibrine was raised to 7 parts in the 1000. In acute rheumatic fever, in pneumonia, pleuritis, peritonitis, puerperal fever, acute bronchitis, acute tonsillitis, pericarditis, acute meningitis, glanders, erysipelas, scarlet fever, and inflammatory fever after Surgical operations, the increase of fibrine has been so carefully determined that it admits of no dispute.

In the second class of cases, the cases of stasis, the proportion of fibrine may be unaffected.

In the third class of cases, the amount of fibrine is actually decreased; in malarial fever this decrease has been traced, with great diligence and precision, by Dr. James Jones, whose tables are in our hands. In one case of this fever Dr. Jones found the fibrine reduced in quantity to 0·87 parts in the 1000. In like manner, in typhoid, Andral and Gavarret found the fibrine reduced to 0·90 parts in the 1000. I dwell on these facts from the circumstance that in the acute cachectic affections, especially in malarial fever, separations of fibrine, holding immense quantities of water, are of the most frequent occurrence. In an epidemic of malarial fever observed by Dr. James Jones, large watery gelatinous-looking separations of fibrine, occurring in the heart, were the chief cause of death in the fatal cases. In the fourth class of cases—I mean where there is profuse flux—the fibrine is found, as a rule, increased in quantity. Thus in a case of cholera Simon found the proportion of fibrine to be not less than 11 parts in the 1000.

Relation of Blood-corpuscles.—The quantity of blood-corpuscle, in the class of inflammatory cases, is reduced. This fact is as completely proved as is the fact of increase of fibrine in the same class of cases. From the standard weight of corpuscle matter—viz., 135 parts in the 1000—the reduction may extend to less than a third. In a case of acute peritonitis Andral and Gavarret determined the matter of the corpuscles as 60 parts in the 1000. In a case of acute arthritic rheumatism Popp determined the solid corpuscle matter as reduced to 77 parts in the 1000. In a case of puerperal fever Heller found the same reduction. In acute pneumonia Andral and Gavarret traced the reduction in one case to 83·2 parts in the 1000, in a case of pleuritis to 68·3 parts, and in angina tonsillaris to 79·5. In a case of carditis Lecanu reports the solid matter of the corpuscles as 41·5. In a case of pericarditis Becquerel and Rodier saw the reduction as low as 78 parts in the 1000. In erysipelas Andral and Gavarret saw the reduction as low as 64 parts. In the blood sent to us by Mr. Wells, the fibrine, the red corpuscle matter, and the serum were so perfectly separated that the crust of fibrine could be lifted out of the serum with all the corpuscle adherent beneath, the serum, after removal, retaining its clear straw colour. The crust put on a glass-plate with corpuscle matter uppermost, the layer of corpuscle admitted of being readily and completely detached. The solid matter of the corpuscles was reduced in this instance to 71 parts in the 1000.

I could extend these observations very greatly, but the result would merely be a continuance of proof, which is unnecessary. Minor differences on this question sink at once into nothing by the side of the all-important fact that the addition of observers only tends to prove the same major points. We have a true basis on which to rest here. We may be sure as we can be sure of anything in science, that when we are called to the bedside of a sick person, and find increased heat of the organism, pain, and local signs of what is called inflammatory mischief,—we may be sure, I say, that in that person, from some physical change in the body, there is progressing an increase in the quantity of fibrine and a decrease in the solid matter of the blood-corpuscles. I shall try in the future to show experimentally why this is the fact. I repeat at the present moment the fact only.

In the second class of case, where separation of fibrine takes place from stasis, there is no necessary change in the amount of the matter of the corpuscles.

In the third class of cases—the cachectic—there is, as in the inflammatory cases, a decrease of matter of corpuscle. In a case of typhus, Gueneau de Mussy and Rodier determined the solid matter of corpuscle at 95·6 parts in the 1000. In a case of typhoid, Andral and Gavarret have determined it as low as 66·7 parts. In nine analyses of blood from different patients suffering under malarial fever, Professor Jones found a reduction of corpuscle matter, ranging from 103·4 to 51·9 parts in the 1000. In a case of chronic scurvy observed by Busk, the solid matter of the corpuscle was reduced to 47·8 parts in the 1000. In this class of cases we have, therefore, a reduction both of fibrine and of corpuscles. Notwithstanding, there is often in such cases a strong disposition for the separation of fibrine, together with a large quantity of water. I have thus actually seen a separation in the heart made up of 97 parts of water fixed around 3 of solid fibrine.

In the fourth class of cases—cases of flux—there is great difference, often in the course of the same case, in the quantity or amount of corpuscle. The rule seems to be that during the time of an acute flux there is a very decided increase of corpuscle. In one case of cholera, Becquerel and Rodier found on the day of death the solid corpuscle substance to be 189 parts in the 1000. In another similar case they found the same solid substance to be 160 parts in the 1000. Other observers have recorded a reduction of weight of corpuscle below the natural standard. These differences are easily accounted for by the frequent changes in the physical state of the body when it is rapidly losing fluid. So long as there is steady loss of fluid with reduction of temperature, there will

be accumulation of corpuscle; but with sudden reaction, and fever consequent on reaction, the scale will soon turn, and the reduction of solid substance of corpuscle will be manifested.

It should be stated, before leaving this part of our subject, that the term "matter of corpuscles" includes both red and white corpuscles; for we have as yet in analysis no satisfactory method for separating the red from the white globules, or for determining their respective weights in a given specimen of blood.

(To be continued.)

ORIGINAL COMMUNICATIONS.

ON HYPERTROPHY OF ONE EXTREMITY.

By C. F. MAUNDER, F.R.C.S.,
Surgeon to the London Hospital.

Reflection upon Dr. Day's case of hypertrophy of a lower extremity in a child 8 years of age, associated with an occasional discharge of chylous fluid, read and discussed at the Clinical Society on March 13, leads me to make the following remarks.

In the first place, it is for the physiologist to determine whether or not the lymphatics of a limb or of the penis can secrete a fluid having the character of chyle, or if, chyle being present, there must exist some abnormal direct communication with the lacteals. Should it be determined positively that chyle flowing from the penis must have been generated in the chylopoietic viscera and have entered the lymphatics directly at some point, then one is driven to the conclusion that some lacteals and the lymphatics coming from the right lower extremity communicate directly, and are obstructed before their junction with the receptaculum; but that a large quantity of chyle does reach the blood is certain, because the boy is fairly nourished. Granted, then, that obstruction exists, and that the size of the limb is due to its overgrowth, consequent on an undue supply of nutrient material being detained, as suggested by Dr. Broadbent, what remedy can be found? Mr. Barwell hinted that the arterial supply to the limb might be in excess, and if so, means to diminish this supply were indicated. Would the sphygmograph aid in determining the relative size of the femoral arteries? The original suggestion that an obstructed femoral vein would account for the increased size might probably be positively determined by careful digital pressure upon that vessel in the groin, when, should it be pervious, venous congestion would quickly be manifested in the limb.

Treatment.—Careful bandaging or the application of an elastic stocking will doubtless avail something towards checking the growth of the limb, but it may do so at the expense of the penis, either by increasing its growth or inducing an almost constant chylous discharge from the open lymphatic vessel on that organ. Whatever the etiology of the complaint—whether obstructive, elective (the tissues having an abnormal appetite or affinity for food), or whether due to the existence of larger arteries—the indication is to diminish the supply of arterial blood with the hope of restoring the balance of the circulation. If the symptoms are due to obstruction, the *vis a tergo* will be diminished, less nutriment will be carried to the limb, and then the tissues may be enabled to appropriate the supply, and the overplus may cease. A similar result will probably follow if the cause be elective or due to excessive supply by the arteries—the material not being supplied cannot, of course, either be made use of or accumulate as at present, and the limb will not grow more rapidly than its fellow; and indeed time and opportunity may be thus afforded to the sound limb to overtake the proportions of the unsound member, and then, by the time that the collateral circulation is established, the growth of the two extremities will proceed in harmony.

It appears that the hypertrophied parts correspond pretty closely to the distribution of the branches of the femoral and of the internal iliac arteries, and therefore, with a view to diminish the growth of the affected regions and check the arterial supply to them, it would be necessary to ligature either the common iliac artery, or to put separate ligatures on the common femoral, and on the branches of the internal iliac which emerge at the great sciatic foramen. Ligation of the former vessel would be the most thorough method, but probably the most hazardous. If the femoral artery alone were tied, the pubic would probably enlarge, and the disease would then be increased in the penis, while it subsided in the extremity.

Before resorting to ligature, it would be well to prepare the patient by rest in the recumbent posture with the foot well elevated, so as to diminish, if possible, the at present somewhat gorged state of the limb, in order to prevent a stasis of the fluids after the operation. At the same time, to prevent the possibility of gangrene, a tourniquet may be occasionally applied to the right common iliac artery, to impede the flow of blood through it, and to promote increase of size in those vessels upon which the vitality of the limb would depend. As regards the necessity or time for operation, I should be guided by the effect of the disease upon the health of the child. If the common iliac were to be tied, it would probably be well to favour the flow of the chylous discharge, so as to diminish the whole mass of the fluids in the limb at the time of operation, and thus lessen the risk of gangrene.

NEURALGIA: ITS PATHOLOGY AND TREATMENT.

By JOHN CHAPMAN, M.D., M.R.C.P., etc.

(Continued from page 309.)

In proceeding to treat neuralgia the Physician will, of course, endeavour to discover if there be any locally exciting cause of the disease, and, if so, to remove it. When any such cause has been discovered, and, if possible, removed, there is reason for hoping that the disease itself will subside. In cases of facial neuralgia the teeth must be carefully scrutinised, and if any of them should be carious they should either be extracted or treated in such a manner as a competent dentist may think best. In cases when sound teeth ache the pain is the result of reflex action originating elsewhere, and therefore the extraction of such teeth is unlikely to give relief, and, as a matter of fact, very rarely does so. If the functions of the bowels are faulty, especial care should be taken to correct them: Sir Charles Bell cured several cases of neuralgia by croton oil.

It is not less indispensably necessary to rectify any disorder, if such should exist, of the uterine function; and happily functional disorders of the womb, as well as those of the stomach and bowels, can now be controlled by modifying the temperature of the spinal region with a facility and certainty previously unknown. In those cases in which neuralgia occurs during pregnancy, and is seemingly referable to it, it should be treated by neutralising the exciting impressions propagated from the womb to the spinal cord, in order to prevent those reflex actions which produce the pain. This can be easily done by means of the spinal ice-bag. But in using it for this purpose especial care is needed, inasmuch as the womb itself is influenced by cold or heat applied along the spine; and while this newly acquired power is fraught with unspeakable benefits to women, it can be easily and seriously abused. When neuralgia originates in irremediable retroversion or other displacement of the womb, or, indeed, in any local but irremovable cause, it should also be treated on the principle just indicated as applicable to the neuralgia brought on by pregnancy.

When there is reason to believe that the malady arises out of, or is associated with, the rheumatic or gouty diathesis, bicarbonate of potash and colchicum may be given with some hope of benefit; and in cases in which it seems probable that the nutrition of the nervous centres has been perverted by the syphilitic poison, iodide of potassium, which ought to have a full trial, may effect a cure. But after the utmost possible effort has been made to discover and remove or neutralise all locally exciting and all constitutional causes of the disease, it remains, in the great majority of cases, entrenched in some one of the citadels of the organism, defying the power of all the batteries of the pharmacopœia to dislodge it. There is probably no other malady producing intense suffering which rivals it in respect to the number of its victims, the long continuance of their torments, and the powerlessness of drugs to give lasting relief. When any cause of neuralgia has continued in operation a long time it produces in the nervous centres acted upon a hyperæmic condition which is apt to persist even after that cause has been removed. In fact, a new physiological habit may have been engendered, and it is notorious that habits are generally overcome only by prolonged effort, and that in many cases they resist the most resolute endeavours long and patiently persevered in. The pathology of neuralgia already sketched points to the conclusion that drugs are unlikely to cure the disease after it is thoroughly established. That they do so in a certain small proportion of cases is indubitable, but it is not less

indubitable that the large majority prove irremediable by any of the many medicines hitherto tried. I can only allow myself to advert to the most important of them here. The carbonate of iron was a fashionable remedy some time ago, and is still much relied on, but its uselessness, except in a small proportion of cases, is only too well attested. Dr. Anstie remarks:—"For patients who possess well-globulated blood I do not believe that iron treatment has any value." I am quite of this opinion. And if the pathology of neuralgia, of which I have given an outline, be correct, it is not easy to understand how any form of iron can exert a specifically beneficial influence over the disease. Quinine, or the Peruvian bark itself, has often proved of service, especially in those cases in which the paroxysms of the malady have recurred only a few times, or in which, like those of ague, they present a distinctly periodic or even irregularly intermittent character. But though this valuable medicine, if taken in time, may perhaps cut short or prevent the permanent establishment of neuralgia, it is rarely capable of effecting more, after the disease has become thoroughly established, than a postponement of the recurrence of its paroxysms, or a modification of them when they do recur. In fact, the opinion I have formed concerning the mode of action of quinine(a) leads me to believe that its continued use in cases of confirmed neuralgia intensifies those conditions on which the existence of the disease depends, and strengthens its hold on the system. Arsenic, strongly praised by Romberg, often proves useful, and is sometimes, though seldom, curative; but much oftener its administration results only in disappointment. Zinc (both the oxide and the sulphate) has found favour with some Physicians: I have never prescribed it for neuralgia; but though its efficacy has been vouched for on the Continent, experience of it in this country is far from justifying the praise which has been bestowed upon it. Strychnia, according to the report of Dr. Downing, is said to be "especially serviceable when the disorder is of a remittent or intermittent character," but its services have proved too slight to encourage Physicians to continue making use of it as a trustworthy remedy of neuralgia. I have never tried it, and on *à priori* grounds do not think it expedient to do so. Of the various stupefying drugs which have been resorted to, opium is chiefly relied upon; and this is used rather with the hope of annulling the paroxysms of pain than of curing the disease of which they are the manifestations. Whether administered by the mouth or in the form of hypodermic injection, it sometimes annihilates neuralgic torments as if by enchantment; but I cannot speak so favourably of it as Dr. Anstie does. Referring to the subcutaneous injection of morphia, he states that "in the right use of this remedy we possess the means of permanently and rapidly curing very many cases, and of alleviating, to a degree quite unknown before, the suffering caused by even the most inveterate forms of neuralgia." It would indeed be fortunate for sufferers from neuralgia if this favourable verdict were confirmed by other reliable observers; but unhappily this is not the case; and the judgment of one of the greatest authorities on the subject—viz., Trousseau—is far otherwise. He says: "The first effect of morphia is marvellous; a few minutes are sometimes sufficient to calm an awful pain; and it rarely occurs that great relief is not afforded in a violent neuralgia. But there is a world-wide difference between this and a real cure, and the pain generally returns when the narcotic effect of the drug has passed off." Perhaps most of the neuralgic patients I have seen have been of the inveterate class; but the experiences related to me of the effects of morphia, however administered, may be summed up as follows:—Its success in arresting neuralgia is generally only temporary; it rarely prevents the recurrence of the paroxysms; and in all cases its benefits are obtained at the expense of those stupefying and often much more distressing experiences constituting the poisonous effects of this narcotic. These effects would willingly be borne, however, if only it would never falsify its promise of even temporary relief; but often when first given, and generally after frequent use, it does this, and, what is much worse, by profoundly modifying the nutrition and functions of the nervous system, it actually operates at length as a predisposing cause of the disease itself, the subsequent attacks of which it renders at once more formidable and more frequent. Stramonium, belladonna, cannabis indica, and aconite have each been tried, and as adjuvants or palliatives have found favour with different Physicians, but their efficacy as remedies for neuralgia has been too slight to insure general recourse to them. Chloroform is sometimes used to render patients temporarily oblivious of their sufferings when extreme and otherwise incapable of relief; but unhappily, unless continuously inhaled, the respite from pain which it affords is extremely brief, and even if used with only moderate frequency, it, like opium, tends, I am confident, to root the disease still deeper in the system.

Sulphuric ether is spoken of by Dr. Anstie as "supremely useful in certain visceral neuralgias." I am acquainted with one case in which its palliative power was well attested, but it exerted no curative influence. Alcohol taken in small quantities is, I am confident, a valuable remedy in some cases. So far my experience in respect to it confirms that of Dr. Anstie. I incline to believe that it is chiefly useful in those cases in which there is a tendency to cerebral anæmia, but I am very far from thinking, as he does, that "alcohol is a decided help to recovery from every form of neuralgia," and, as he justly observes, "the dangers of prescribing it as a remedy are very great, since the patients cannot always be induced to use it in the strictly Medical manner in which alone it is safe." He has "a theoretical basis" for the use of alcohol as well as for the use of animal fats in the treatment of neuralgia, and therefore strongly recommends cod-liver oil, butter, and cream. But apart from this theory, which I am constrained to dissent from, "there is," he says, "the strongest ground, in the results of experience, for insisting upon the value of this class of remedies." This I can readily believe, and, though I have not verified it by experience, I am quite prepared to expect that they may often prove of use. They certainly tend to increase the general health and strength, and they may especially increase, as he thinks they do, the nutrition of the nervous system. At all events, the better the general health the greater is the chance of repair of any local injury, whether in the nervous system or elsewhere. In cases which I have treated by drugs only I have several times given great relief by means of bromide of potassium; and not less frequently I have succeeded in annulling those obscure and more or less shifting, but long persisting, pains which the poor who attend dispensaries often complain of, and which may be owing perhaps to slight hepatic disorder, by means of hydrochlorate of ammonia, the virtues of which, I think, are not duly appreciated in this country.

Remedies applied externally, and generally at the seat of pain, are almost as numerous as those which are given internally in the treatment of neuralgia. They are divisible into excitants and sedatives, and it is not difficult to understand that in appropriate cases they may each exert, as undoubtedly they sometimes do, a beneficial influence. In every case, as I maintain, they operate ultimately, through the medium of the sensory nerves with which the substances are brought in contact, on the nervous centres themselves; and, whether excitants or sedatives, they produce a modification of circulation in those centres, and thus give relief—generally, however, of a slight or temporary kind only. The excitants chiefly resorted to are blisters, mustard plasters, tincture of iodine, croton oil, liniments containing ammonia or chloroform, veratrine or tartar-emetic ointment, heat, electricity, electropuncture, and acupuncture. The sedatives are less numerous: they comprise, *inter alia*, opium and belladonna or their alkaloids, aconite, cyanide of potassium, and the prolonged use of the warm bath.

Excitants.—Chief among these are blisters, which have been much extolled. Cotungo used them in cases of sciatica. Valleix regarded them, as Trousseau remarks, "almost like a panacea;" and since he wrote they have been constantly resorted to in the treatment of neuralgias of almost all kinds. They often give temporary relief. I have seen case after case in which they have failed to do more than this, and I have never met with one in which they have effected a cure. It seems to me that Trousseau was right when he said—"I think that they have owed their favour to the extreme facility with which they can be used, for I cannot believe in the exaggerated praises which have been accorded to them for a century." The weighty opinion of this celebrated Physician agrees with the conclusion which might reasonably be deduced from a consideration of the *modus operandi* of blisters: the irritation they set up is conveyed to the sensory nerve-centres of those nerves which have been excited; a fresh afflux of blood is induced in those centres; the excitement spreads throughout the neighbouring nerve cells; those presiding over the nutrition of the part where the blister is applied flash back from the centre to the periphery the excitement in which they are sharing, and light up the previously normal processes of textural life into intense local inflammation with its consequence, copious serous effusion. During the period of centric hyperæmia thus induced, a change in the nutrition, and therefore in the function, of the sensory centre related to the painful nerve is likely to be effected, and in some rare cases the morbid condition of that centre on

(a) See some remarks on the mode of action of quinine in my work on "Diarrhœa and Cholera," pp. 206-7.

which the pain depends may be carried away as the preternatural afflux of blood temporarily induced there subsides, just as chronic inflammation of a part is often cured by the application of a caustic which produces an acute inflammation in which the chronic one is merged, and which, itself ceasing, causes the disease to cease with it. Generally, however, as the tumult in the nervous centre and at the seat of the blister subsides, the morbid condition which it was intended to overcome is found to be still existing, to have been only masked or obscured meanwhile, and too often to be intensified by the very process intended to effect its destruction; for the capacity of variation or irregularity of the circulation of the blood in the nerve centres acted upon has been increased, and the more this is increased the greater the possibility of their functional disturbance, and therefore of pain. What is here said concerning blisters applies to the other excitants, which are used externally in degrees proportionate to the intensity of their action, and I shall abstain, therefore, from adverting to each of them more especially.

Sedatives.—When the action of narcotics is mainly on the peripheral termination of sensory nerves, their operation is strictly and directly sedative, and differs widely from the character of their influence when they are administered inwardly, either by the stomach or by subcutaneous injection, or even when applied externally over a surface sufficiently extensive to permit of their absorption in quantity adequate to act directly on the brain. Acting as sedatives in the sense here indicated, they are soothing, and in many cases they afford relief more or less complete from pain for a time; but I doubt if in any case of fully developed neuralgia they ever cure. As a sedative, the frequent and prolonged use of the warm (not hot) bath is in my opinion far more efficacious. Trousseau mentions a remarkable expedient to which he resorted empirically in some cases with a temporary success he could not, as he says, account for, and which I regard as sedative in its action—viz., division of the chief artery at the seat of pain. By this operation the affected nerve is suddenly deprived of its wonted and direct supply of blood, and until, through indirect channels, it has again attracted to itself a fresh abundance, it is rendered less vigorous than before.

(*To be continued.*)

ON THE EARLY PROGRESS OF ARMY SANITATION IN INDIA.

By C. A. GORDON, M.D., C.B.,
Deputy Inspector-General of Hospitals.

(*Continued from page 272.*)

Transport by Sea.

The documents in the Army Medical Office, Calcutta, supply no information regarding arrangements connected with the movement of troops by sea within the limits of India prior to 1826. We learn, however, that in that year the 67th Regiment was sent round by sea from Bombay to Calcutta. On the voyage the men suffered severely from dysentery, the cause of which disease, Dr. Burke believed, was to be sought in the vessel by which the corps was conveyed.(a) "The ship," he stated, "was one of 800 tons, and had on board 400 men, women, and children, and a crew of 80 men; the 'tween-decks were badly ventilated, and the heat during the night was excessive." "The men, from a generous diet (on shore), were put at once upon one which must be considered far from being so—namely, 1 lb. of indifferent salted meat, ¾ lb. of biscuit, and a little rice; this, with an allowance of country rum or arrack, composed their daily ration for two months, that being the time the voyage occupied in those days.

To give the reader an idea of the extent to which, on this occasion, the troops were overcrowded, it is only necessary to remind him that under the present regulations not more than one man to every $2\frac{7}{10}$ of a ship's tonnage must be embarked, and that authorities on the subject urge the propriety of the proportion being, for ships proceeding to or from India, one man to three tons. Here, then, in the instance of the 67th, was an evident source of disease; yet added to it we have insufficient ventilation, inferior food, and pernicious "liquor."

The vessel to which these remarks refer would appear to have been a hired transport. Unfortunately, information is not now available in regard to the arrangements made on board for the accommodation of the sick; we are enabled, however, to say what they were on board one of those taken up in the colonies—namely, that by which, in 1827, the Buffs were conveyed from New South Wales to Bengal. Here, for example, is the report on the subject made by the Medical officer of that regiment.(b) "I cannot help observing here," he observes, "that some neglect is shown to the welfare of the sick on board the Honourable East India Company's ships, by the non-provision of a sick bay on the gun deck." According to the present system, the unfortunate patients are slung in hammocks near a hatchway in the orlop deck, exposed to all the varied annoyances arising from the presence of between three and four hundred individuals. It was, indeed, scarcely to be expected that when arrangements for healthy men were in the unsatisfactory condition we have just mentioned, the sick should be much attended to. When a man became the subject of disease, he was too often considered only as an incumbrance, and, in the language of many an old officer "of the period," "anything was good enough for him."

The next occasion on which the arrangements on board ship would seem to have become the subject of remark and remonstrance by our Medical officers in India occurred in 1830. In October and November of that year the 26th Regiment arrived at Calcutta from Madras, having, as we learn, been sent up "in six different detachments by so many different ships." With reference to the ships, it is stated that they were all more or less crowded, and that, too, notwithstanding that strong remonstrances were made on the subject, both by the Surgeon of the corps and by the Inspector-General of Hospitals before the embarkation of the troops at Madras. It, is, moreover, stated that, "as the ships were c[h]arter-party, the Surgeons of the vessels had charge of the troops on board; this being in accordance with the rules of the East India Company."

With reference to this brief paragraph, it may be well to explain that formerly, and up to a very recent date, it by no means followed that regimental Medical officers had charge of their own men on board ships belonging to or chartered by the above Company; but that, on the contrary, either a civil Practitioner, or a servant of their own, had so during the period of the sea voyage. This extraordinary arrangement virtually withdrew from the army Medical officer all power to ameliorate, for the time being, the condition of officers or soldiers belonging to the body of which he was himself an integral part.

We learn that porter was first issued to troops in lieu of spirits on board the *Moira* in 1836. The 44th Regiment, which in that year went to India, had a detachment on board that vessel, and unluckily scurvy attacked some of the men in her, although in none of the other ships conveying the regiment did the malady occur. It does not appear that there was any serious defect in the manner of fitting up the ship or in the quality or quantity of provisions.(c) It is stated, however, that the troops on board experienced some wet, cold, and rough weather when off the Cape of Good Hope, and were for a few hours occasionally confined below.

There certainly could have been little harm to the troops from such trivial inconveniences as have been here alluded to, yet they are noted because specially mentioned at the time. It is, moreover, stated that the men themselves were perfectly satisfied with receiving porter on board instead of spirits, but that the experiment was incomplete, as the supply of "malt" ran short, and for several weeks towards the end of the voyage not only were the men without porter, but they had no spirits or anything in lieu of it. With reference to the experiment, Dr. Macleod wrote thus:—"It is to be hoped," said he, "that a measure offering so fair and so rational a prospect of doing much good as the disuse of the spirit ration will not be defeated by one failure, and that failure arising, in all probability, from sources totally different." I would beg attention to these remarks if for no other reason than that the evident desire of recent writers on hygiene is to induce the belief that the substitution of malt liquor for spirits on board ship is an improvement for the first time proposed within a very few years back.

But although scurvy appeared only in this one of the vessels by which the 44th Regiment came to India, this disease occurred in one of those on board of which were detachments of recruits proceeding to the same destination. The ship in question was the *Exmouth*, and we learn from the reports of the occurrence that "the consequences in her might have been serious if she had not put into the Nicobar Islands, where the men were supplied with fresh provisions and vegetables,"

(a) Report 1826, page 115.

(b) Report by Assistant-Surgeon Patterson, of the Buffs, quoted by the Inspector-General in his Report for 1827, page 294.

(c) Report 1836.

which, as we learn, were "the means of saving many." Of the progress of the disease on this occasion, it is stated that when the first case appeared the vessel had been 102 days at sea, that in the course of three or four days thereafter 15 or 20 men were affected, that within three weeks 74 were incapable of doing any kind of duty, and that the presence of the affection had occasioned a great deal of despondency.

Adverting to the scale of victualling for troops, and to the duties of inspecting the stores of vessels, Dr. McLeod, in his report for 1836, thus writes:—"There are no specific regulations, that I am aware of, for this part of the duty of officers on board ship—namely, to see that the rations issued are of good quality and properly cooked—but as they are of the greatest importance, and as the health and comfort of the men may very materially depend on them, they are deserving of the greatest attention, and ought not to be left to the careless superintendence of raw, ignorant non-commissioned officers, as, I fear, is too frequently the case where young and giddy officers are entrusted with the care of soldiers for the first time. That this happens frequently in the instance of recruits coming to join their corps in India is well known, and perhaps no existing practice of our service requires to be more closely looked into than this very charge of troops on shipboard, and on their way to a tropical climate." He stated that the allowance of water which was put on board ships was at the rate of seven pints per man per day, and of lime-juice a quart per man for the voyage; but added that these quantities were much too small, and that the increase of both of them to double the quantity "would be a desirable improvement."

In contrasting the conditions of troops at sea at that time with those of previous periods, he writes:—"The difference that has taken place of late years in the health of persons on board ship is very extraordinary, and that the change is owing to discipline and attention to the men is beyond a question. It becomes a matter of great public importance, therefore, to make strict inquiry into such an unusual state of things as in these two ships, and to avoid in future the causes which led to it." And he winds up his remarks in this wise:—"That for upwards of twenty years no recruits coming out, or invalids going home, have arrived with scurvy, is most certain, and many of the ships conveying them must have had longer voyages than the *Moira*. That the cause of the disease was, however, very powerful in the *Moira* is obvious, for it was not confined to the troops."

In adverting to some of the circumstances attending the arrangements made on board ship for the troops connected with the first China expedition, it is considered convenient to consider them in the present place. Let us therefore refer to the remarks made by Dr. Bell, of the Cameronians, in regard to the arrangements on board vessels which conveyed sickly men of that regiment from Chusan to Manila. "Instead," said Dr. Bell, "of allowing the space of seven feet by two and a half to each of the convalescents sent to Manila, according to the regulations of the Bengal Government for invalids going to Europe, all such measurements and regulations were held in ridicule by the authorities of Chusan, and the men were crowded contrary to the regulations, and in spite of the opinion of the committee who examined the vessels. The transport *Ernaud* brought from Calcutta 204 healthy men, and they were so much crowded that not more than 160 could swing their hammocks, the rest lying on the deck as they best could. Yet now 205 sick men were embarked in her, though very few of them were able to swing their hammocks, and the relief obtained by keeping a third of the men on deck, as so many healthy men, was impossible."

"The provisioning of these two transports (*Ernaud* and *Defiance*) was still more mismanaged than their overcrowding. Instead of fresh provisions being provided for the voyage to Manila, which could easily have been done, only fresh beef for two days was put on board; after which the men had nothing but the same bad salt provisions which had been so much complained of at Chusan—this, although there was abundance of good provisions to be purchased in the harbour at the time. They had no limejuice, and the biscuit was such as has already been represented. What has been said with regard to the *Ernaud*, in which most of the convalescents of the 26th embarked, applies in every respect equally to the *Defiance*. The deficiencies in regard to Medical comforts, Hospital supplies, and attendance of all sorts were on a par with those relating to space, accommodation, and provisions.

What was foretold, and might easily have been foreseen, happened. Instead of any improvement as regards health having taken place, the very reverse was the case; debility, sickness, and mortality increased to such a degree that out of the party of 206 embarked at Chusan, 134 died.(d)

Dr. Bell thus continues his narrative:—"To show," he says, "the grievous injustice that was done to the Manila party, it is necessary to explain that though the *Ernaud* brought from Calcutta 204 healthy men, she could in reality only accommodate only 136 at the measurement allowed by the Bengal Government—namely, 6 feet by 2." "So that, instead of each man having 12 superficial feet, as a man in health ought to have had, he had only $5\frac{1}{2}$ feet by $1\frac{1}{2}$, or 8 superficial feet—that is, only two-thirds of what he was entitled to—but as these men were not in health, but, on the contrary, convalescent from previous disease, feeble and emaciated, and most of them unable to swing in their hammocks, each man ought to have had 7 feet by $2\frac{1}{2}$, or $17\frac{1}{2}$ superficial feet, in which case only 94 instead of 204 would have been sent in the *Ernaud*. It would be unreasonable to doubt," he further observes, "that, had this been attended to, the disgraceful catastrophe might to a great extent have been avoided."

In 1842 the 98th Regiment sailed for China, direct from England; and of the voyage we learn that it was tedious, the ships crowded and insufficiently ventilated. We cannot wonder, then, that with these defects, and with salted provisions during 214 consecutive days, the men became affected with scurvy. They landed in China pale, unhealthy, and ineffective, after leaving seventy sick on board the *Belleisle*.(e) But, carrying out the principle so often alluded to in these notes of not bringing my narrative to a date sufficiently recent to implicate surviving officers, I had better here conclude the present section.

(To be continued.)

(d) Report 1841. (e) Report 1842.

CASE OF SPINA BIFIDA AND HYDROCEPHALUS, WITH BURSTING OF THE HEAD.

By THOMAS EDWARD AMYOT, F.R.C.S.

The extreme rarity of the case, the particulars of which I am about to narrate, appears to me to justify its publication. I can find no record of a similar termination to a case of hydrocephalus in the tolerably extensive collection of books to which I have access, and my friend, Mr. Williams, of Norwich, who has kindly assisted me in the search, has been equally unsuccessful.

The father of my late little patient is a respectable agricultural labourer, a man of small build and somewhat feeble appearance, but he tells me he has always enjoyed good health. The mother is a decent, healthy-looking woman, and, as far as I can ascertain, there is no tendency to hereditary cerebral or other ailment in the family of either parent.

On the last day of March, 1868, their first child (a female) was born. A woman attended at the labour, which was of the ordinary kind. On the following day I was requested to see the child, and found it the subject of spina bifida in the upper lumbar region, the tumour being the size of a hen's egg, and its integument very thin, red, and semi-transparent. Otherwise the child appeared healthy and well formed. I simply protected the tumour from injury by a ring of thick felt spread with adhesive plaster, and covered its surface with lint and spermaceti ointment. After the first few days of its life I did not see the child; but the mother frequently called on me and described its progress as satisfactory. I now find, however, that, during the first month, a neighbour remarked on the prominence of its forehead, and I am also told that, throughout its nine months of life, it suffered frequently from "stoppages," a not inexpressive word used by the poor folks here, and probably elsewhere, to denote the milder form of infantile convulsions shown by slight rigidity of short duration, lividity of countenance, and staring eyeball. The secretions and appetite appear to have been always natural, and sleep moderately good.

By the eighth month of the child's life the spinal tumour had disappeared, and was covered in with sound integument; but the head had become enormously distended, and in the middle of last January I was again called to see it, as the convulsive attacks had been more frequent and severe than usual. I now measured the head, and found its circumference twenty-seven inches. The eyeballs were forced downwards, so that nothing but the upper rim of the cornea could be seen above the lower lid of either eye. Dentition had not commenced; but otherwise there was little remarkable about the child. The trunk was

fairly formed, well nourished, and of the average development of its age. The legs were perhaps a little small, and there was slight double talipes varus. On January 18 the mother perceived some slight watery oozing among the hairs of the scalp, and on the 21st the skin looked so thin and "bulging" a little to the right of the vertex that the husband predicted in the afternoon that the head must burst. He proved right; for at 11 p.m., while the child was resting on its mother's lap, the scalp suddenly gave way, and the fluid contents of the cranium burst out in a stream about the size of the stem of an ordinary tobacco pipe, being projected some inches from the head. Much was lost upon the floor, but I found the remainder, which was caught in a pail, to measure (within a few ounces) one gallon. It was clear straw-coloured serum. No remarkable change of symptoms followed this event; but the appearance of the head was indeed extraordinary, for it resembled a good-sized basin, of which the frontal, parietal, and occipital bones formed the rim, and the hairy scalp the bottom. The only marked irregularity to the rim was an extension (about an inch and a half long by three-quarters of an inch wide) of the central portion of the frontal bone towards the vertex. The child died quietly the next evening (January 22), having fed heartily on cake sopped in milk about three hours previously.

No post-mortem examination was allowed.

P.S.—I have kept a list of the works which Mr. Williams and myself have vainly searched for an account of a case of hydrocephalus with a similar termination, as a copy of it might save much trouble to any gentleman inclined to pursue the inquiry.

Diss, Norfolk.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. GEORGE'S HOSPITAL.

ABSTRACT OF THE FATAL CASES OF AMYLOID DISEASE OCCURRING DURING THE YEAR 1868.

The nature and ætiology of the peculiar degeneration known by the various names of amyloid, albuminoid, waxy, and lardaceous, has recently attracted much attention, and has been discussed both in these columns and at the Pathological Society. We therefore take this opportunity of presenting our readers with an abstract of all the fatal cases of this disease which occurred during the past year at St. George's Hospital, where the admirable system of recording the observations in the deadhouse offers peculiar facilities for such investigations. We are indebted to Dr. Dickinson and Mr. Pick for their kind assistance in enabling us to obtain all the information we required. The number of the case refers to the number in the pathological register of the Hospital; the dates are those of the patient's admission and death.

1. (*Case* 39).—Mary Ann W., aged 40. January 22—February 3, under Dr. Barclay. Ill ten weeks with bronchitis; swelling of legs for nine weeks; no vomiting; pain in the head; catamenia absent for sixteen months. On admission, anæmia and general œdema marked; fluid in abdomen; urine thick, full of albumen, with granular casts. She became rapidly worse, and died suddenly.

Post-mortem.—Body œdematous; lungs collapsed, with old and strong adhesions in both pleuræ, which contained much fluid blood. Fluid in abdomen; liver congested; spleen small; kidneys large, pale, fatty; pyramids congested, slight amyloid reaction with iodine.

2. (*Case* 45).—Richard B., aged 52. January 22—February 7, under Dr. Barclay. A carman; ill "on and off" for three years with diarrhœa; no history of abscess, syphilis, or phthisis. Aspect markedly "lardaceous"; skin wrinkled, thin, yellow, and sallow, with little fat; weakness and lassitude; thirst troublesome; liver large, extending below umbilicus; urine pale, clear, very albuminous; stools loose and thin. He sank gradually, and died slowly.

Post-mortem.—Body emaciated; lungs almost destitute of air; liver large, weighing 6 lb. 10 oz., fatty, firm, giving no reaction with iodine; spleen large, firm, giving distinct amyloid reaction; kidneys large, also amyloid; mesenteric glands enlarged, amyloid; intestines decidedly amyloid. No evidence of previous suppuration, nor of chancre.

3. (*Case* 80).—John D., aged 28. March 13—March 27, under Dr. Ogle. Soldier; served five years in India, suffered from hepatitis in 1857, but not from dysentery; had syphilis, and had been previously under treatment for dropsy and albuminuria. On admission, surface generally very pale, but with a flush on cheeks; legs swollen; urine pale and albuminous, sp. gr. 1007, containing large clear casts. He sank gradually.

Post-mortem.—Indurated cicatrix on penis; lungs œdematous, left adherent, and with a patch of pulmonary apoplexy in lower lobe; valves of heart atheromatous; liver small, left lobe especially hard, with whitish fibroid matter infiltrating it, the right lobe also containing a few similar patches, probably of syphilitic origin; spleen large and firm; kidneys large, weighing 24 oz., pale, tubules full, structure coarse, giving amyloid reaction with iodine.

4. (*Case* 114).—Joseph F., aged 73. April 8—April 25, under Mr. Hewett. Whilst gardening he cut and poisoned his right thumb; four days later his hand and forearm became swollen, red, and painful. On admission he was very weak; diffuse cellulitis was extending up his forearm and lower arm; abscesses formed in arm and were opened; hæmorrhage followed, and the patient died.

Post-mortem.—Body emaciated; diffuse cellular inflammation of the arm and hand; areolar tissue infiltrated with pus, sloughy; lungs œdematous; heart hypertrophied, aortic valves rigid and incompetent, mitral valves thickened; liver fatty; spleen normal; kidneys large, capsule adherent, pyramids congested, surface rough, giving decided amyloid reaction with iodine.

5. (*Case* 140).—Edmund B., aged 22. November 5, 1867—May 13, 1868, under Mr. Pollock. Six months ago patient had rheumatic fever, and was in bed for nine weeks, during which time bedsores formed over the trochanters, and his knees became drawn up and very painful. On admission there was stiffness of the hips; the knees were flexed, and when an attempt was made to straighten them by splints, the skin sloughed from the pressure; sickness and diarrhœa came on; the urine was albuminous; sweating marked. He continued in this state for four months, and sank gradually.

Post-mortem.—Body emaciated and distorted: thighs flexed and rigid; a large bedsore on posterior surface of sacrum, the exposed bone was soft and carious; lungs œdematous; remains of old pericarditis and endocarditis, mitral valves thickened liver very large, soft, light fawn-colour, giving a very marked reaction with iodine; spleen also amyloid; kidney large, weighing twenty-one ounces, pale, waxy-looking, giving amyloid reaction; intestines also amyloid.

6. (*Case* 195).—Ann H., aged 25. May 6—July 4, under Dr. Fuller. Scrofulous glands for three years; legs have swollen from time to time during last two years, but markedly so in last three weeks; catamenia not seen for four months; vomiting for four weeks. On admission there are remains of old abscesses in the glands of the right side of the neck; the legs are swollen; urine very albuminous; complexion waxy; vomiting constant and distressing; diarrhœa occurred; patient sank gradually.

Post-mortem.—Body emaciated; œdema of legs; apices of lungs adherent; fluid in pleura; cavities in both apices, the right being of old standing, and lined with a smooth membrane; both recent and old tubercular deposits in lower lobes; all the abdominal organs intensely amyloid, giving very marked reactions with iodine; liver large, weighing 5¼ lbs., pale, soft, fatty, amyloid; spleen large, firm, amyloid; kidneys large, pale, fatty, amyloid, weight 16 oz.; stomach and intestines amyloid, the latter also containing old tubercular ulcerations.

7. (*Case* 200).—Eliza F., aged 31. June 13—July 8, under Dr. Ogle. Admitted in August, 1866, after her confinement in the previous month, for a swelling in the left iliac and hypogastric region, which felt doughy; her face was pale and anæmic; skin hot and moist; she had rigors whilst in the Hospital, and an abscess pointed in the back, and became very painful; it was opened on September 11; about 30 fluid ounces of thick green pus escaped. The discharge continued, varying in amount, till the day of her death, nearly two years later. In October the urine became albuminous, and in March she passed pus in the urine. She then gradually improved, and left the Hospital on April 20, 1867. Readmitted June, 1868. Pale, passes urine highly albuminous; severe pericarditis supervened, and she died.

Post-mortem.—Body in good condition. In the left lumbar region is a sinus, from which some thin pus exudes; lungs infiltrated with serum; in anterior margin of lower lobe of left lung are three or four small fibrinous masses, the size of peas, softening in the centre—they appear to be old abscesses;

evidences of recent pericarditis. Occupying the position of left kidney was a firm mass, apparently consisting of fibrous tissue, with a small abscess in the centre, communicating with opening in the lumbar region; scarcely any kidney substance remained; no disease of neighbouring vertebræ; right kidney large, capsule adherent, surface granular, giving reaction with iodine; liver fatty and amyloid; spleen amyloid; as also was the mucous membrane of the rectum.

8. (*Case* 219).—Eliza G., aged 29. October 23, 1867—July 30, 1868, under Mr. Hewett. Four years ago had syphilis, and was treated in the Lock Hospital. Her upper lip is now swollen, the labia greatly hypertrophied; these subsequently ulcerated, and she sank very slowly.

Post-mortem.—Body emaciated; legs œdematous; pudenda ulcerated; a large fibro-cellular tumour existed in labium; the lips were ulcerated; lungs adherent, œdematous; heart fatty; all abdominal viscera were amyloid, spleen especially giving a very well-marked reaction; rectum ulcerated.

9. (*Case* 246).—Harriet S., aged 20. August 19—August 23, under Dr. Wadham. A lady's maid; ill ten weeks with vomiting, pain in the back, and jaundice; catamenia absent for two months. On admission, very anæmic; face puffy; cardiac murmur at apex; urine reported non-albuminous. She had repeated fainting fits, and died in one of them.

Post-mortem.—Body extremely anæmic, legs œdematous; right pleura contained much clear fluid and some flaky lymph; lungs pale and infiltrated with serous fluid; pericardium contained fluid, a few purpuric spots; liver fatty, amyloid; kidneys extremely pale; capsule adherent and splitting; Malpighian bodies prominent and glistering, tubules coarse and well-marked; uterus and appendages anæmic, but normal; stomach and intestines anæmic, but normal.

10. (*Case* 270).—Mary F., aged 40. August 26—September 16, under Dr. Clark. A widow, had had seven children, began to suffer six months ago from a coloured discharge having an offensive smell; sometimes blood clots were passed; three years ago suffered from difficulty in passing water; went to a workhouse for seven weeks where she was badly fed. There was advanced cancer of the uterus, the legs became swollen, the mind wandered, and she died slowly.

Post-mortem.—Body emaciated; much sero-purulent fluid in pleuræ; lower lobe of left lung solid, sinking in water, and infiltrated with puriform fluid (grey hepatisation), right lung œdematous; liver in advanced stage of amyloid degeneration, very fatty; spleen amyloid; kidneys very large, weighing 16 oz., very pale and fatty, decided reaction. A large mass of ulcerated encephaloid occupied the lower part of uterus and upper part of vagina; the os uteri was completely destroyed, and the ulceration had nearly perforated bladder; the lumbar glands were affected.

11. (*Case* 279.)—Henry L., aged 49. August 19—September 22, under Mr. Holmes. Three weeks ago had pain in the sole of the right foot; three days later it began to swell, and abscesses formed and burst. On admission, a large abscess existed on the inner side and a little above the left ankle; whole foot much swollen, the soft structures being undermined; the skin sloughed, and much thin pus was let out; abscesses formed higher up, and were opened; urine scanty and albuminous. He sank gradually.

Post-mortem.—Body emaciated; skin on inner side of foot destroyed, and also the tendons passing over ankle-joint; right lung adherent, both œdematous; liver large, fatty, slightly amyloid; spleen also slightly affected; kidneys pale, anæmic, fatty, yielding very distinct amyloid reaction.

12. (*Case* 282.)—Sarah B., aged 27. April 11—September 26, under Mr. Hewett. Pale and emaciated; passes blood by bowel, and purged; hypertrophy of labia; ulceration of pudenda; urine albuminous. She sank gradually and died.

Post-mortem.—Body œdematous; a large fibro-cellular tumour in labium, partly ulcerated; cicatrix in groin; lungs pale, anæmic; liver pale, soft, fatty; spleen natural, no trace of amyloid; kidneys pale, soft, fatty, distinctly amyloid; intestines also amyloid; uterus and ovaries natural; ulceration of vagina in neighbourhood of tumour.

13. (*Case* 379.)—Elizabeth H., aged 44. December 2—December 31, under Dr. Barclay. Married, has had eleven children; has suffered from cough for two years, and from frequent hæmoptysis; had had enlargement in region of liver for one month. On admission thin and cachectic, apparently in the last stage of consumption; sputa very purulent; occasional vomiting; urine albuminous; diarrhœa profuse.

Post-mortem.—Body greatly emaciated; upper lobe of left lung converted into a large vomica; softening tubercle in lower lobe, tubercle in right lung more recent; no cavity; liver large, weighing 106 oz.; kidneys large, weighing 14 oz.; all the viscera gave marked reaction with iodine.

Remarks.—The point which strikes us most in reviewing these thirteen cases is the infrequency with which the disease seems to have followed or to have been associated with prolonged and excessive suppuration. In only one case (the 7th) was there any considerable abscess present; in two cases there were cavities in the lungs of old standing, and in one of these there were remains of scrofulous abscesses in the glands of the neck; in one case there were large bed-sores, and in another there was encephaloid disease of the uterus, which may have given rise to discharges of pus; in four cases the patients died from recent and acute suppuration, sloughing, or ulceration; whilst in the remaining four cases no history of abscess or of suppuration in any form was obtained. It might with justice be maintained that in the five cases in which ulceration and sloughing occurred in the course of other affections—viz., 4th, 5th, 8th, 11th, 12th—the process was rather consequent upon the diseased condition of the kidneys and other important organs affected by the amyloid change, than that the latter was due to the depurative action itself. With regard to the influence of syphilis in producing this condition, we have direct evidence of the existence of this disease in two cases (3rd and 8th), and a probability in favour of its existence in another (12th). It must be remembered, however, that the history of syphilis is often obscure and difficult to obtain. In all the cases the patients are described as being anæmic, and many of them were emaciated; and it is curious to notice that the only patient described as being in good condition (7th) had suffered from prolonged and excessive suppuration, due to the existence of a large renal abscess. The œdema mentioned in nearly all the cases was doubtless due to the diseased condition of the kidneys. But are we to consider that the albuminuria, which was present in all the cases but one—in which it is expressly stated in the register that the urine was "reported" non-albuminous—was the result of the amyloid change in the kidney substance, or may it not have been due to the same primary condition which gave rise to this degeneration? The change appears first in the walls of the blood-vessels. Has any alteration in the blood-plasma or corpuscles been detected?

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Medical Times and Gazette.

SATURDAY, MARCH 27, 1869.

"PRACTITIONERS OF THE CURATIVE ART."

We had supposed that Medical men, as a class, were not only as serviceable to their fellow-creatures as men of any other vocation, but that for intelligence, power of observation, and calm judgment, they would bear a fair comparison with any other profession—with clergy, with lawyers, or even (shall we say?) with Poor-law Commissioners. But Mr. Edwin Chadwick is very severe on the poor Doctors, and inveighs against them as a class under the curious periphrasis, "practitioners of the curative art." Whence springs his wrath against them we know not; it has, however, led him to some amusing infer-

ences. They are not merely disqualified to gain Mr. Edwin Chadwick's approval, but are incompetent either to judge of, or profit by, their experience in the very facts with which their whole life is one continued contact. One might have supposed that no class of men could better judge of the phenomena of health and disease, life and death, the materials of all sanitary science. Mr. Chadwick, far from countenancing such a delusion, supposes them to be ignorant and incompetent for the very reason which best guarantees alike their knowledge of facts and their presumable ability to form and to test theories.

Surely the Secretary of the Poor-law Commissioners must for once have been oblivious when, at a late meeting of a department of the Social Science Association, he ventured to follow the pioneering of Mr. Holland, and make an heroic attack on the "practitioners," or rather, as it seems, to inflict, under cover of such general terms, an assault of singular grace upon the president of that department.

We had thought that whatever were the merits of Dr. Rumsey's address at Birmingham, as being careful, exhaustive, mature of thought, lucid in style (and in these respects we estimate it highly), it had also a special merit of a very scrupulous courtesy in its recognition of the efforts of other sanitary reformers, giving praise to most of those who had specially deserved it. But he fails to satisfy Mr. Edwin Chadwick. He is a "practitioner in the curative art!" What practitioner in curative art can be other than ignorant of the specialities of his art? How can it be expected that men who have been labouring for years in antagonising disease and infirmity can know anything of the sanitary condition of our population? How is it possible for them to judge with any authority of the *causes* of those very *results* against which their whole life is one constant contest?

Surely a blue book, a page of statistics, a foolscap of "return," is a far better, far more real and vital evidence of the conditions of health and disease than observation of and ministration to the living, dying, sick, and sound bodies of human beings! Nay, if we may follow Mr. Chadwick's line of thought, the very fact of a life devoted to practical work against the evils which we all desire to correct or palliate is of itself a presumption powerful to exclude the "practitioners" from the ranks of intelligent observers or credible witnesses.

It is somewhat remarkable that in the attack made upon the President, the points set out for discussion were wide of anything which he had said in his address. He had, while giving credit to early sanitarians, pointed out the great evils of that method of drainage which was extensively adopted, with their apparent concurrence, not merely in large towns, but also in villages and detached houses—namely, "pouring abominations of all kinds into the nearest water-courses," a method which, when employed in populous towns and cities, "rendered (as he said) subsequent measures for the recovery of what was truly valuable in this so-called refuse almost impracticable." No one would deny that this was a "rash dilution and wrong disposal of organic matter."

If only half be true of that which we read in the scientific journals, in the reports of the Rivers Commission, and in the published papers of great professors of chemistry, such as McAdam and Frankland, about the pollution of rivers and streams, and about the destructive effects of that pollution, there is quite enough to justify the President's sweeping denunciation of that plan of town and house cleansing which consists in using sewers for the conveyance of fæcal matter and organic refuse into water-courses.

Dr. Rumsey never objected to the abolition of the old cesspools, nor to a scientific removal of *excreta* to a distance from dwellings, nor to the drainage of the subsoil, nor to the thorough scavengering of towns. He never denied that the old school of leading sanitary reformers had done much good; and if Mr. Chadwick had read the address, he would have seen how handsomely *his* official services were acknowledged.

The non-professional ally who, unable to draw his conclusions from living phenomena, has to take his data at second-hand, in his office, may still be a worthy and valuable *collaborateur*, provided he be patient, modest, temperate of speech and judgment. When such is his spirit, he will be little disposed to sneer at those who fight in the forefront of that battle of which he perusses the despatch.

ON HEADACHES.

Dr. Martineau has lately published an admirable monograph(a) on this subject, which is well worthy of careful study, for there are few symptoms which give the Practitioner more trouble, both in a diagnostic and therapeutic point of view, than some of the anomalous forms of headache.

Headache may be general, extending over the whole of the cranial region, or it may be partial and circumscribed, and affect either a lateral half, when it is known as hemicrania, or a definite region, as the frontal or occipital, or it may be confined to a very limited spot, as the top of the head in certain cases of hysteria. The pain varies in intensity, and may be slight or violent, acute or dull. The pictures of their sufferings, as drawn by the patients themselves, are most varied. Some complain of a sensation of heat, tension, constriction, formication, pricking, and lancing, while others describe a sensation of tearing of the structures and of violent pulsations. Some complain that they feel as if the head were bursting, or as if it were being struck by a hammer, or as if it were compressed by a heavy weight, while others complain that the head feels light and vacuous. In some cases the scalp is so sensitive that even touching the hair excites pain. The functions of hearing and sight may be affected, and the patient may complain of abnormal sounds in the ears and various disturbances of vision, and in some cases the cutaneous sensibility of the face is affected. With these cerebral phenomena are associated certain symptoms presented by other organs, especially the stomach.

The duration of headache is as variable as is its intensity or seat. It may be ephemeral or permanent, lasting only a few hours or continuing for months or even years. In the latter case the pain is commonly due to a morbid diathesis, or to a gouty tendency, or a syphilitic taint. If the pains are due to syphilis, we may often get a diagnostic hint by observing the exacerbations which they undergo when the patient retires to bed. An illustrative case lately occurred in the wards of Professor Nélaton. A young washerwoman, suffering from syphilitic nodes, was frequently obliged to carry on her business throughout the whole night; and on these occasions there was no exacerbation of the headache from which she constantly suffered. But if she attempted to lie down during the day, the pain in a few seconds became so intolerable as to render sleep impossible. Indeed, whenever she attempted to lie down, the pain became so agonising as to compel her to rise. Iodide of potassium in small doses soon effected a radical cure.

After noticing the various classifications of headache, based upon its causes, that have been proposed by various authors, Dr. Martineau divides them into (*a*) cephalalgia dependent on a lesion of the skin, or of the muscles and fibrous tissue, or of the bones of the head; (*b*) cephalalgia due to a lesion of the nervous centres; and (*c*) cephalalgia of a sympathetic or reflex origin.

The pains in the head experienced in erysipelas, rheumatism of the scalp, and secondary or tertiary syphilis, are examples of the first division. The headaches accompanying acute meningitis, the tubercular meningitis of children, cerebral softening, cerebral congestion, affections of the cerebellum, scarlatina, Bright's disease, etc., belong to the second division; while under the third division the author places the headaches

(a) Article "Céphalalgie" in the *Nouveau Dictionnaire de Médecine et de Chirurgie*, tome vi. Paris: Baillière. London: Baillière, and Williams and Norgate.

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that occur in the various forms of fever, in disordered conditions of the stomach and intestinal canal, diseases of the respiratory system (as pneumonia, febrile catarrh, influenza, acute bronchitis, etc.), in gout, in uterine affections, epilepsy, blood-poisoning, etc.

We must always carefully distinguish between a headache that comes on almost instantaneously in a healthy man and a headache attacking a person who is already an invalid. Our diagnosis and prognosis in these cases are very different. For example, if a man is suddenly attacked with intense headache, under special conditions of climate and season, in certain countries (especially in northern countries), the headache almost certainly indicates a malarial poisoning, while in hot southern countries such a headache would have a very different signification, and would point to abdominal and probably hepatic disorder, and would probably be the precursor of yellow fever. In the first case, the Physician would at once have recourse to sulphate of quinine, while in the second the headache would give no special hint as to treatment. Remedies must, as a general rule, be addressed not directly to the headache itself, but to the seat of the disease which excites it. In the headaches accompanying a syphilitic taint, nothing is so serviceable as pills of iodide of iron (each containing a grain and a half), of which four should be given the first day, and the number should be increased by two daily. The headache usually disappears under this treatment in a few days. Headaches of a rheumatic nature, and sometimes even those that are symptomatic of cerebral disorder, are often much relieved by the local application of bags containing hot sand. This mode of treatment is much used by Trousseau. Lastly, in some very rebellious and obstinate cases, the application of a compress saturated with a solution of cyanide of potassium (1 part to 100 of water) has been found to be of signal service.

THE WEEK.

TOPICS OF THE DAY.

Mr. Froude's address to the students of the University of St. Andrews on the occasion of his being installed Rector of the University is better worth reading than the greater number of such productions. It deals with the subject of education, and the gist of it is that the first aim in all education is to enable a boy to get his own living. That this is not the main idea in modern education Mr. Froude affirms with characteristic force, as a short quotation will show :—

"If I go into modern model schools, I find first of all the three 'R's,' about which we are all agreed; I find next the old Latin and Greek, which the schools must keep to while the Universities confine their honours to these; and then, by way of keeping up with the times, a mixed multitude of matters—history, natural history, physiology, chronology, geology, political economy, and I know not what besides—general knowledge, which, in my experience, means general ignorance; stuff arranged admirably for one purpose, and one purpose only—to make a show in examinations. To cram a lad's mind with infinite names of things which he never handled, places he never saw or will see, statements of facts which he cannot possibly understand, and must remain merely words to him—this, in my opinion, is like loading his stomach with marbles—for bread giving him a stone. But what has been gained for the boy himself, let him carry this kind of thing as far as he will, if when he leaves school he has to make his own living? Lord Brougham once said he hoped a time would come when every man in England would read Bacon. William Cobbett—whom you may have heard of—said he would be content if a time came when every man in England would eat bacon. First and foremost a man has to earn his living, and all the ologies will not of themselves enable him to earn it. Light! yes, we do want light; but it must be light which will help us to work, and find food and clothes and lodging for ourselves. A modern school will undoubtedly sharpen the wits of a clever boy. He will go out into the world with the knowledge that there are a great many good things in it which it will be highly pleasant to get hold of—able as yet to do no one thing for which anybody will pay him, yet bent on pushing himself forward into the pleasant places somehow. Some intelligent people think that this is a promising state of mind—that an ardent desire to better our position is the most powerful incentive that we can feel to energy and industry. A great political economist has defended the existence of a luxuriously living idle class as supplying a motive for exertion to those who are less highly favoured. I doubt very much indeed whether the honesty of the country has been improved by the substitution so generally of mental education for industrial, and the 'three R's,' if no industrial training has gone along with them, are apt, as Miss Nightingale observes, to produce a fourth 'R'—of rascaldom."

Mr. Froude proceeds to apply his rule first to the education of boys intended for handicrafts and commerce, and then of young men intended for the learned professions. For each profession he sketches an educational groundwork. For the lawyer he recommends a thorough knowledge of Latin and Norman French; "the Acts of Parliament of Scotland are more important reading than Livy or Thucydides." For the Doctor, Latin, chemistry, modern German, and French. We suspect, if Mr. Froude's studies had led him as far into science as into Acts of Parliament and Norman French, he would have included Greek in the category of a Doctor's education. It appears to us that Greek is becoming daily more necessary to the training of a scientific man, for the terminology of the whole round of the natural sciences is becoming more, instead of less, exclusively Greek. In endorsing Mr. Froude's protest against the frothy, flimsy cramming which passes for education in the present day, we are not to be supposed to agree with him on every other point. We have no doubt, however, that his address will secure him golden opinions in Scotland, for he told his hearers that, excepting the Athenians and the Jews, no people had left their mark so deeply in the world's history, and that England is more indebted to Scotland than Scotland to England—compliments which, taken together with the orator's dictum that the teaching of the Sermon on the Mount, as to "taking no thought what ye shall eat, or what ye shall drink, or wherewithal ye shall be clothed," was addressed only to a few, cannot fail to recommend him to our "brither Scots."

In addition to the gentlemen whose names we mentioned as candidates for the vacant Assistant-Physicianship at King's College Hospital, we are informed that Dr. Crucknell will probably offer himself for the post. Dr. Crucknell has been Physician for some years to the Great Northern Hospital, where, in addition to his ordinary duties, he has acted as pathologist, having voluntarily undertaken the performance of all the post-mortem examinations.

We are sorry to see, from an answer given by Mr. Bruce to Lord E. Cecil on Tuesday, that it is not the intention of Government to bring in a Bill to consolidate the Sanitary Acts in the present session. The report of the Royal Commission on sanitary matters will, it may be hoped, serve some day as the ground of some useful legislation, but at present the prospect seems doubtful. In the meanwhile we are promised a short Bill to promote the union of districts for sanitary purposes—a measure, however, which ought not to be made an excuse for an increase of local taxation. *Apropos* of sanitary matters, Mr. George Rigden, of Canterbury, has published in the *Kent Herald* some statistics of the death-rate in Canterbury, from which it appears that the mortality has diminished by 162 deaths in the last three years—a fact which he thinks attributable to sanitary reformations.

The *Liverpool Weekly Mercury* comments on a curious advertisement published by the Berwick Guardians. These parochial magnates are in want of a Medical officer and a porter. To the former they offer £25 a year, out of which he is to pay for all medicines except cod-liver oil. Candidates are to attend before the Guardians on the day of election at their own cost. For a porter they offer £20 a year, with board and lodging. The Berwick Guardians must be no doubt amusing people to know; but when they publish a joke they should say so.

The debate on Hospital administration in the Metropolitan Counties' Branch of the British Medical Association has been brought to a close, and a large Committee, including many well-known names, has been appointed to report on the subject. It seems difficult to suppose that much good can result from the movement. As long as unanimity is wanting, the Medical Profession will do nothing to diminish the evils which it has been the chief agency in producing. Individual Medical men cannot or will not afford to sacrifice their personal interests to the general good of the Profession. Until they have learned by experience that Hospital and Dispensary appointments do not lead with any certainty to Professional success, and that public support will be withheld from institutions started for the benefit of individuals and not for the good of the population, the evil will assuredly go on. Meanwhile the real sufferers are the general Practitioners of London and the large towns, on whom undoubtedly a great evil has been inflicted. We shall be glad if the Committee can suggest any scheme by which the ill may be lessened. But, for ourselves, we can only hope that a remedy will be found through the promulgation of juster notions on the subject of charity, and the setting in of a tide of public opinion against indiscriminate almsgiving of all kinds.

DEATH OF MR. JAMES, OF EXETER.

We are sorry to have to record the decease, at an advanced age, of the eminent provincial Surgeon so long and familiarly known as "James of Exeter." We are compelled to defer our obituary notice till next week.

THE PROBABLE SUCCESSOR TO DR. BEALE.

Upon whom the lot may fall of succeeding Dr. Lionel Beale in the Physiological Chair at King's College, it is almost presumptuous to speculate; but there is no impropriety in at least designating one Physician who would fill the chair worthily, and the choice of whom would undo what has seemed to many an act which gave very great pain to a large professional circle. We need hardly say that we mean Dr. John Harley, the abrupt severance of whose connexion with the College and Hospital, after many years' service as Assistant-Physician, is not yet forgotten. It is understood that Dr. Morris Tonge, a young Physician of the greatest promise, who was elected into the vacancy left by Dr. J. Harley's retirement, and who had given hopes of an eminent career as a physiologist, has retired from the fight for the higher positions in the Profession, and has undertaken the more active and lucrative life of General Practitioner. Dr. Harley's reputation is already established on a sound basis by the genius for experimental research shown in his work on the old vegetable neurotics, and by his lectures at the College of Physicians on the same subject. If King's College be indeed an Alma Mater, now is the time to show some grace to one of her most deserving children, more especially to one who can claim the vacant chair as due to his reputation and labours. Report has mentioned Dr. Burdon Sanderson, than whom no one has a higher character for original and exact research. Dr. Yeo, too, whose ability would well qualify him for the chair.

THE NEWCASTLE INFIRMARY.

For a considerable time past great dissatisfaction has prevailed in the town and neighbourhood of Newcastle respecting the condition and management of the Infirmary. Dr. Gibb, twelve months since, urged strongly on the governors the necessity of taking some steps to mitigate or extirpate Hospital gangrene from the institution, and to augment and improve the nursing staff. These and other alleged deficiencies were pooh-poohed at the general meeting in April last. A better state of things, however, has now been inaugurated, and, if carried out, as we believe it will be, the Hospital will be improved in every way, both as a building and as a well-managed receptacle for the sick and injured. A Committee of the Hospital governors have just issued a long and elaborate report on the deficiencies of the institution, and on the means of removing them. We are glad to perceive that the Committee cordially approve of most of the recommendations of the Medical staff, and suggest that they should be carried out as soon as possible. The expenditure required for the objects contemplated by the Committee will be about £2000 on capital account and an increased annual outlay of £1300, £440 of which is to be applied to the payment of housekeeper, additional nurses, and additional servants. The Committee also endorse several alterations in the constitution of the Medical staff as suggested by the members thereof, as also some very good regulations respecting House-Surgeons, clinical clerks, etc. The diet is to be improved. The following sensible recommendation is embodied in the report:—

"That a new operating room, on the ground floor, and in connexion with the accident room, must be built; and that it would also be extremely desirable to add to the operating room a pavilion ward, for the reception of very severe accident cases, and for persons who have undergone very severe operations. The site recommended for this ward is at the south-east corner of the building. This situation has the advantage of being open on three sides, by which perfect ventilation could be effected. The isolation of the worst cases of injury in this salubrious ward would be a great safeguard against the reappearance, in an epidemic form, of Hospital gangrene, and would also be attended with the important advantage of keeping out of the general wards patients whose condition would shock the sensibilities of the other inmates."

We observe that the *Newcastle Daily Journal* takes exception to a recommendation of the Committee that the Medical officers might retain their posts until they were 60 years of age. This, the *Journal* thinks, "shows a somewhat mature regard for vested interests." But we join issue with our contemporary on this point, taking into consideration how many cases there are in which Medical officers attain a *mature* age before they are elected to the higher posts in such institutions as the Newcastle Infirmary. The report to which we have directed the attention of our readers is valuable and suggestive, but too long to give in detail in our pages. It will be found in full in the number of the *Newcastle Journal* mentioned above for March 18.

AN ACTION FOR MALPRACTICE, ST. JOHN'S, NEW BRUNSWICK.

It has unfortunately too often been our lot to comment on the hard fate of some of our Professional brethren, who quite undeservedly have found themselves in a court of law as defendants in some action wherein the plaintiffs had not a leg to stand upon, yet were able to put the unfortunate Practitioner to expense, trouble, and anxiety. One of the very worst instances of this comes to us from New Brunswick, through the medium of the *Canada Medical Journal*. We give the substance of this extraordinary case. The plaintiff, John B. Key, was agent for a mining company, earning about $1500 a year. The defendant is Dr. Thomson, of St. George's, a gentleman who has practised there for forty years, and was for many years a member of the provincial parliament. From the evidence it would seem that the plaintiff left St. George's one evening about five o'clock, having to drive alone in a sleigh, for about ten miles. The plaintiff, according to his own account, had been drinking, but was sober. The temperature was below zero, and he had to face a north-west wind. After driving half an hour, he had occasion to get out of his sleigh; his feet were numb; he fell, and his horse left him. He tried to follow, fell repeatedly, and lost his cap and mittens. He had no pain or feeling in his hands, and he wandered about for four or five hours before he got to a house. His hands were frozen hard; they were put into cold water, and kept there half an hour, scales of ice forming on them in the water. His feet were treated in like manner. When his hands and feet were withdrawn from the water, blood flowed from below the nails. Warm flannels were then placed round his hands and feet.

Dr. Thomson saw him next day. Key's hands and feet were then dark red, and covered with blisters containing blood and water. Poultices containing flour, hops, yeast, and charcoal were ordered. This was on Sunday morning, December 24, 1865. That evening the nail of one of the plaintiff's toes fell off, several others following in a few days. On January 19 the fingers and toes were removed at the joints with a pocket knife. On the 28th plaintiff sent for Drs. Gow and Babb, who amputated his hands and his feet. This was the plaintiff's description of the operation; but it would seem to have consisted in merely cutting off the protruding portions of bone so as to enable their ends to be covered. He thinks he lost his hands and feet from inflammation, *produced by absorption of the oxygen of the blood by the charcoal in the poultice*. To any Medical man of ordinary intelligence and honesty the case is plain, and any one can see that Dr. Thomson acted most properly, at all events in the first instance. Yet what have we here! Dr. Gow, when examined for the plaintiff, stated that hot applications, when the man was received into the house where he was treated, were not objectionable; that after these the parts might have been saved, but that charcoal would cause death of the parts, and would be highly injurious if continued twenty-five days. He could not account for the death of the parts in any other way. We shall say nothing as to the operation performed by Dr. Thomson, which Dr. Gow pronounced highly improper. It is foreign to the argument, which is whether Dr. Thomson is responsible for the loss of Key's fingers and toes. Now, what has been done in this case? Any one would say that Dr. Thomson must have been triumphantly acquitted. Alas! no. The case has been tried on its merits twice over. The first time the jury awarded the extraordinary damages of $25,000 against Dr. Thomson. This verdict was, however, set aside on appeal to the Supreme Court. It was again tried in August last before a special jury. This trial occupied *nearly a month*, and the jury disagreed. Unfortunate Dr. Thomson is saddled with all this expense; and for what? A case as clear as noonday. We have no hesitation in saying that Key's fingers and toes were doomed from the first, and that, from the treatment adopted, Dr. Thomson must have been sure of this also. A more disgraceful case it has seldom fallen to our lot to comment upon. We cannot, however, regard the statements above given as untrue. They were copied from the judge's notes who tried the case. We unfortunately cannot do more for Dr. Thomson than make his case public—and pity him.

FROM ABROAD—RAILWAY ACCIDENTS IN PRUSSIA—DISMISSAL OF M. POUCHET FROM THE MUSÉUM—PROFESSOR BROWN-SÉQUARD'S EXPERIMENTS.

One of John Bull's most marked idiosyncrasies, sometimes almost passing into the ever-increasing tribe of minor manias, is his determined spirit of self-depreciation as compared with the well-managed inhabitants of the Continent. That everything is so much better done there than here has almost been admitted by ourselves as a proverb, and complacently accepted by our neighbours as an axiom. Railway travelling is an example of this. It is admitted that this is slow, not very conveniently adapted to the wants of the public, and surrounded by restrictions to which we are not accustomed, and to which we would not submit. Indeed, railways on the Continent seem to have in view far more the profits of the shareholder than the advantage of the traveller. But then it is said how safe they are, and how seldom accidents occur. It is true that unless these are of the crashing order they are not heard of; but then we must recollect that no such antediluvian institution as an open inquiry in a coroner's court exists, but all is done quietly and decently so as to give as little umbrage and excite as little alarm as possible. Still, judging from an "official report" quoted in a recent number of the *Berliner klin. Wochenscrift*, deaths are so frequent on the Prussian lines that we should indeed be staggered at the like occurrences here, and loud would be the comments upon their atrocity, although, it is true, they chiefly concern only the *employés* of the lines. It seems that in 1867 there were 38,766,866 persons who travelled 200,300,757 German miles, and the *employés* numbered 73,190, of which number 32,850 were engaged in forwarding the traffic, and were therefore exposed to the liability to accidents. During the year there occurred 305 non-fatal injuries and 230 deaths. Of these deaths 164 occurred to the workmen or other *employés* on the line, and are not stated in the report to be due to their own carelessness. Many of the remaining 66 deaths are attributed to this, and 18 of the number were suicides. The injuries from all causes amounted to 1 in every 72,461 persons, the deaths to 1 in every 168,551. Of course this last figure is an exaggeration as regards the travellers, and chiefly concerns the *employés*. But what would be said in this country if a proportionate fearful loss of life were entailed on those engaged on our railways? We have, too, been informed by the Surgeon of one of the great French lines that accidents to and deaths of *employés* are very numerous, but that no public investigation is ever instituted.

Another recent occurrence in Paris shows that in the management of scientific bodies also our neighbours are not the paragons of perfection we are so often directed to imitate. Our British Museum stands, we only too well know, in need of great organic change and expansion, but then among the first to admit this are the officials of the institution themselves, who have long vainly called for improvements which would render it more conducive to the advancement of science and the enlightened instruction of the public at large. But the Muséum d'Histoire Naturelle of Paris, the entire management of which is virtually in the hands of some of the senior professors, stands in need of no less extreme reforms, though, perhaps, in somewhat other directions. An incident which occurred last week—the dismissal of one of the officials—has recalled public attention to this body. M. Georges Pouchet, *aide-naturaliste* to the Museum, and well known in this country by his contributions to science, published in one of the Paris political journals some strictures on the body of which he was a subordinate officer, containing the following passages, which were regarded as especially offensive:—

"The Museum has discontinued during the last twenty years the meetings of the professors who administer it, sacrificing the superior interests of science to enmities, struggles for influence, and rivalries of cliques. . . . Then this body closes its ears to the complaints of its subordinates, refuses justice without its walls, and encourages calumnious imputations within them, without even calling to its bar the victims of persecutions within closed doors. . . . The professors may resist, but it is on condition of their being united at the cost of some sacrifices in favours, dignities, and bits of riband. They have not shown this excess of stoicism, and we cannot condole with them for reaping the fruit of their complaisance."

M. Pouchet only expresses a feeling very general in Paris that the affairs of the Museum are wretchedly mismanaged and monopolised. The neglect of the remarkable claims of Gratiolet until a period when acknowledging them ceased to be of service is only one example out of many. Routine, obstruction, and vested interests, scientific though these profess to be, stand in the way of improvements loudly called for. Still, it cannot be expected that any administrative body will permit one of its subordinate officials to become one of the leaders of attacks made upon its proceedings, and we cannot feel surprised that M. Pouchet has been summarily dismissed by the Minister of Public Instruction.

In a communication to the Académie de Médecine, Professor Brown-Séquard related some results of recent experiments on guinea-pigs, which he regards as of great interest and novelty. The first of these is the production of hæmorrhage by lesion of the restiform bodies. Hæmorrhages as a consequence of nervous affections, indeed, are not rare, as, for example, vesical hæmorrhage in disease of the spinal marrow, and intestinal

hæmorrhage in diseases of the brain. But the fact now noted is entirely new, while thus far it is of constant occurrence. This is the occurrence after lesion of a restiform body of subcutaneous hæmorrhage, very distinct, though limited in extent, of the ear. Another result of the same lesion is the production of gangrene, also of the ear, not gangrene resulting from ulceration, but dry gangrene. Moreover, when the lesion has been produced only on one side, the gangrene still is observed on both ears, although to a much greater extent on the injured side. Another fact M. Brown-Séquard was desirous of communicating is that section of the sciatic nerve induces the attack of epilepsy on exciting a certain point of the face, exactly as the experimenter has already described is the case after lesion of the spinal marrow. M. Colin, who has often shown himself incredulous as to the results of the author's experiments, declared that he saw in the ears of the guinea-pigs produced no signs of gangrene, but merely the result of the compression and friction that had taken place during the experiments. As to the section of the sciatic nerve, he has often performed this in the horse, but never met with anything like epilepsy resulting from the operation.

M. Colin is not the only person somewhat staggered by M. Brown-Séquard's continued revelations. M. Amedée Latour, commenting on these last, says :—

"M. Brown-Séquard's communication seemed to us to have rather astonished than convinced his audience. Experiment is doubtless a splendid thing; but does not this honourable *savant* somewhat abuse this precious means of investigation? Let us see. He pierces the restiform bodies in the medulla oblongata, and under the influence of such puncture, he finds gangrene of the ear produced. But, after all, what does this amount to, and to what practical application can it lead? What unheard-of dexterity of hand must be admitted in order that, in so complex a region as the bulb, in such small animals, and in so narrow a space wherein the pyramids, olivary bodies, pedicles, and so many other objects are mingled together, and laid one on another, it may be able to transfix these narrow and delicate bands termed restiform bodies, and none other but them! . . . The terrible M. Colin again interposes, declaring that, often as he has divided the sciatic nerve, he has never met with epilepsy. For the attack to be witnessed, M. Brown-Séquard replies, a little manœuvre is required, which consists in pinching and irritating a small determinate space of the cheek. Frankly, all this is very singular, and it is to be feared that it will end in compromising experimentation by such inconclusive exhibitions."

PARLIAMENTARY.—SEA BIRDS' PRESERVATION BILL—NOMENCLATURE OF DISEASES—THE METROPOLITAN POOR ACT—DISTRICT ASYLUMS—THE SANITARY ACTS.

On Thursday, March 19, in the House of Commons,

The House went into committee on the Sea Birds' Preservation Bill, and the Bill passed through committee.

On Friday,

Mr. M'Laren asked the Chancellor of the Exchequer whether the statement was correct which had appeared in a Medical publication, to the effect that the Lords Commissioners of her Majesty's Treasury, by a letter dated March 10, have ordered 20,000 copies of a work entitled "Nomenclature of Diseases" to be purchased at the public expense and distributed gratuitously among the registered Medical Practitioners of the United Kingdom; whether this work was intended to be adopted or recognised in any way by her Majesty's Government; and whether the Colleges of Physicians of Edinburgh and Dublin have been consulted and concur with the London College of Physicians in recommending this nomenclature for adoption throughout the United Kingdom.

The Chancellor of the Exchequer: The Medical Profession are required to give certificates in reference to diseases for the use of the Legislature. It appears that Medical men are not agreed on the nomenclature of disease, so that much doubt and uncertainty arises from the employment of different terms to denote the same disease and of the same terms to denote different diseases. The London College of Physicians have for many years been compiling a work to remedy this defect. This work is now completed, and it is true that the Treasury has consented to purchase on certain terms—I need not now specify them—20,000 copies of the work, to be distributed among the registered members of the Medical Profession throughout the United Kingdom. As those gentlemen perform the duty of giving these certificates gratuitously, it seemed that it would not be possible to make them pay for a work that would enable them to discharge this duty, which is a very necessary one. The Government do not adopt or recognise this work in the sense of making themselves responsible for the correctness of its nomenclature; but they do so far adopt and recognise it that it is their wish, without pretending to say that it is perfect—and, probably, it would be the first book of the kind that was perfect if it was—that it should be employed generally, in order that the terminology used by Medical men should not be such as to mislead. With regard to the third question, the Government came to this conclusion in consequence of a deputation that waited upon them, headed by Dr. Alderson, President of the Royal College of Physicians, and Sir Thomas Watson. We have had no communication with the Medical bodies of Scotland or Ireland on this subject, and I am not aware whether they concur with the London College of Physicians upon it.

On Monday, March 22,

Mr. M'Cullagh Torrens gave notice that on the second reading of the Bill to amend the Metropolis Poor Act, 1867, he should move an amendment to the effect that in the present condition of the ratepayers of the metropolis, having regard to legislation on this subject, it was not desirable that any further measure should be passed to change that legislation until a proper inquiry had been held in regard to the matter.

Mr. W. H. Smith asked the President of the Poor-law Board whether the amounts of £56,000 and £44,000 respectively, specified in the returns relating to asylums (Metropolis) as the estimated cost of the structures of the Fever and Small-pox Asylums at Stockwell and Homerton, included all charges necessary to the completion and fitting of the asylums for the reception of patients; and, if not, the estimated additional amount which would be required for that purpose. And, if he would state the number of beds to be provided in the proposed new Hospitals for the chronic sick, bedridden, and acute sick in each of the sick asylum districts of Newington, Kensington, Rotherhithe, Poplar, Central London, and Finsbury.

Mr. Goschen said the sums specified in the returns to which the hon. gentleman's first question related did not include the amount paid for furniture and fittings. His hon. friend the member for Finsbury had moved for a return showing the cost of the site and the cost of the structures. The Poor-law Board had applied to the managers of the metropolitan asylum district for the estimate, as asked for, and they gave the original estimate for the structures. It was stated in the returns that these estimates were subject to material alterations, which would effect a reduction. That reduction, in the case of the Stockwell Asylum, had now been settled, and was ascertained to amount to £5600. On the other hand, the estimates for fixings, furniture, and fittings had since come in, but they must as yet be regarded as simply provisional. They amounted, in the case of the Stockwell Asylum, to about £16,000, besides a sum of £6700, which represented 10 per cent. for possible contingencies. In reply to the second questions, he had to inform the hon. member that a different arrangement from the proposed asylum district would be carried out in the case of Finsbury. The same remark applied, more or less, to the cases of Newington and Rotherhithe, which were under the consideration of the Board at the present moment. With regard to the number of beds originally proposed, they were as follows, and he might observe that the estimates for the number of beds were those of the managers of the asylums, and not of the Poor-law Board, though the inspector had conferred with the managers. The number of beds at Newington was about 600, at Kensington 700, at Rotherhithe 500, at Poplar 570, and in Central London about 600. These were entirely provisional estimates, with regard to which no decision had at all been taken, and with respect to which he hoped to be able to make a statement when the Bill to amend the Metropolitan Poor Bill of 1867 came on for discussion.

Lord E. Cecil asked the Secretary of State for the Home Department whether it was his intention to introduce during this session a Bill to consolidate the various existing sanitary Acts, or to reconcile the conflicting clauses in some of them, especially with reference to the powers and duties of governing bodies of special drainage districts, formed by order of the Secretary of State under the Acts of 1867 and 1868.

Mr. Bruce said it was not his intention this Session to introduce a Bill to consolidate the Sanitary Acts, although he quite admitted that the subject was one worthy the attention of the Government. In answer to the latter part of the question, he

hoped to be able to bring in a short Bill promoting the union of districts for sanitary purposes, so as to solve the doubts and difficulties which surrounded that part of the question.

MEDICAL EDUCATION IN ITALY.

The system of Medical education had to be reorganised in the new kingdom of Italy, and new acts and laws were recently passed in Parliament to this effect. Thorough changes had to be introduced in the government of the universities, and the ecclesiastical power, hitherto omnipotent in most of them, was greatly curtailed. The reforms were not undertaken before inquiries into the existing state of things in other countries were made, especially in France and Germany. An educational committee was then appointed, the proposed reforms based on the report of the latter were discussed in the House of Commons and Senate, and, as usual, sanctioned by the King to become law. They include the *leggi Casati* and other acts promulgated up to October, 1866. The late Professor Matteucci, who was president of the committee, took a leading part in these matters. From information recently received, we know that the new regulations respecting the studies are not everywhere rigidly observed, and especially we hear complaints that the examinations which are passed at the universities have not in all cases reached the intended standard. Each university is governed by a rector appointed by the King.

Some of the universities, especially of Northern Italy, stand higher than others, and the following course of study is generally followed at the Faculties of Medicine connected with the universities:—The students are matriculated or admitted as auditors (*uditori*, from *udire*, to hear). The former have to produce the certificate given on leaving a lyceum (*l'attestato di licenza da un liceo*), and to pass an additional examination. (Law of October, 1860, amended September, 1862.) A commission of three members is appointed by the rector of the university for this purpose. The examination is in writing and *viva voce* on geometry, trigonometry, algebra, natural history, Italian and Latin literature.

The course of study usually lasts six years, and an official programme of the studies is received by each student. They usually follow it, but are not bound to do so. They are also at liberty to choose the schools of the universities in what order they please. A circular was forwarded to the universities in October, 1866, by the Minister of Public Instruction, which contained the following schedule of studies, and is still in force:—

First Year.—Medical botany, natural philosophy (*fisica*), inorganic chemistry, zoology, and histology.

Second Year.—Natural philosophy, physiology, organic chemistry, anatomy, chemical analyses, and anatomical dissections.

Third Year.—Physiology, general pathology, pathological anatomy, Materia Medica and therapeutics, practical anatomy.

Fourth Year.—Special pathology, special surgery, midwifery, diseases of women and children, clinique of medicine and surgery.

Fifth Year.—Clinique of medicine, surgery, and obstetrics, ophthalmology, topographic anatomy, pathological anatomy, operations on the dead subject.

Sixth Year.—Cliniques as before, skin diseases, forensic medicine, public hygiene, toxicology, and pathological dissections.

The Anatomical Schools.—A professor for practical instruction in dissections is at their head. A senior and junior prosector (*settore*) act as tutors of the pupils under him. They are appointed permanently. The senior is nominated according to seniority, the junior by competitive examination (*concorso*). This must be passed at the university, where a vacancy occurs first, and consists in preparing a subject drawn by lot from twenty others, and a verbal examination on this subject. For the practical test twelve hours are allowed, for the verbal one only three. The commission is composed of the professor of anatomy, of morbid anatomy, and three experts, nominated by the Minister of Public Instruction on the proposal of the *President* of the Faculty. In deciding between candidates of equal proficiency, those have the preference who have worked for a longer time in the anatomical cabinet. In universities where the anatomical cabinet and that of morbid pathology are united, an additional prosector is appointed for the latter.

The Cliniques.—At the head is a director. He alone is responsible for the management, and all officials are under him. He has to give lectures and supply an annual report. He has assistants, coadjutors who are generally elected by competitive examinations.

Polyclinics.—Generally presided over by the clinical directors, who hold gratuitous consultations twice a week in the presence of students of the fifth and sixth year. The assistants do duty in their absence.

Conferenze Cliniche.—At the end of every bimester of the scholastic year, the clinical directors, coadjutors, and assistants meet to discuss the most interesting cases, therapeutics, and allied topics. The professors of morbid anatomy and special pathology and chirurgy are specially invited. The coadjutors are secretaries, and write the minutes, etc. The internes (alumni clinici) are allowed to attend.

Examinations.—The students pass examinations at the end of every sessional year; again after the studies are finished. The former are on the special subjects they have heard during the year, and are *viva voce*; the latter are in writing and also *viva voce*. The special examinations on botany, chemistry, and zoology generally last twenty minutes; those on physiology, materia medica and therapeutics, legal medicine, hygiene, operative chirurgy, and general pathology, half an hour. The examination in anatomy lasts three quarters of an hour, and comprises the demonstration of a preparation, for which five hours' time is given to the candidate. The time for clinical examinations and special pathology is forty minutes. Bedside examinations last about half an hour. The final examinations are called *esame di laurea* for the licence, either the double one, *doppia laurea*—viz., for medicine and surgery—or one of the two. Papers are written on medical and surgical cases, and the candidates are verbally examined on the same. Bandaging, operations on the dead body, etc., are practised. At last those who wish to obtain the degree of Doctor of Medicine have to write a dissertation and publicly defend their theses. The examinations are of the same value at whatever university they may be passed. The candidates have a great latitude given them in the order they wish to pass the examinations. Students who have not attended to all the lectures obligatory for the degree of M.D. may receive a certificate and a licence for practice, according to the studies they have undergone. The commissions for examinations consist generally of six members, not including the president, who is also the President of the Faculty. Three of the members are selected from the official teachers; the others may be outside the Faculty, but experienced in the subjects of examination.

The regulations are certainly good, but the frequency of amendments gives room to the suspicion that they were not quite considered to fulfil their object. We also know that the students do not show that constant diligence which is desirable; the cliniques especially are not well attended to during the end of the semester. The enervating climate may have something to do with this. To it also and to the unripe age of most of the students the long duration of the studies must be referred.

GRESHAM LECTURES.

By E. SYMES THOMPSON, M.D., F.R.C.P.

The first lecture delivered this term by the Gresham Professor of Medicine was on the "Influence of Occupation on the Health."

After referring to some of the evils that arise from working with poisonous substances—*e.g.*, arsenic, mercury, lead, phosphorus, and the means which an advancing science has suggested for mitigating the evils of these hurtful trades—the lecturer spoke of dust as a fertile source of disease. Allusion was made to the value of magnetised gauze respirators to the needle and fork grinders, to charcoal respirators for those exposed to poisonous emanations, and to Nature's respirator (the moustache) to potters, stonemasons, and millers; and instances were mentioned in which the introduction of fans into flour mills had diminished the invaliding and death-rate. Bakers are an unhealthy race, not from the dust only, but from the long hours and night work to which they are subjected. The main cause of unhealthiness among tailors and shoemakers is the close confinement for many hours in a cramped posture. It is no uncommon thing to see twenty or thirty tailors at work in a room barely large enough for three. Why should the employers of labour be allowed to kill tens and hundreds by carbonic acid when it is contrary to law to poison one person with prussic acid?

It is difficult to see why women and girls should be subjected, even more than men, to these causes of disease, and should be made to work the hours that men will not, and, in-

deed, cannot endure. In the straw plait trade, as carried on at Luton and Dunstable, overcrowding is often seen in its worst forms; the girls sit round a stove, every window is closed, and every crevice through which fresh air could enter is carefully stopped up; much gas is needed for the work, the temperature is often far above 70° Fahr., and the supply of air about forty cubic feet for each person; during busy seasons the girls are so closely packed that they can scarcely use their arms, and sometimes they work twenty hours a day. (*Vide* Dr. Thorne's recent Report to the Privy Council.) Can we wonder that under such circumstances the hands should be dilatory and lacking in vigour, and that the employers should complain that long hours are unprofitable?

It has been practically shown that the employed know how to make short hours more efficient than long ones, and those employers find the work done quickest and best who most consider the health and comfort of their hands.

Before leaving the subject of work for women, the Professor pointed to the fact that female telegraph clerks have proved most efficient, that as compositors they have succeeded fairly, and that wood-carving has been found by many ladies with an aptitude for art a remunerative and not very laborious exercise for their delicate fingers. The lecturer concluded with a reference to emigration as the true remedy for overcrowding. The disinclination for emigration in the "labouring classes" arises from ignorance and a vague dread of "foreign parts," and in the "genteel classes" from a false pride and inveterate flunkeyism, which regards manual labour as degrading to a gentleman. Many a British mother, with shame be it said, would rather see her sons enter the world as dependants on the reluctant charity of kinsfolk than as dependent on their own strong arms and sound heads in occupations healthy, enlivening, and opening the road to fortune, but which she has been accustomed to regard as derogatory.

The concluding lectures of the course were given to the consideration of the eye. The structure of this organ in various creatures was described, and illustrated by diagrams and models.

Beginning with the starfish, whose eyes are mere sensitive points conscious only of light, the lecturer explained the mechanism of vision in the motionless, prominent, honeycombed, and four-thousandfold eye of the common house fly; in the butterfly, whose eyes have 40,000 divisions; in the curious eyes fixed on stalks, by which the lobster, being destitute of neck, can, without moving his body, flourish his sight about in all directions; in the tearless eye of the fish adapted to the refraction of light by water, and nearly blind when out of that element; in the elongated telescopic eye of the bird of prey, whose nictitating membrane serves for eyelashes—and showed that, by the aid of magnifying glasses, the human eye can see more distant, as well as more minute objects, than that of any other being, and (by the aid of a farthing candle) see better in a dark cellar than the cat or mouse.

Passing from physiological anatomy to pathology, it was pointed out that "long sight," the change that occurs in the eye as age advances, is due not so much to an impairment of the tunics or humours as of the adapting muscle, which, like the screw of an opera-glass, alters the focus according as near or distant objects are looked at. While the prejudice against spectacles to remedy such defects is shallow and mistaken, no little skill and judgment is needed in selecting them. For many who can see neither distant nor near objects without glasses, the plan of introducing into the lower half of the spectacle frame a convex glass suited for near objects, and in the upper part a less convex one suited for longer distances, is useful, as saving the necessity for frequently changing the spectacles, although the appearance of a crack across the centre of each glass looks strange to the uninitiated.

Double vision, due to paralysis of the co-ordinating muscles of the eye, may arise from other causes besides the abuse of stimulants. Some people, when suffering from "biliousness," see double, or their sight is distorted, so that a person in one direction appears to be in another, or the leaf of a printed book looks as if partially blank paper. Some of the perplexing phenomena of dichromic vision (colour blindness) were explained, and the danger of red and green signals—colours undistinguishable from one another by the colour-blind—pointed out. Much injury is done by straining the eye when light is insufficient, as well as by exposure to excessive and unsteady light, such as that of a fire or flickering gas burner. In travelling, the muscles of the eye are perpetually at work—the focus needing constant change with every movement of the carriage—and thus the eye gets worn out before its time.

Early treatment is most important in eye affections, and in countries like China or Japan, where the laws of health are neglected and Ophthalmic Medicine and Surgery very little understood, blindness is much more common than in highly civilised countries. Even in England there are, however, more than 30,000 blind, and it is a question of great moment how to educate and enable them to earn their living.

Of the blind who can read very few claim parish relief, and the talent for music, so common with the blind, has in France led to the very general employment of blind organists and musicians, but hitherto an unfortunate prejudice has existed in England against them. The blind can sing from embossed music, and some can write it by means of the French system of dots—no small boon this to blind musical composers. Many are very clever at arithmetic and Euclid.

The question what is the best type for reading has lately been agitated greatly. This aspect of the question having never received due attention, the Professor proceeded to deal somewhat fully with the physiological differences between the senses of sight and touch. When the idea of printing in embossed characters was first introduced (nearly a century ago), the Roman letter as used by the seeing was naturally employed, and still has many advocates (most of these, be it remembered, use their eyes, not their fingers, for reading) who assert that the adoption of a separate tactile alphabet would tend to isolate the blind by obliging them to use characters in the deciphering of which they cannot be aided by the seeing, unless these latter take the trouble to learn the cipher, which is considered to be an amount of trouble which would not willingly be undertaken (a reflection on the charity of the seeing we should be sorry to admit). The true way to lessen this isolation is to find a type which the blind can read with the same certainty and fluency as the seeing. While this must be our aim, it is one we can never thoroughly attain, as the sense of touch is so inferior to that of sight. It is manifestly better to give a blind person a book in which he can read with certainty unaided, than to give him one in the Roman letter to enable his seeing friends to assist him. It is true that some few who have been trained from youth, and whose hands are not callous from hard work, can spell out the Roman letters, but in deciding on a universal character the many must be considered, not the few. We are told that, with practice, the blind can read whole words as we do at a touch, but as the eye can only see one thing or person clearly at the same time, so can the finger distinguish but one character clearly at the same moment, and as the finger moves less rapidly than the eye, it becomes important, if we would secure fluency in reading, to abbreviate the words for the blind; for this reason shorthand (stenographic or phonetic) methods have been introduced. To compare the sensibility of the skin with that of the eye, we find, on placing the points of a compass two or even three inches apart, on the outer side of the arm or leg, that the points cannot be distinguished as two. At the tip of the finger the two points can be distinguished if separated $\frac{1}{12}$ inch from one another, and this is the most sensitive part of the skin, whereas the eye can distinguish particles $\frac{1}{300}$ or $\frac{1}{3000}$ inch in diameter, or threads $\frac{1}{4000}$ (half the diameter of a silkworm's silk). The nerve fibres of the retina vary from $\frac{1}{5000}$ to $\frac{1}{30000}$ inch in diameter, and as the size of the retinal rods corresponds with the dimension of the image of the smallest object of which we can take cognisance, we may judge by the aid of these figures how vastly the two senses differ in the power of detecting minute objects. The angles and prominences of embossed letters are of course much less clearly discernible than the points of a compass, yet such is the effect of education that the finger may be trained to distinguish slight peculiarities of surface, even at the distance of $\frac{1}{12}$ inch, but at a less distance it is not physiological to expect clear definition. Nevertheless, many works have been printed in Roman letters on so small a scale, and with the letters so close together, that the finger is at a loss to distinguish the letters. The central part of the finger being more sensitive than the sides, it has been proposed that the lines of type should be printed in a vertical direction, so that the centre of the finger should first come in contact with the letter. But this system (Mitford's) has never obtained public approval. Moon's plan of embossing, though cumbersome and expensive, is easy to read, for the letters are large, simple, far apart, and the lines run from right to left, as well as from left to right, so that the whole page seems to the blind like one uninterrupted line, and the danger of losing the place is thus greatly lessened.

The Professor explained, by means of diagrams and embossed specimens, the salient features of each system, and pointed out the manifest imperfections of each, and the means of remedying some of these. Lucas's characters, though less clear than Frere's (which is the most scientific system), are clear enough

for the horny-handed. The great advantage of Braille's French dotted system is that it can be readily written as well as read, but if adopted in England it will need to be abbreviated and otherwise modified.

To obtain cheap literature the first essential is a large reading public, and the great barrier to the production of a cheap and extensive literature for the blind is the wasteful outlay upon opposing systems, and the antagonism which exists among the advocates of each. It is to be hoped that the end of this foolish rivalry is near at hand. A council of blind gentlemen, each practically acquainted with the different systems, has now been formed, and is impartially weighing the merits and defects of each, to determine, if possible, upon one universal system. It is hardly to be expected that any system can be devised suitable for the quick and the dull, for the educated and the uneducated, though the same letter may be used for all, varying in size, the abbreviations employed being suited to the class of readers for which it is intended. As the deaf and dumb understand what is meant by a letter or two of their finger alphabet, so, with the intelligent blind, it is a work of supererogation to emboss the whole word; if this is done, not only is it tedious to read, but very hard to retain the whole sentence, whereas, by the aid of stenography, ease and fluency of reading is as great as can be desired—indeed, so rapidly do many blind children read their Bible that, to prevent an irreverential gabble, it is necessary constantly to check their rapid reading.

The Professor concluded by expressing a hope that a speedy decision would be arrived at, and that the system selected by the blind would so commend itself that an extensive literature would soon be within the reach of every blind person in the land.

REVIEWS.

A Practical Treatise on Perimetritis and Parametritis. By J. Matthews Duncan, Clinical Lecturer on the Diseases of Women in the Royal Infirmary, Edinburgh. Adam and Charles Black. 1869. Pp. 249.

"Perimetritis" and "Parametritis" are additions to our obstetric nomenclature, but Dr. Duncan explains his reason for using them. He rejects the old terms "pelvic abscess," "inflammation and abscess of the uterine appendages," "pelvic cellulitis," as being inapplicable to express the nature of the disease. Dr. Duncan therefore explains the meaning of his terms. "Perimetritis" will strictly imply inflammation of the uterine peritoneum. "Parametritis" will imply inflammation of the cellular tissue in connexion with the uterus. Speaking generally, he describes these diseases as "inflammation and abscess in connexion with disease of the uterus and of its appendages. This inflammation and abscess may be slight perimetritis, adhesive perimetritis, adhesive perimetritis with numerous little collections of serum or of pus, encysted intra-peritoneal serous collections or encysted serous perimetritis, intra-peritoneal abscess or perimetric abscess, inflammatory induration of cellular tissue or parametric phlegmon, abscess of cellular tissue or perimetric abscess." The seat of disease is, in Virchow's words, "the loose mass of connective tissue and fat which supports laterally the vagina and cervix uteri, and, at the same time, forms the base of the broad ligaments." But these parts are deep-seated, protected, and not inclined to original inflammatory action. The inflammations are all secondary to inflammation of the uterus, the tubes, or the ovaries. To express Dr. Duncan's views in his own language, he says:—"Taking for the nonce the uterus as representing the internal generative organs as a whole, I may state the theory as follows, with a view of showing how time and research have, as it were, run the disease to earth. It is not a metastasis of milk. It is not an iliac engorgement or abscess. It is not simply pelvic abscess; it is not simply intrapelvic abscess; it is not inflammation or abscess of the broad ligaments; it is the consequence of inflammatory or other diseases of the uterus, tubes, and ovaries. To be still more incisive, it is most frequently a consequence of endometritis." Hence he infers that perimetritis and parametritis are never idiopathic or primary, but always secondary or the result of injury.

This is a wide divergence from current pathology, for "the common doctrine is that inflammation of the unimpregnated uterus is rare, while pelvic abscess is not." "Pelvic abscess and metritis," instead of being separate and unconnected, "are stages or conditions of one disease;" and "at whatever age and time pelvic abscess is common, at that age and time metritis must be common, and *vice versa*." Apart from instruments, whether cutting or not, the tissues of the pelvis may be injured in various ways—by contusion in difficult labour and by coitus. This latter Dr. Duncan has remarked to occur frequently with "young strumpets." In a young married woman he observed that a fibrous tumour connected with the uterus became inflamed always after intercourse. Difficult delivery is a frequent cause of pelvic abscess. Among forty cases Dr. Duncan found twenty-five connected with delivery at the full time, or with miscarriage or abortion; fifteen had not been traced to these conditions. The conclusions to which Dr. Duncan arrives are:—"That perimetritis and parametritis are never idiopathic or primary, and that their causes are either mechanical injury; uterine, tubal, or ovarian disease, almost always of an inflammatory nature, sometimes malignant, sometimes tubercular; or noxious discharges through or from the tubes or ovaries." In alluding to the signs of perimetritis and parametritis, Dr. Duncan first criticises the terms commonly employed—"fulness, hardness, induration, tumour, fluctuation, fixation"—and then proceeds to the symptoms, of which the principal is pain in the affected part or its neighbourhood, sickness, and vomiting. When suppuration occurs to any extent, general constitutional disturbance may be produced, but not always. The situation of the abscess, and where it bursts, makes a great difference; if into the vagina or rectum, the event is only signalised by the purulent discharge, but if into the peritoneum the symptoms are both acute and very alarming. Frequently there is a total absence of acute symptoms, even when there is peritonitis. He quotes Andral, to whom the absence of symptoms in cases of partial peritonitis was well known. He says:—"In more than one case of partial peritonitis local symptoms have been very little marked." Dr. Duncan confirms this by his experience of cases of gonorrhœal ovaritis where, although the ovary was first mobile, then fixed, then lost in a mass of adhesions, yet the patient was cheerful and gay, making no complaint of pain or any annoyance except from irritable bladder. So also with ovarian cysts, which, growing to a great size, form dense and extensive adhesions without the patient suffering any inconvenience, or even suspecting the disease. The author thinks it essential to point this out, because the Profession frequently makes the mistake of considering all such cases as being those of cellulitis, not peritonitis. He describes "encysted serous perimetritis," where fluid is contained in a cyst formed by the peritoneum. The author quotes a case of cancer described by M. Torget, of Strasburg. The woman was believed to have ovarian dropsy, and was four times tapped. "On opening the abdomen, there was found, in the situation of the supposed ovarian cyst, an ovoid cavity containing a large quantity of a yellow limpid serosity. This cavity was formed anteriorly by the great omentum thickened and adhering to the anterior wall of the abdomen, posteriorly by a mass of small intestines adhering together and covered by false membrane. Inferiorly this cavity seems to have been formed by the uterus and ovaries reduced to a putrilage." Dr. Duncan then gives two similar cases of serous perimetritis, one in a woman who, two months after her delivery, felt a lump on the left side of the lower belly. She consulted Dr. Duncan, who felt the tumour, but, making an examination per vaginam, he found the cervix high up in the pelvis, and displaced backwards, and fixed. In front of the cervix, the whole left side of the upper part of the cavity of the pelvis was occupied by a hard tumour presenting no soft or fluid-containing portion. Between the 8th and 11th a soft tumour was found in the recto-vaginal space. It was punctured with Pouteau's trocar, and "a transparent straw-coloured fluid slowly distilled through the canula to the amount of eight ounces." The discharge made little difference except in the recto-vaginal portion of the tumour, which was diminished. It was again tapped on the 14th, and on the 28th a vaginal discharge was observed, and "about this time the whole tumour had commenced to diminish in size." She afterwards quite recovered. Hence the author infers that many of the supposed cases of cures of ovarian cyst by tapping or bursting into the abdomen were nothing but cases of serous perimetritis. He then refers to the so-called iliac abscesses, which he considers to be truly uterine, and which owe their origin to disease of the internal genital organs. In treating of parametric phlegmon described by Nonat in Paris and Sir James Y. Simpson in this country, the former calling it perinterine phlegmon, and the latter cellulitis, he criticises these authors rather sharply. Dr. Duncan does not accede to the view of metastasis of these inflammations; the objection that the

cellular tissue between the uterus and peritoneum at the fundus is too scanty to convey inflammatory action, he meets by quoting the view of Aran, who shows the possibility of inflammation so extending. He then discusses the formation of the tumours resulting and their time of suppurating. On these points he quotes Nonat, Bernutz, Courty, Grisolle, Simpson, and West. His own opinion is "that suppuration of a parametric phlegmon is even more frequent than the statements of any of the authors quoted would lead us to suppose." Dr. Duncan then describes parametric abscess, or what is commonly called pelvic abscess. That it begins on either side of the uterus, but not within the broad ligament; that it may spread in every direction, although the most frequent direction taken by these abscesses is either upwards or into the iliac fossa on either side. They also may extend along the rectum to the perineum, or even to the kidney. "There is a form of abscess," he says, "not rare after delivery, which should not be confounded with abscess occupying the iliac fossa, or iliac abscess. I mean abscess in the region of the inguinal canal. Careful examination . . . shows that this situation of abscess is not rare. It may occupy the subperitoneal cellular tissue or the more superficial portions of the same structure." Parametric abscess may not only reach parts distant from the original disease, but may occur in regions separate and remote from the original affection, and apparently unconnected by any continuity of suppuration. Dr. Duncan considers these as probably the result of inflammation spreading by a direct continuity of tissue. *Inflammation* may extend widely, but *suppuration* may not be coextensive with it. This view is opposed to that of West and Grisolle. With regard to the opening of a pelvic abscess, the author says it generally does so in the groin, between the external and internal inguinal openings; "but it may open by the side of the anus, or on the upper and inner part of the thigh, and it has been described as finding vent through the obturator foramen." When a pelvic abscess opens internally, it most frequently discharges itself into the rectum, next most frequently through the vagina, and only occasionally through the bladder. Bursting into the peritoneum and causing peritonitis is a rare termination. Having discussed the characters of these abscesses, the author proceeds to consider "perimetric adhesions," or the fixation of the uterus and appendages by adhesions, and the mode of restoring their mobility. One of these is pregnancy. He relates a remarkable case of a young lady with whom the uterus was completely retroverted and so fixed in the pelvis that it could not be removed by the sound. It was supposed that conception could not take place; nevertheless it did so, and she bore a living child. The author gives several other cases to show the manner in which these adhesions are removed or destroyed. With regard to diagnosis, a summary by Thomas is given to mark the difference between periuterine cellulitis and pelvic peritonitis, which Dr. Duncan considers valuable.

The chapter on treatment contains remarks applicable not merely to uterine inflammation, but to the whole field of modern disease. In a few pungent paragraphs he takes the measure of meddlesome and pretentious therapeutics in general:—

"In our own day, as in olden times, we may justly estimate an author's ignorance of a disease by the amount and variety of the therapeutic means he recommends. When different Physicians have, after long trials, all fixed on quite different remedies for the same disease, it is a safe conclusion that none of them is of much use. The next clever and unscrupulous man will unship them, and bring in still another new cure in triumph. . . . Foolish and unscrupulous men have a peculiar tendency, easily accounted for, to cultivate the diseases of the sexual organs. And the history of the progress of gynæcology in our day would, if truly given, cast as much disgrace on some individuals as honour upon others. Fortunately, its worst side will probably never be thoroughly exposed; for the fittest of fates—oblivion—awaits much that is now vaunted: the discovery and diligent treatment of diseases which do not exist, the use of treatment the danger of which is greater than that of the disease, the recommendation of remedies and operations regarding which little more is known than their names, the facile juggling with remedies of which it is the one sufficient recommendation to have a new name, the systematic concealment of disasters resulting from such treatments."

He follows his denunciation of rash practice with an exposition of his own, in which he lays the greatest stress on leeches, rest, and poultices. As to mercury, he has discarded his faith in the anti-adhesive virtues of that mineral for the diseases under discussion, and when he administers it does so in the gentlest doses. Thorough ability, power of getting to the bottom of his subjects, acute criticism, and careful observation, mark the present as Dr. Duncan's former publications. We think he might have avoided a slight trace of bitterness and undeserved contempt which occasionally marks his reference to some of the labours of his contemporaries.

Report on the Health of Liverpool during the Year 1868. By W. S. Trench, M.D., Medical Officer of Health.

Report on the Sanitary Condition of Birkenhead for the Year 1868. By C. O. Baylis, M.D., Medical Officer of Health.

Report addressed to the Barnsley Board of Health in February, 1869. By Michael Thomas Sadler, jun., B.A., M.D., Medical Officer of Health.

It would be unfair to make any comparison between these three reports, although they came to hand together, and are now grouped together for the purpose of review; and for this reason—that Dr. Trench possesses the inestimable advantage of being in a position to devote his whole time and energies to the sanitary oversight of his district, and of working with a board fully alive to their responsibilities. So also we must not forget that, while the Liverpool reports furnish a model of completeness which the reports of our Metropolitan Health Officers do not attain, the fault lies less with these gentlemen themselves than with the petty corporations of shopkeepers under whose stifling influence it is their misfortune to act.

Liverpool is one of the most unpromising towns in the kingdom in which a Health Officer can be called upon to operate, on account of the moral, physical, and economical conditions of its inhabitants. "The amount of pauperism, of Irish immigration, and of unskilled labour in Liverpool is far greater than in any other town of the kingdom, and no zeal in sanitary legislation can succeed in placing an indigent population on the favourable conditions of health attainable by towns whose labourers have constant work, and are in the receipt of remunerative wages." Nevertheless, in 1868 there was a saving effected of 1552 human lives when compared with the mortality of the previous decennial period. The mortality, compared with the assumed population, was, indeed, less than in 1867—a result not attained in London—and this in spite of the excessive heat and dryness of the summer months, which occasioned an unusual amount of infantile sickness throughout the country. With all its disadvantages, the death-rate of Liverpool was less than that of Manchester, Salford, and Glasgow, notwithstanding that the population was crowded to the extent of 96·1 persons to the acre, while that of the towns mentioned have respectively only 90·1, 23·4, and 77·7 persons to the acre. Dr. Trench points to the remarkable fact that every fourth child born within the borough dies before attaining the age of 12 months, and observes that, on distributing these deaths into districts, it comes out that "poverty and want" will not suffice to explain or justify it. He has some very interesting statistics on the subject of fever, which is always more or less rife in Liverpool. They will be read with attention by all engaged in sanitary work. But for this very reason we should like to know whether there is any arrangement in force for verifying the certificates of death in respect of the diseases grouped together under this head. And our reason is that Dr. Trench lays some stress upon the distinction of terms used in the certificates, especially upon the number of deaths returned as due to typhus and typhoid fever respectively. The general experience of Health Officers in London is that the Medical certificates are most untrustworthy in this respect. With all deference to the skilled opinion of Dr. Trench, there is another passage in his report upon fever which we feel disposed to criticise, since we can in no way agree to the practical inference which might be drawn from it. He says: "If poverty and want, or intoxication, or overcrowding, or insalubrious home arrangements be the proximate causes of fever, then mere sanitary legislation cannot hope to reach and eradicate the evils; but it is different when external filth, insufficient drainage, untrapped and unventilated sewers, close and confined courts, cellar habitations, inadequate water supply, or any other removable physical conditions which are under the surveillance and within the control of the local authorities, are the causes of fever. In other words, typhus may exist without blame to the governing body, and the removal of its cause be beyond the duties and responsibilities of property; but epidemic typhoid or enteric fever never." We quite admit that *mere* legislation will be totally ineffectual as against any causes of disease if local authorities are too obtuse or too negligent to employ the means which Parliament puts in their hands for their removal, or if Parliament should decline to supply sufficient power on application being made to it.

But surely Dr. Trench cannot argue that the tendency of legislation has not been towards affording facilities for the more healthy lodging of the lower classes, or that the superior classes of the community are not willing to assist in every rational effort for the reduction of pauperism, the suppression of vice, and the extension of popular education. The gloomy view he takes ill corresponds with his suggestion of the desirableness of a compulsory education law.

There is an interesting table showing, day by day, the deaths that took place from diarrhœa during the summer months. It has columns showing the readings of the barometer, thermometer, and rain-gauge, and the direction and force of the wind. The table would be more useful if it were constructed in another manner, since it does not show readily the influence which the weather exerts upon the production of the disease. What is wanted is a column indicating the cases of diarrhœal sickness, not of death (which follows after a longer or shorter interval), occurring each day. This might have been derived from the records of public sickness. We would also suggest the advantage that would be derived to the reader desirous of drawing inferences from the figures were it so far condensed as to give the results in periods of a week instead of daily. There are similar tables in which the deaths are arranged in quarters of the year for measles, scarlatina, hooping-cough, and small-pox. It is worthy of notice that there were only eighteen deaths from small-pox all the year in Liverpool. As in London, so there also, the excessive heat of the summer seems to have extinguished the disease. We are glad to see that Dr. Trench has found no difficulty in working the registration of lodging-houses under the Sanitary Act 1866. In London, somehow, the local authorities look shyly at this admirable provision of the law. The inhabitants of Liverpool also have the advantage of two public disinfecting establishments for clothing, etc., which seem to be fairly used by the people at large. During the year 16,639 articles were sent for disinfection.

The two other reports on our list are comparatively brief, and dwell chiefly upon the importance of remedying those local causes of insalubrity which it is always the first object of a health officer to point out to the board which he is appointed to advise. Dr. Sadler, from the exigencies of his position, lays great stress upon the employment of nursing mothers in factories as one cause of the high infant mortality at Barnsley.

A Guide to the Eastern Alps. By John Ball, M.R.I.A., F.L.S., etc., late President of the Alpine Club. London: Longmans. 1868. Pp. 638.

This, the third of its series, is a book of compact form, well illustrated by maps, and intended to guide the tourist to the Eastern Alps, including the Suabian and Salzburg Alps, the Alps of the Central and Southern Tyrol, the Styrian and Venetian Alps, etc. Routes, distances, lists of hotels, scales of charges of hotels, guides, and horses, and notices of the curiosities, whether antiquarian, popular, or botanical, abound throughout. We cannot pretend to analyse a work which is so full of details, but may commend it to all our readers who desire to improve their health or to risk their neck during the next long vacation. *Nil mortalibus arduum est.* The author is describing the ascent of the Terglou in the South-eastern Alps. It is, he says, highly imprudent to attempt this, or any other of the peaks of the Southern Alps, at times when violent thunderstorms are to be apprehended. These, however, rarely occur after the end of July. "In fine weather the expedition is quite within the reach of any practised cragsman; but the ascent of the main peak requires steady and cautious climbing, as the rocks are not very solid, and a single detached block may endanger the climber himself or his companions. As the rocks have very sharp jagged edges, the traveller should look to the nails in his boots, and be provided with thick doeskin gloves. . . . The climb up the ridge of the Kleine Terglou is steep, but the word 'danger' here used by Captain Holsmay is certainly inappropriate, nor will any one used to mountain-climbing find difficulty in reaching the summit, which, according to Professor Peters, attains 8820 feet. It must be said that any one who has not found out by experience that rock-climbing is not so bad as it seems, may be excused for showing some hesitation at undertaking the ascent of the final peak. The *arête* that spans the tremendous intervening gulf begins as a broad-topped wall, but thins off to a breadth of a few inches, and abuts against the base of an obelisk of bare rock some 600 feet in height, where, if a man were to slip, he must fall at least 1500 feet before the detached portions of his body could find a resting-place. Yet there is no difficulty, and no real risk. The narrowest part of the *arête* may be passed astride, but no one would think of doing so if the wall were 6 feet instead of 1200 feet in height." That is well put, and Alpine climbing may be taken as an exercise for the nerves that shall brace them against terrors of the imagination. The late Dr. Brinton's name is mentioned amongst the Alp authorities to whom the author is indebted.

The Seventy-fourth Annual Report of the Glasgow Royal Infirmary, 1868.

The Annual Report for 1868 *of the Devonshire Hospital and Buxton Bath Charity.*

These reports contain the particulars usually given in such documents, and are chiefly of value as forming an item in that mass of statistics which it would be of advantage to the community to see summarised every year. We observe that in Glasgow not a single case of small-pox was received into the Infirmary during seven months until December 27. This is another illustration of the influence exerted upon the progress of this disease by the exceptional temperature of the summer months. There were 325 Surgical operations performed, with 51 deaths among the subjects of them. Out of 6 persons operated on for strangulated hernia, 5 died, 4 of them from peritonitis; 31 out of 108 persons died after amputations; 1 out of 10 after excision of bones; and 1 out of 25 after excision of joints. There is one feature of the financial statement which specially attracted our notice—namely, that out of a total revenue of £16,148, no less than £5125 stands in the names of *employés* in public works, warehouses, and other establishments, the subscriptions of the general public amounting to £6456. We are hearing a good deal of wholesome truth now about the abuses of our London and provincial Medical charities. It is refreshing to find that, after all, an example of what is right and honest is being set us by our brethren in a city where the national characteristics are certainly not such as would have led us to anticipate it.

The report of the Buxton Bath Charity consists of the ordinary self-laudation of governors and managers, who, forgetful that the self-denial is all on the side of the Medical staff, take credit for the charity they manifest by buying the privilege of recommending four or five patients a year with the guinea they expend, and the inestimable social *éclat* attendant upon their names appearing in the list of subscribers to an institution which it is the proper thing to patronise.

FOREIGN AND PROVINCIAL CORRESPONDENCE.

FRANCE.

LETTERS ON THE SOUTH OF FRANCE.—No. I.

Cannes, March 18.

So much has been written on the South of France, especially with regard to its Medical properties, that every new publication about it will, to many readers, seem quite superfluous. Such, however, is not the case. In the first place, the South of France is not only in a state of development, but of the most rapid development. Hence many publications, which a few years ago were a true expression of reality, are, at present, almost useless. Moreover, most publications on our subject are written by men who had, in some way or other, their interests connected with the South, and whose views, as those of most mortals, are likely to be influenced by those interests.

It requires, indeed, a very sharp eye to detect among the rich literature of the Midi a single publication which tends to depreciate that place in which it has been written or printed. And the reader should always take account of the title before making up his judgment about the book.

There are doubtless some very good publications about the South, and some which, in point of impartiality, I can recommend with full conscience. I will especially name a little pamphlet of one of your excellent countrymen, the Rev. Mr. Acland.(a) I will also name the two valuable brochures of Dr. Buttura, of Cannes.(b) Both these writings contain most

(a) "A Letter to a Physician on the Domestic Management of Invalids in a Mild Winter Climate." By a Clergyman. Oxford and London: James Parker and Co. 1866. A French translation of this pamphlet has been published at Cannes, with the title of "Lettres à un Medecin sur les soins à donner aux malades dans les pays chauds."

(b) "L'Hiver au Midi, 1864." "L'Hiver à Cannes, 1867." Paris: J. B. Baillière et Fils. The former of these works contains an *aperçu* of the literature about winter stations.

precious indications of the precautions which ought to be strictly observed by the invalid, if he wishes to obtain real good from this country.

I speak here only, of course, of the books I know. There are some which I do not know, and among those there may be very good ones.(e) Whatever may be the case, I can safely affirm that new publications on the South are not superfluous. And I do it on this ground, that the indications given by MM. Acland, Buttura, and others have not had by any means the effect they deserve. I have, indeed, too often the opportunity of being struck with indignation at pale and thin and coughing ladies with light dresses setting at defiance the laws of nature by driving in open carriages in the worst of all weathers. And the other day, if illness had not retained me, I should scarcely have resisted the temptation of rushing into the street to a young pretty English governess. Why, do you think? To give her an earnest reprimand for leading through a cutting "mistral" two delicate children without the slightest covering on their little heads. It was a sad thing indeed to see their long blonde hair blown about by mistral, and the tender skin shining through it; and all those balls and picnics and races and other *casse-cous* in which the invalids share, and all the open windows which ought to be shut, and the great consumption of mercurial preparations!—when I think of all that, I am quite convinced that the warnings against the treacherous qualities of this country, and the precautions here to be taken, can hardly be too often repeated. The writer of these lines is, in his relations to the South, quite impartial. Unfit for every profession, on account of his health, he is condemned to the—by no means useless—opportunity of looking at men and their doings without a great amount of prejudice. As to his feelings to the South, and especially to Cannes, he has rather reason to be grateful towards it. With all that, he cannot help thinking that the properties of the South, as concerning disease of the lungs, are generally overvalued, and that a great many of those who seek their recovery at the coasts of the Mediterranean would better stay at home. To give a clear notion of the character of this country, it is best to compare it to what women are said to be by those who have had no chance with them—I mean capricious. The traveller from the North who visits this country in the first days of October feels as if newly born. The immaculate sky, the placid sea, the sweet aroma rising from the rich vegetation, the vivifying influence of the air, abundance of delicious fruit and wine—all this concurs to bring the stranger in a mood of peace, love, and new life. Can there ever be any ice, and wind, and misery in this country? Impossible! But wait, *latet anguis in herba*. In a few months this sky will be covered, this sea will be of a grey colour and wrinkled with waves (not even grandiose), these flowers will be shrivelled up and scattered by a sharp wind. So it will be—not for long, perhaps, but long enough to destroy the health of the strongest man if he does not take proper precautions. Proper precautions must be taken, and the base of all precautions is—Mammon!

No use is it—or rather unpardonable carelessness—to send people to the South without the means of making themselves comfortable. And it is not enough to have money—you must know how to make use of it. Take care that you use it to the profit of yourself and others who deserve it, not to that of robbers and worse than robbers. Look well out of your eyes, and do not mistake politeness and gallantry—that charming French politeness and gallantry—for more than it is. His Satanic majesty takes other forms than that of a roaring lion when he goes round to see whom he may devour.

One of your celebrated countrymen—who does not quite belong to my idols—the absolutist philosopher, Hobbes, has described the relation of a man to another as that of a wolf to his prey. There is some truth in this, and there would—what is worse—have been truth in it if, instead of a wolf, a fox had been taken for *terminus comparationis*. That there is truth in it can, perhaps, nowhere better be seen than in this country. Struggle for life, which among civilised organisms is deceit for life, is to be observed here in its very unæsthetic forms. The stranger who directs his way to the South must make up his mind to be cheated as far as he allows it. "*Nous autres, nous vivons de l'étranger*," I heard at a *table d'hôte* a lady of this country say. The confession was sincere and true. It was found rather *banal*. The stranger in the South is not only cheated, he is surrounded by a net of conspiracies—conspiracy between his cook and his butcher, conspiracy between his "courier" and his grocer, conspiracy between the police and the thieves, conspiracy between the administration and the public press, conspiracy even between—I am ashamed to say it—between the stranger's doctor and his apothecary, between his doctor and his landlord. In my next letter I hope to prove the truth of this statement by a few anecdotes derived from my own experience.

(e) Dr. de Valcourt's book on "Cannes," Dr. Taylor's on "Pau," and Dr. Genzmir's on "Mentoo," are said to contain much good.

BIRMINGHAM.

March 20.

The governors of the Queen's Hospital, at their annual meeting held on the 19th ult., resolved to close the Midwifery department of the Hospital. It is to be hoped that they have not taken this important step rashly and without careful deliberation, for it is much easier to shut up a department than it is to establish one. Whether they have acted wisely in this matter—in the face of the fact that this is the only Hospital in the town which has connected with it this *spécialité*—can only be realised by experience. The only other institution which affords succour to pregnant women is the Lying-in Hospital, and, as the cases here are attended solely by midwives, its proved success is, to say the least of it, doubtful. We believe we are right in stating that this department of the Queen's Hospital was established many years ago more especially for clinical purposes; but during the last few years, from causes which we need not particularise, certain irregularities have crept in, and instead of the honorary Surgeons-Accoucheurs acting in their original capacity, to assist in instrumental and difficult cases only, they have actually been called upon to attend even the ordinary cases of labour, thus being reduced to the mere position of ordinary Accoucheurs to the Hospital—a position palpably derogatory to them as honorary officers of the Hospital. A resolution was proposed by a governor which, if carried, would have kept open this department, and have made it really efficient; but it was not supported. It was to the effect that a qualified Surgeon, at a salary of £50 a year with board and apartments, should be appointed to take charge of this department, under the superintendence of the honorary Obstetric Surgeons, and by whom the students should be instructed in Midwifery. The expenses of this arrangement would have been insignificant, and we think the governors would have been justified in incurring them to have kept alive a department which, to the poorer female classes of the community, is eminently useful and deservedly popular.

GENERAL CORRESPONDENCE.

ENGLISH AND IRISH POOR-LAW OFFICERS.

Letter from Dr. Joseph Rogers.

[To the Editor of the Medical Times and Gazette.]

Sir,—I should feel obliged if you would permit me, through your journal, to make an appeal to members of the Poor-law Medical Officers' Association especially, and Poor-law Medical officers generally, under the following circumstances.

In December, 1868, I was deputed by the Council of the Association to write to the Secretary of the Irish Medical Association, and tender an interchange of good offices in furtherance of the objects of the respective Associations. This offer was gladly accepted. The time has now arrived when English Poor-law Medical officers can afford a practical demonstration of sympathy with their Irish brethren. On April 7 the Bill to provide superannuation allowances to Medical officers of Poor-law Unions and of Dispensary districts of Unions in Ireland, introduced by Dr. Brady, will be read a second time. The object of the Bill is fully described in its title; but, in order to make it more plain, I may state that it is intended thereby to provide, with the concurrence of boards of guardians and the Irish Poor-law Commissioners, superannuation allowances to any Medical officer of a Union or Dispensary district who shall at any time, after his or their appointment, become incapable of discharging the duty of his or their office with efficiency, by reason of infirmity of mind or body, or old age, upon his or their resigning or ceasing to hold office, such annual allowance for his or their lives not exceeding in any case two-thirds of the income derived by such officer or officers.

Having communicated with Dr. Brady and others, they agree with me in considering that great assistance will be afforded at the second reading if English and Welsh Poor-law Medical officers would at once write to such members of the House

of Commons as they may be personally acquainted with, and urge them to vote for the Bill. With a view to afford in a ready form the material of such letter, I would suggest the adoption of a part of the speech of Mr. B. Baker at the last quarterly meeting of our Association on moving a resolution on this subject:—"Our education costs us much; we devote much time and thought in our department; our work is most difficult and most ungrateful, and fraught with much personal risk to ourselves and families. We work seven days a week, ofttimes at night, all the year round. There is no provision made for a vacation. The parish Doctor is never supposed to be idle, never tired, never to want a change from the monotonous duties of his office. If he leaves his appointment, it must be at his own risk and cost."

The argument used against superannuation of Poor-law Medical officers is that they do not give the whole of their time. To this it may be replied, the salaries paid are wholly insufficient for them to do so, but they are expected to be ready at all times, even at the sacrifice, too frequently, of other more remunerative interests.

I may further state that a direct appeal will be made through the Council of the Association to those English and Welsh members who, to the number of ninety, replied favourably to our circular letter at the late election, but I must urge upon gentlemen the desirability of supporting our application by immediate oral or written request to those they can influence.

In conclusion, let me remind Poor-law Medical officers that our Irish *confrères* are not likely to be wanting in grateful recognition of our services, and that if they are afforded on this occasion, we shall have the right to ask, and security in getting, a similar service from them when the time arrives to make that Parliamentary appeal for the redress of grievances which it is the object of the Poor-law Medical Officers' Association to obtain. I am, &c. JOSEPH ROGERS.

Dean-street, March 22.

INFANTILE TETANUS.

LETTER FROM DR. J. WHITEHEAD.

[To the Editor of the Medical Times and Gazette.]

SIR,—If you think the following worthy a space in your next, I will briefly give the particulars of the case. Was called to Dalston on February 15 at 2 p.m. to visit a baby of 7 months old, who I found had been ailing for about a week, but no particular alarming symptom had manifested itself until two days before, when a Medical man was called in. The parents, having been old patients of mine, wished I should be sent for, but he informed them that it was useless to send so far, as it was only teething convulsions, and he prescribed the usual treatment, but, the child not getting better, he advised my being sent for. Upon my arrival I found the baby breathing with difficulty, and that it had tetanic twitchings of the mouth, with slight contraction of the whole of the right side. I ordered a warm bath immediately, with cold application to the head, linseedmeal and mustard poultices to the back and chest, and all the light nourishment with the breast-milk; also the following powder every two hours—℞ Hyd. chlorid. gr. j., pulv. sacch. alb. gr. iij., promising to see her again in about five or six hours. I returned at the promised time, and found the bowels acted well, bringing away a quantity of scybala and offensive fæces. She had taken the breast well. To continue the treatment until my next visit, which I made early the next morning. I found her convulsed, and the scalp smoked again when the cold lotion was applied. She tossed her head from side to side; extremities cold; had had violent twitchings in all her limbs, which left her completely prostrated. To continue the treatment, and give one teaspoonful of ol. ricini every two hours until the bowels acted freely, and substitute powdered ice and salt for the cold application to the head. On the following morning I heard she had had a fearful night, rolling and tossing her head, and at times became perfectly purple, with cold extremities; would not take the breast, but screeched violently at each attempt; her mother said she was sure she could not swallow, and that her little jaw appeared fixed. Abdomen enormously distended with flatus, and she seems in great pain, continually groaning, and at times screeching out. Pupils greatly dilated; pulse scarcely perceptible; could hardly force open her jaw. Ordered enemas of warm water, with one grain of assafœtida, every two hours, and squeeze in her mouth, if possible, continually liquid calf's-foot jelly and wine; flannels wrung out with hot water to abdomen continually. On paying my visit the following morning, I found the hands firmly clenched, the feet, particularly the right one, flexed on the ankles, toes bent, jaw fixed, the whole right side contracted, spine curved backwards, condition of opisthotonos; she could not swallow. I ordered nutritious enemas every hour, but she never rallied, but remained in a semi-comatose state for nearly twenty hours, when she died. I could not, unfortunately, obtain a post-mortem in this interesting yet painful case. I am, &c.

J. WHITEHEAD, M.D., L.S.A.

18, Upper Tollington-road, and 7, St. James's-road, Holloway.

TREATMENT OF FUNIS PRESENTATIONS.

LETTER FROM MR. N. ADAMS.

[To the Editor of the Medical Times and Gazette.]

SIR,—I have on former occasions published in the *Medical Times and Gazette* two cases of the successful treatment of prolapse of the funis by the method pointed out by Dr. Dyce, Professor of Midwifery in the College of Aberdeen. Another case of this kind occurred in my practice on the 15th inst., in the person of the same patient whom I had attended twice before in similar circumstances.

On examination I found the membranes ruptured, and a large coil of the funis pulsating in the vagina. The fœtal head had not descended into the pelvis. I placed the patient on her elbows and knees, and endeavoured to push back the funis. It required a good deal of perseverance to accomplish this. More than half an hour was passed in the repeated pushing back and return of the cord. In the end, however, I succeeded in permanently lodging it above the head, just before the latter so completely occupied the pelvis as to preclude any further descent of the former. The patient then returned to the usual position on the side, and the labour came to a natural termination, and both the mother and child did well.

There can be no doubt that this child owes the preservation of its life to this new management, as well as the two other children in the cases I have previously reported.

Lymington, March 21. I am, &c. N. ADAMS.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY.

FRIDAY, FEBRUARY 26.

Dr. GREENHOW in the Chair.

MR. HOLTHOUSE related two cases of Traumatic Tetanus, in which the Calabar bean extract was given in larger doses than had hitherto been considered compatible with safety—viz., three grains every two hours, and on one occasion as much as four grains and a half in a single dose. The first case, in which the large doses were given, recovered; the second, which was of a more acute character, died on the fourth day of the seizure, notwithstanding the physostigma had been given, from the very first accession of the symptoms, in 1½-grain doses every hour, and the patient was for the greater part of the time fully under its influence. Mr. Holthouse remarked that, with our present knowledge of the pathology of tetanus, a successful issue could scarcely be looked for in those cases in which the peripheral nerves were deeply implicated, unless they could be acted on simultaneously with the cord. The Calabar bean diminished the excitability of the latter and of the motor nerves, but did not affect the sensory nerves. We wanted a remedy which would act similarly on these; and possibly opium, from its known paralysing effect on the nerves, might do this. The chief points of interest in the fatal case, in which the knee-joint was laid open by a large lacerated wound, were the almost entire absence of constitutional symptoms till the accession of the tetanus, and the absolute immunity from painful cramps which constitute so striking a feature of the disease.

MR. BRYANT referred to a case in which he thought the fatal result due to the influence of the Calabar bean. He thought very ill of treatment in acute tetanus, but drew attention to the possible utility of tracheotomy as preventive of the risk of death from spasm of the glottis.

MR. MAUNDER in two cases failed to gain anything from the use of the Calabar bean; he had found more help from opium. Tetanus did not, he considered, especially attack the larynx,

and he doubted if much good would come from tracheotomy, although it was an operation he thought deserving of a trial.

In reply, Mr. Holthouse observed that in tetanus patients either died suffocated during a paroxysm, or they died of exhaustion. If this suffocation was from spasm of the glottis, then opening the trachea would undoubtedly prevent death from that cause, but it was equally probable that death during the paroxysm arose from spasm of the diaphragm, and possibly of all the respiratory muscles. The symptoms which Mr. Bryant had detailed as occurring in his case were those which always precede death from exhaustion. Mr. Holthouse did not believe that the Calabar bean had anything to do with the death.

Mr. Callender referred to cases of tetanus treated by Mr. Wormald by active aperients, and to the good results which were thus obtained in many instances.

Dr. Day read an account of a remarkable enlargement of the right leg, associated with a discharge of chylous fluid. The case will be reported, with the discussion, after the report of a committee appointed to examine it has been brought before the Society.

Dr. Thorowgood related a fatal case of Obstruction of the Ureter an inch from its vesical orifice, which gave rise to dilatation of the ureter itself and of the right kidney, the latter organ being enormously distended with purulent fluid. About a year before his death the patient, a previously healthy man of 39, had two attacks of hæmaturia at intervals of a few weeks, neither of which was attended with symptoms of importance. After these he remained well for ten months, at the end of which time the hæmaturia returned and became constant, the urine being albuminous and containing an abundant corpuscular sediment, among which blood discs could be distinguished. Renal abscess was suspected, but no tumour could be detected.

After some further details had been communicated by Mr. Bryant, who had seen the patient in consultation,

Mr. Callender drew attention to the importance of well-timed Surgical interference in similar cases, in illustration of which Dr. Langdon Down related a case of spontaneous cure of renal abscess by pointing.

MEDICAL SOCIETY OF LONDON.

March 15, 1869.

Peter Marshall, Esq., President, in the Chair.

Votes of thanks were accorded to the officers and Council for their labours during the past year.

Mr. De Meric, in proposing a vote of thanks to the retiring President, Dr. Richardson, took occasion to point out that his untiring zeal had led to an unexampled prosperity of the Society. He also alluded to the unflagging interest of the subjects brought forward on the evenings of meeting, as well as the success of Dr. Richardson's plan of gathering into the fold of the Society members from the provinces, and to the embellishment of the meeting-room.

The vote was seconded with much enthusiasm, and Dr. Richardson returned thanks.

Mr. Peter Marshall, the new President, followed with an address, in which he embodied a retrospect of the labours of the Society during the past year.

Dr. John Thompson Dickson then read a paper on "Matter and Force in relation to Mental and Cerebral Phenomena," the discussion upon which is deferred until Monday next at 8.30.

The following is the list of officers and Council for 1869-70:—*President:* Peter Marshall, Esq. *Vice-Presidents:* John Gay, Esq.; George Buchanan, M.D.; Andrew Clark, M.D.; William Adams, Esq. *Treasurer:* C. H. Rogers-Harrison, Esq. *Librarian:* S. Day-Goss, M.D. *Secretaries-in-Ordinary:* A. Ernest Sansom, M.D.; J. Wickham Barnes, Esq. *Secretary for Foreign Correspondence:* J. Althaus, M.D. *Councillors:* W. Cholmeley, M.D.; C. Cogswell, M.D.; Victor de Méric, Esq.; R. W. Dunn, Esq.; W. Tilbury Fox, M.D.; E. Head, M.D.; Abbotts Smith, M.D.; E. Symes Thompson, M.D.; W. Spencer Watson, Esq.; F. E. Anstie, M.D.; Henry Day, M.D. (Stafford); William Harvey, Esq.; James Hinton, Esq.; Thomas Hunt, Esq.; Hughlings-Jackson, M.D.; B. W. Richardson, M.D.; H. Hyde Salter, M.D.; Frederick Simms, M.B.; Gregory Smith, Esq.; J. L. W. Thudichum, M.D. *Orator:* Francis Mason, Esq.

OBITUARY.

SIR JOSEPH FRANCIS OLLIFFE, M.D.

This well-known and respected Physician died last week at Brighton in his 62nd year. He was born at Cork in 1809, and, having had an excellent preliminary education, went to Paris early in life to pursue his Medical studies. He took the degree of M.D. at the Faculty of Medicine of that city in 1840, and commenced practice there shortly afterwards. He subsequently had conferred upon him unanimously the Fellowship of the Royal College of Physicians of England, was an Honorary Fellow of King's and Queen's College, Dublin, and was member of several learned societies. Honours were thickly but deservedly showered upon him. Thus, he was created a Knight of the Legion of Honour by Louis-Philippe, and promoted to be an officer in the same order by Napoleon III. He was a Knight Commander of St. Stanislaus of Russia, and a Knight of the First Class of the Order of Ernestine of Saxe-Meningen. He was knighted by Her Majesty Queen Victoria in 1853. He was a member of the Jury of the International Exhibition of Paris in 1855 and 1867, and of that of London in 1862. He was Physician to the British Embassy at Paris since 1852, and Honorary Treasurer of the British Charitable Fund, Paris, since 1842.

Sir Joseph Olliffe might fairly be regarded as the representative of British Medicine in the French metropolis, and he was well worthy, in every sense of the word, to occupy that important and dignified position. In manners, talents, and acquirements, he was the true gentleman, and as a Physician was able and successful in practice. This was large and lucrative, and was amongst the English, Russian, American, and French society in Paris. He married in 1841 Laura, eldest daughter of the late Wm. Cubitt, Esq., and leaves her two sons and four daughters surviving him.

MR. LEY, OF LITTLEMORE.

Mr. William Ley, who had only lately retired from the office of Medical Superintendent of the Asylum for Oxfordshire and Berkshire, was born in 1806, and at the time of his death had not completed his 63rd year. He was the son of a clergyman in Devonshire, and received his early education at the Grammar School at Ottery. He was apprenticed to Messrs. Lawrence and Warner, of Cirencester, Practitioners of good reputation and experience, and completed his professional education at St. Bartholomew's Hospital, where he was a dresser under Mr. Earle. He was admitted a Member of the College of Surgeons in 1831, and a Licentiate of the Society of Apothecaries in 1835.

The first public appointment he held was that of Resident Medical Officer of the Fever Hospital. After holding it about four years, he began practice in Crawford-street, and about the same time he was elected Surgeon to the Western General Dispensary, an office which gave him much work among the poor. His colleagues remember that he did the work with ability, with good feeling, and with most conscientious uprightness of purpose. In his own opinion, however, he was more fitted by his tastes for the duties of a Physician than for the more strictly Surgical part of the Profession.

After some few years, at the instance of Sir William Lawrence and other private friends, he determined to quit the general practice of Medicine, and to enter on the special department of lunacy, which was then receiving attention from active members of the Profession. With this view, he took lodgings at Hanwell for the purpose of studying the diseases and the general management of the insane. Ample opportunity was afforded at the Asylum under the personal superintendence and instruction of Dr. Conolly and Dr. Begley. Mr. Ley's minute knowledge of morbid anatomy, and ability to detect shades of difference in diseased structure, at once gained the respect of all who met him at the examinations in the dead-house.

When the Asylum for the united counties of Oxford and Berks was instituted in 1845, he was appointed to the office of Medical Superintendent then created. To form such an establishment, and to bring the different officers—all alike new to their duties—to work together in harmony, to maintain the requisite discipline, and to enforce it by example, was a task which he executed with remarkable skill. He gained the affection of those under him while he commanded their respect. He was seldom absent from the Asylum; indeed, he denied himself the moderate relaxation which others in similar office find necessary as a relief from the monotony of the work.

The view he took of madness, as it came under treatment, was that the diseases of the mind, as shown in the insane, were generally dependent on constitutional causes. He pointed to the pathological evidence that they were most frequently found in connexion with diseases of the chest or the respiratory system. It was a special feature of his system of management that the patients were invariably treated with gentleness. On one occasion an officer from another Asylum applied to the head nurse to lend a "strait waistcoat." The nurse, not being able to understand the name or the nature of what was wanted, came to Mr. Ley and repeated the request. There was no such thing at Littlemore. Mr. Ley sought consistently to carry out the humane system far beyond what was common, beyond what other people could understand. In the task he set himself to accomplish he felt that he had to take all the duty upon his own back, or too much of it. It need not excite wonder that his health broke down. "It took more out of a man," he said shortly before his death, "than any man is justified in giving."

Beyond his annual reports, which were regularly printed by the Committee of Visitors, Mr. Ley was not the author of any printed work, except a single pamphlet, an address to the Governors of the Warneford Asylum upon the distribution of the Warneford gifts, and a paper in the Medical journals upon *cannabis Indica*, which he was the first to bring to the notice of Practitioners in England. He was one of the early members of the Association of Medical Officers of Asylums, and served the offices of president and treasurer. For some years he took an active part in the affairs of the Society, without, however, contributing to the journal.

At different times of late years, Mr. Ley had shown symptoms of hypertrophy of the heart, and, without admitting to himself the extent or the full consequence of the lesion, he felt the necessity of being released from the charge upon him. Conscious of failing health, and doubtful of his power to continue the duty to his satisfaction, he more than once requested to be allowed to resign his office. At the urgent desire of the Committee of Visitors, he consented to remain. Frequent and lengthening periods of illness, without perfect recovery in the intervals, at length made retirement necessary. The Committee acknowledged in most complimentary terms his just and honourable discharge of duty through more than twenty years—"Twenty years," said one of the Committee, "and there has never been a scandal." As a further acknowledgment of the services he had rendered, the Committee awarded him a pension, which was confirmed unanimously by the Quarter Sessions of the two counties and the boroughs in union.

When he was finally released from the labours under which his once strong health had given way, he spent some months in Devonshire, looking forward to a home among the scenes of his early life. He had lately returned to the neighbourhood of Oxford, and was upon a visit to former friends at Littlemore, purposing after a short stay to pass on again to Devonshire, to try whether the warmer climate would be more suitable to his increasing difficulty of breathing. His strength failed too rapidly to allow of his removal from Littlemore; and there, under the watchful care of those who had been trained under his own eye, he quietly breathed his last.

NEW REMEDIES.

PÜLLNA-WATER, FROM PÜLLNA, NEAR BRÜX, IN BOHEMIA.

(*Messrs. Best, Henrietta-street, Cavendish-square, London, W., Importers.*)

Püllna-water is the fashionable purgative of people in high life. It is not very agreeable to the taste, and would hardly have earned its popularity unless it possessed some practically good qualities. These we believe to be that it is a sure and efficient purgative, and that it neither nauseates nor gripes. It contains notable quantities of the sulphates of soda and magnesia, with the *mélange* of other salts of soda, magnesium, lime, etc., which figure in most analyses of mineral water. Many persons prefer a mineral water to a dose compounded in the apothecaries' shop, and for any such person who may need an unmistakable purge the Practitioner may safely recommend Püllna-water. The sample before us has been duly tested and found to answer.

SNAKE-BITE ANTIDOTE.—Several cases have occurred in Australia during the month of December in which Dr. Halford's antidote for snake-bites was employed with success.

NEW BOOKS, WITH SHORT CRITIQUES.

Pure Wine, and how to know it. By James L. Denman. London: 20, Piccadilly, W. 1869.

*** Mr. Denman favours us with another of his pungently written pamphlets, anathematising the use of strongly fortified and drugged wine, and recommending the pure fermented juice of the grape. He gives several useful pieces of information as to the properties of young, pure wine, such as its tendency to throw down a crust of tartar and tannin, at which some persons, used only to pale sherry (with perhaps not 20 per cent. of *wine* in it), would be startled. We should suggest that these young and full-bodied wines should be allowed to deposit in cask before bottling. The following extract shows what Mr. Denman thinks of his choicest white Greek wine:—"*St. Elie*—the 'Wine of Night;' the finest, and strongest, and most stimulating white dry wine the world produces, being perfectly fermented, and free from sugar and added spirit. This wine, when young, resembles the finest Hock with a dash of Amontillado; when old, it resembles the finest Montilla with a dash of Hock, and it acquires with age in bottle an exceedingly high and etherous character, which renders it in cases of mental depression or nervous exhaustion a wonderful restorative. Tested fairly for vinous character, no Spanish wine, age for age, can compare with it, unless at double the price. Strength in proof spirit, 26°."

Pennsylvania Hospital Reports. Vol. II. 1869. Philadelphia: Lindsay and Blakiston; London: Trübner. Pp. 320.

*** This is the second volume of Hospital Reports which has appeared in America, and, although not quite so large as the first, contains a good deal of valuable material. The volume begins with a paper by Addinell Hewson on the influence of weather on Surgical operations. Dr. Morton writes on the operation of lithotomy in the Pennsylvania Hospital. One of the most important papers is by Dr. Da Costa, who treats of bromide of ammonium as a therapeutic agent in rheumatic fever. Another, also of great value, is from the pen of Dr. J. H. Hutchinson, and deals with intra-cranial aneurism. Papers of a more theoretic character are published by Dr. Tyson, who writes on spindle-celled sarcoma, and by Dr. Richardson, who writes on the identity of pus, mucus, salivary and white blood-corpuscles. These are only some samples of the contents of the volume, which is a credit to our American brethren.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, March 18, 1869:—

Argles, Robert, Maidstone.
Budd, Samuel Punnett, Plymouth.
Hunt, Tom Oliver, Hockley, Birmingham.
Lister, Charles Henry, Royal Free Hospital, Gray's-inn-road.

As an Assistant in compounding and dispensing medicines:—

Loggin, Charles Frederick, jun., Stratford-on-Avon.

NAVAL AND MILITARY APPOINTMENTS.

36TH FOOT.—Staff Assistant-Surgeon James Henry Reynolds, M.B., to be Assistant-Surgeon, *vice* John Frederick Foster, deceased.

73RD FOOT.—Staff Surgeon Hector Ferguson, to be Surgeon, *vice* John Harrison Robotham, appointed to the Staff.

76TH FOOT.—Staff Assistant-Surgeon Samuel Popham, M.B., to be Assistant-Surgeon, *vice* Forbes Dick, M.D., appointed to the Staff.

MEDICAL DEPARTMENT.—Surgeon John Harrison Rowbotham, from the 73rd Foot, to be Staff Surgeon, *vice* Hector Ferguson, appointed to the 73rd Foot; Assistant-Surgeon Forbes Dick, M.D., from the 76th Foot, to be Staff Assistant-Surgeon, *vice* Samuel Popham, M.B., appointed to the 76th Foot.

BIRTHS.

GARMAN.—On March 21, at 1, Clarendon-terrace, Bow-road, Middlesex, the wife of Cornelius E. Garman, Surgeon, of a son.

PURVIS.—On March 18, at Royal-hill, Greenwich, the wife of John Prior Purvis, M.R.C.S.E. and L.A.C., of a son.

ROCHE.—On March 15, at Museum-terrace, Chelmsford, Essex, the wife of F. Everard Roche, A.B., M.D., C.M., etc., of a son.

WILSON.—On March 19, at Park House, Maida-hill West, the wife of H. Wilson, M.D., retired, Bombay Army, of a daughter.

MARRIAGES.

FERGUSSON—TAFT.—At the Holy Trinity Church, Paddington, W. E. Laing Fergusson, M.D., M.R.C.P.E., to Elizabeth Harriett, only daughter of Mr. E. Taft, and granddaughter of John Taft, Esq., of Paddington. No cards.

OSMOND—BLYTH.—On March 23, at St. John's, South Hackney, Thomas Osmond, Surgeon, Thorpe-le-Soken, to Penelope Frances, eldest daughter of Robert Blyth, 5, Palestine-place, Cambridge-heath.

PEEBLES—EDMONDSON.—On March 11, at Caton, Lancashire, William Bellingham Peebles, M.B., T.C.D., to Rose Florence, fifth daughter of the late John Edmondson, J.P., D.L., of Gresgarth Hall, Lancashire. No cards.

TITLEY—NICHOLSON.—On March 16, at Broughton, James Titley, M.D., of Brigg, to Frances Margaret, eldest daughter of Henry Nicholson, Esq., of The Vale.

TURNER—HUET.—On March 16, at St. Mary's Parish Church, Reading, William Turner, M.R.C.S., L.S.A., to Blanch Elizabeth, fourth daughter of Frank W. Huet, Esq., of Devonshire House, Reading.

DEATHS.

BLENNERHASSETT, RICHARD ARTHUR WILBERFORCE, only son of the late Richard H. Blennerhassett, M.D., of Tralee, Co. Kerry, at Kingstown, Ireland, on March 14, aged 3½ years.

BROWN, WM. SPENCE, M.D., at Stroud, on February 26, aged 53.

EVANS, WILLIAM, L.R.C.P. Ed., M.R.C.S., L.M., at Brynfedwen, Treherbert, of pneumonia, on March 12, aged 43, deeply regretted.

GILL, SARAH ADELINE, widow of the late Christopher Gill, M.D., F.R.S., of the 50th Queen's Own, at Carisbrooke, Isle of Wight, on March 10.

GIMSON, ELIZABETH, infant daughter of T. S. Gimson, M.R.C.S., of 8, Grafton-street, Fitzroy-square, W., on March 18.

HADDY, JAMES JOHN, F.R.C.S., Consulting Surgeon to the Devon and Exeter Hospital, etc., at his residence, Chichester-place, Exeter, on March 17, in his 81st year.

MATHEWS, WILLIAM, M.D., J.P., at Hatfield, near Doncaster, on March 17, in his 68th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election as far as known, are stated in succession.

BRIGHTON HOSPITAL FOR SICK CHILDREN.—Surgeon. Certificates of qualifications and testimonials to the Medical Committee of the Hospital on or before April 9. Election on April 16, at 5 o'clock p.m. Further particulars may be obtained on application to the Secretary of the Medical Committee.

CAMBERWELL PROVIDENT DISPENSARY.—Resident Dispenser and Secretary. For further particulars, apply to M. D., Mr. Ward, stationer, Denmark-hill, S.E.

CHESTER GENERAL INFIRMARY.—House-Surgeon; must have both Medical and Surgical qualifications. Applications, with testimonials, to the Chairman of the Board of Management on or before the 31st inst.

COUNTY OF CHESTER.—NEW LUNATIC ASYLUM BEING ERECTED NEAR MACCLESFIELD.—A Medical officer; candidates must be duly qualified. Applications and testimonials with a statement of Medical qualifications to the Clerk of the Peace for the county, in Chester, on or before April 9. The election will take place shortly.

DOWLAIS IRON WORKS.—Assistant-Surgeon; must be a Welshman, legally qualified, and unmarried. Applications and testimonials to Peacock E. Cresswill, Chief Surgeon, Dowlais, Merthyr Tydfil.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, BARTLETT'S-BUILDINGS, HOLBORN.—Honorary Surgeon; must be F. or M.R.C.S.E., and not practising midwifery or pharmacy. Applications and testimonials to Mr. S. Green, St. Michael's House, St. Michael's-alley, Cornhill, on or before March 29. Election on April 6.

KING'S COLLEGE HOSPITAL.—Assistant-Physician; for particulars apply to J. W. Cunningham, Esq., Secretary at the Hospital

LONDON SURGICAL HOME FOR DISEASES AND ACCIDENTS OF WOMEN.—House-Surgeon. For particulars, apply to Mr. Baker Brown, 136, Harley-street, Cavendish-square, W.

NOTTINGHAM COUNTY AND BOROUGH LUNATIC ASYLUM.—Assistant Medical officer; must be duly qualified and registered under the Medical Act. Candidates must be unmarried. Applications and testimonials to the Chairman of the Committee of Visitors, under cover to Mr. K. Sanby, on or before April 12. Election on April 15.

ROYAL SOUTH LONDON DISPENSARY, ST. GEORGE'S-CROSS, S.E.—Honorary District Surgeon. For particulars, apply to Mr. Hentsch, at the Dispensary.

ST. GILES'S DISTRICT BOARD OF WORKS.—Medical Officer of Health; must be legally qualified. Applications and testimonials to the Clerk of the Board, Stone-yard, 199, Holborn, endorsed "application for the appointment of Medical Officer of Health," on or before the 27th inst. Residence in the district will be required.

ST. IVES (HUNTS) UNION.—Medical Officer for the Somersham District. Candidates must be registered under the Medical Act, 1858, and have the qualifications prescribed by the Poor-law Board. Applications and testimonials to Mr. E. A. Wallingford, St. Ives, Hunts, on or before March 30. Election on March 31.

SUNDERLAND INFIRMARY.—House-Surgeon; must possess both Medical and Surgical qualifications, and be registered. Testimonials and diplomas to the Secretary, on or before May 1. Election on May 10.

VICTORIA HOSPITAL FOR SICK CHILDREN.—House-Surgeon and Secretary; must have a registered qualification. Applications and testimonials to the Managing Committee, Gough House, Queen's-road, Chelsea, on or before March 27. Election on March 31.

DR. HAMMOND ceases to have anything to do with the editorship of the *New York Medical Journal*. It will now be brought out under the sole responsibility of Dr. Dunster.

ANTIDOTE TO CARBOLIC ACID.—Messrs. Calvert wish to make known the fact that sweet-oil or castor-oil in large quantity is the best antidote to carbolic acid, when it has been swallowed in poisonous doses.

MR. MELLER, Government Botanist of Mauritius, is about visiting Australia, New South Wales, and Queensland, in order to collect information with regard to sugar-canes, the planters of the Mauritius having convinced themselves that it is only by the introduction of new and better descriptions of sugar-cane that the island can maintain its production of sugar.

VACCINATION.—The guardians of the parish of St. Pancras have instituted proceedings at the Marylebone police-court against Dr. William T. Jones, of Kentish Town, for neglecting to have his child vaccinated. Dr. Jones, however, at the hearing, handed in certificates showing that the child was not in a fit state for vaccination, and the case was dismissed. It was stated at a subsequent meeting of the guardians, that Dr. Jones had intimated that the child should not be vaccinated at all unless the guardians would guarantee the purity of the matter; and that there was reason to believe that the certificates submitted to the magistrate, although dated at different periods, were all written at the same time. It was intimated that he would be again prosecuted if the provisions of the Vaccination Act were not complied with.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—At the meeting of the Association on Saturday evening Dr. Vinen read the results of an application to all the Poor-law and charitable Medical institutions in London for statistics of the late epidemic of scarlet fever. The report, which we shall publish next week, shows the lamentable want of arithmetic in the management of the above institutions.

THE SWISS RAILWAYS.—We find it stated, in a recent number of the *Gazetta Medica di Torino*, that the Swiss Railway Administration obliges the conductors of the trains to follow a course of Surgery in order that on the occurrence of accidents they may be able to proffer early succour. Every train is also to carry a portable pharmacy, as well as such instruments as are indispensable in case of accident.

PROFESSOR OWEN.—On his return through Paris from Egypt, Professor Owen took his seat in the Academy of Sciences as one of the Foreign Associates, and, as the late Lord Brougham was so fond of doing on similar occasions, contributed a memoir. This related some of the results of his recent excursion, or at least contained a summary of his geological and palæontological observations made in the desert and along the course of the new Isthmus Canal.

MEAT PRESERVING.—The *Melbourne Argus*, in an article on this subject, says:—"The results of an experiment with the bisulphite of lime have been reported during the month. The meat was shipped by Messrs Keep and Perry, of Melbourne. The casks were opened in London, and the letter regarding them says—'A 1, cask of wattle staves, and containing 300 lbs. of mutton. The meat was steeped in concentrated bisulphite of lime forty-five minutes. After being headed up, a pint of the bisulphite was poured in at the bunghole, the thermometer standing at 46°. This cask was opened September 30, and cooked October 5. The odour was good; colour quite natural in parts; structure perfect; and when cooked was quite satisfactory, and of good flavour.'" The same result was obtained in other casks. The experiment is deemed eminently satisfactory.

IN 1861 Dr. Rooker, of Castleton, Indiana, U. S., castrated a man who had become a confirmed victim to the vice of masturbation. Every repetition of the act induced a fit of epilepsy, so that the individual was utterly unable to work. Since the time of the operation, says Dr. Rooker (*Cincinnati Lancet and Observer*), there has been but one attack of epilepsy, whereas there used to be one a day, and the man has increased in weight from 120 lbs. to 160 lbs. Dr. Rooker's act was naturally much called in question, but he thinks the end has justified the means. After this we need say nothing of such paltry practices as clitoridectomy or Marion Sims's operation for vaginismus.

DR. GEORGE H. KIDD, of the Coombe Lying-in Hospital, Dublin, publishes in the recent number of the *Dublin Quarterly* a most valuable paper on the diagnosis and treatment of uterine polypi. We have not room to make long extracts, but we may direct attention to two points of special interest. In dilating the os uteri prior to any operation, Dr. Kidd makes use not of one tent, but of many, composed of laminaria, and about the size of a quill; these can be introduced one after another down to the fundus of the uterus, and, after a short time, their expansion effectually dilates both the os externum and internum, as well as the cavity of the uterus itself. Another point is Dr. Kidd's favourable experience of the extirpation of uterine polypi through the agency of pressure alone, effected either by sponge or tangle tents.

CORONERS AND POLICE MAGISTRATES.—The *Australian*, in some remarks on "The Proposed Reduction in the Public Service," says:—"Another reduction which deserves attention is the transference to police magistrates of the duties, or at least a portion of the duties, of coroners. There can be no doubt that a preliminary inquiry as to whether any further investigation into the causes of death was required would prevent many useless and vexatious inquests. We should be inclined to go much further. We think that the police magistrate is the proper officer to conduct all such inquiries. The function of the Medical man is that of a witness, not a judge; and as the superior courts are competent to decide disputed questions upon Medical testimony, although neither judges nor jurors are Medical men, so an experienced police magistrate might well decide the less difficult matters that would come before his court." It is remarkable that in a "go-ahead" colony like Australia

such an opinion should have been made public in the columns of a newspaper. If one conviction is becoming stronger than another in the public mind of this country, it is the necessity of all coroners being members of the Medical Profession. The coroner's inquest is essentially a Medical inquiry. The laws of evidence are few and plain; the laws governing life and death many and complicated. Hence the necessity of the coroner being a Medical man.

NEW MEDICAL SOCIETY AT PRESTON.—On February 16 a Medical Society was established for Preston and the neighbourhood, having for its objects the reading of papers and discussion upon all subjects relating to Medicine and Surgery and the allied sciences, and the formation of a Medical library. A room has been secured for the purposes of the Society in a central part of the town, which will be open daily, and well supplied with the leading Medical journals. The Society's meetings will be held on the first Tuesday in each month, at 8 o'clock p.m. The Society has met with nearly the unanimous support of the Profession. Officers for 1869:—*President:* Dr. Haldan. *Vice-Presidents:* W. Howitt, Esq., Dr. Hammond, Dr. Gilbertson. *Committee:* Dr. Arminson, Dr. Smith, Mr. Rigby. *Hon. Sec. and Treasurer:* Mr. John H. Gornall.

THE *New York Medical Gazette* quotes the following item from *Putnam's Magazine*:—"Delectable Food.—The mixture known among the Koraks as *manyallah* is eaten by all the Siberian tribes as a substitute for bread, and as the nearest approximation which native ingenuity can make to the staff of life, in a country where no grain can grow. It is also valued as much or more for its medicinal virtues as for its own intrinsic excellence and tastiness. Its original elements are clotted blood, grease, and the half-digested moss which is found in the stomach of the reindeer, where it is supposed to have undergone some essential change which fits it for human consumption, health, and happiness. These curious ingredients are boiled up together with a few handfuls of dried grapes, to give the mixture consistency; the dark mass is then moulded into small loaves, which are frozen for future use." The substitution of one kind of carbonaceous food for another is not such a novelty, we conceive, even nearer New York than Siberia, for it is generally said that the North American hunters, when long deprived of bread, make use of strips of dried fat in the way just alluded to.

IN the French navy, Medical officers may attain the rank of admiral; in the English, Russian, and Spanish, that of vice-admiral; and in the Austrian, that of rear-admiral. In the French service the Surgeon-in-Chief of a squadron is allowed table-money, and messes with the Commander-in-Chief. In the Austrian navy the Medical men wear the same uniform, enjoy the same privileges, and receive the same retired pay as the line; in the Russian, they are allowed an increase of pay every five years, and enjoy the same honours and pensions as the other officers. In the Spanish navy the same regulations essentially exist. The highest grade in the navy of this country, on the contrary, is that of commodore, enjoyed only by the Chief of the Bureau of Medicine and Surgery; the Assistant-Surgeon ranks with the ensign, and the Passed Assistant-Surgeon with the lieutenant. The Medical officers do not receive the rewards, honours, and pay of those grades of the line with which they are assimilated. The full pay of a captain, for instance, of any number of years' standing, is $3500 per annum; a Surgeon, on the contrary, has to be in the service in that grade fifteen years to obtain this rank, and is then entitled only to $2600. All his time as Assistant and Passed Assistant is lost to him. The highest pay that the oldest Surgeon on the active list can receive, after having been in the service for nearly forty-two years, is $3300. The youngest captain in the navy, on the contrary, is entitled to an income of $3500, with a service only of twenty-nine years. Another great disadvantage is that, while the captain, however young he may be, has a large, airy apartment to himself, the aged Surgeon is stowed away in a small room, and is, much to his chagrin and annoyance, thrown among a crowd of noisy young men altogether his inferiors in education and social position. These statements show how unequal is the estimation in which the most republican government in the world holds the services of its Medical officers in comparison with those of the navies of the principal monarchies of Europe. There is no service abroad in which Medical men may not hope, eventually, to reach the rank of admiral, while in ours, as at present constituted, they can only attain that of captain. The French nation, always foremost, both in civil and military life, in recognising the claims of our Profession, honours her naval Medical officers with the distinguished rank of admiral, and assigns them apartments similar to those occupied by the Commander-in-Chief of the squadron.—*Address of Samuel D. Gross, M.D., LL.D., President of the American Medical Association.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

S. D. Y.—We think three guineas a moderate price.

A. B. C.—Unless he be registered, he cannot sue at law. The fact of his being qualified is not sufficient.

A. B. C.—Four dressers and four clinical clerks.

Petros.—It is a mistake; Mr. Croft is not the President of the Medical Society. That office is filled by Mr. Peter Marshall.

M.R.C.S.—The lectures will be brought to a close on Friday next, and the examinations commence on the following day. In June next Professor Clark will commence his course of lectures.

Cottage Hospital.—A bazaar and concert in aid of the funds of the Fowey Cottage Hospital, one of the best of these useful institutions, will take place on Tuesday next under distinguished patronage.

Mr. G. N. Pickstock, Peckham.—The summons sent to us, signed "James Thomas Woodman," is the ordinary summons issued by the coroner's officer to ordinary witnesses, and is different from the one contained in the "Medical Witnesses Act." This is not only different in form, but requires to be signed by the coroner. It is doubtful whether Mr. Pickstock could have been compelled to attend on such a subpœna as that served on him as a *Medical* witness; at all events, if he did attend he could positively refuse to give Medical evidence without being fortified by the legal document. This the coroner would have been obliged to give him. There is a grave doubt whether, under the circumstances, Mr. Pickstock could recover his fee at law, but in equity he is undoubtedly entitled to it, and we cannot understand upon what grounds the coroner refuses to pay it. He certainly cannot sanction his officer summoning a Medical witness by an ordinary summons in order to attend the inquest to see if he be wanted. Such a proceeding would be in contradiction to the spirit and letter of the Medical Witnesses Act, and could not for a moment be tolerated.

Mr. R. G. Beer (Zurich).—We have perused carefully, and with much anxiety, the pamphlet entitled "The Case of Dr. Frederick Beer, with Comment and Notes. By J. Sheridan Moore, Principal of Randwick College," published in Sydney at the close of last year. Assuming the statements contained in this pamphlet to be correct—and, as far as we know, they have not been contradicted—we can arrive at no other conclusion than that Dr. Beer has been the subject of a gross injustice. As to the charge against him that he had attempted to injure either mother or child by the injection of belladonna into the rectum for painful stricture of that canal, it is perfectly absurd. It is to be regretted that the trial was conducted on principles that are not recognised by English law. If we cannot entirely approve of the style in which Mr. Moore's pamphlet is written, we must make allowance for the peculiarities of the case. Dr. Beer is entitled to a full investigation of his case anew. If he was wrong in his report to the assurance company, he was certainly—if the pamphlet is to be relied upon—not guilty of fraud. At all events there appears to have been "a miscarriage of justice" in Dr. Beer's case, and, under these circumstances, he is justly entitled to the consideration of the Home Government.

Healing by the Laying on of Hands.—The new cure of disease, as it is called, practised by Mr. Young, minister of the Free Christian Church at New Swindon, is in reality a species of mesmerism. It consists mainly of "pawing" the part affected. It is thought essential that the process should be accompanied by long and ardent prayer, in order that the "faith" of the sick person may be strengthened, and his cure effected. Mr. Young himself admits that, even under apparently the most favourable circumstances, he cannot always succeed in his object. In fact, as was said by Dr. McCreight thirty years since, that mesmerism was a "cure for individuals and not for diseases," so it is with all the "remedies" that act through the imagination. Occasionally, as in the case of the Okeys under Dr. Elliotson, some strange and inexplicable phenomena follow the "laying on of hands;" but the result, in the long run, is always disappointing, if not worse. The New Swindon remedy is no exception to the "miraculous cures" by similar means practised in all quarters of the world. It will have a passing reputation, and soon sink into oblivion.

U. L.—The Senate and Convocation of the University of London, in a petition to Parliament in favour of the "Endowed Schools Bill," state—

"That the University has established a matriculation examination, which properly constitutes the first step to be taken by students who wish to gain any of the various degrees in Arts, Laws, Medicine, and Science, conferred by the University; but which is also the test, and marks the termination, of the literary and scientific education received by large numbers of schoolboys, who are prevented by circumstances from the further prosecution of systematic studies.

"That candidates present themselves for the matriculation examination from a great number of schools and colleges scattered throughout the United Kingdom, and to some extent also from other portions of the British Empire.

"That no candidate is admitted to the matriculation examination under the age of 16 years, and that, in the great majority of cases, the ages of the candidates range from 16 to 23 years.

"That the results of this examination, conducted as it is by examiners of acknowledged eminence, may therefore be accepted as fair tests of the nature and value of the secondary school education which is now available for those classes of her Majesty's subjects who are desirous of obtaining a systematic liberal education, but who do not pursue their studies at the older universities.

"That the average proportion of candidates who have been unable to pass the matriculation examination during the last ten years has been nearly 40 per cent.—a fact which, considering the object and nature of the examination, proves the existence of grave deficiencies in the secondary school education now provided in this country.

"That, although the percentage of rejections at the matriculation examination is thus high, yet the absolute number of those who pass with credit, and even with distinction, is a sufficient proof that the requirements of the University are not in themselves greater than can be complied with by really diligent and properly trained schoolboys."

The Strange Case at Llanfihangel-ar-arth, Caamarthenshire.

(From a local Paper.)

A committee, comprising several gentlemen and respectable farmers of the neighbourhood, met on Monday evening, the 15th instant, in the National Schoolroom, Llanfihangel-ar-arth, with the view of discussing the most efficient plan for watching and testing the case of Sarah Jacob, the young girl who is represented as not having taken any food during the last eighteen months. The committee consisted of H. H. Davies, Esq., Surgeon, Llandyssil; J. Jones, Esq., Maesyerygiau; B. Jones, Esq., Talardd; Messrs. D. Davies, Llwyncroes; D. Davies, Dolmaen; D. Phillips, Pantglas; D. Francis, Gwndwn; T. Morris, Penceader; D. James, Castelldu; E. Davies, Crossinfach; T. Thomas, Ty-wrth-yr-Eglwys; J. Thomas, Eagle Inn; D. James, schoolmaster; E. Davies, Powell Castle; T. Evans, Crossmaen; R. Thomas, Gate; J. Williams, Bwlchnewydd; H. Jones, Powell Castle, and the Rev. E. Jones, vicar of the parish, who occupied the chair. It should be understood that the committee met at the request of Mr. Evan Jacob, father of the girl, who has expressed a strong desire that the case should be thoroughly investigated. The following resolutions were unanimously passed at the meeting:—

1. That the services of four men will be required for the subject in view—that is, two by day, and two by night.
2. That these men be required to sign a solemn declaration, or to be sworn before a magistrate, before they are allowed to undertake the watching of the case, not to leave a single moment pass without one of them remaining in the presence of the girl.
3. That, at the termination of the engagement, they be again examined on oath as to the result of the inquiry.
4. That, H. H. Davies, Esq., Surgeon, Llandyssil, should undertake to communicate with three Medical men, from different and distant parts of Wales, and to request that each of those gentlemen would appoint one trustworthy man, and that Mr. Davies himself should appoint the fourth man.
5. That these men should commence their task, if possible, on Monday, the 22nd instant.
6. That subscription lists be opened at this meeting, and by the members of the committee in their several localities, in order to defray the expenses of the undertaking; and that those persons at a distance who may be willing to contribute should be desired to send their contributions to H. H. Davies, Esq., Surgeon, Llandyssil.
7. That the surplus (if any) remaining, after paying the men, be sent to the Treasurer of the Carmarthen Infirmary.

It was further resolved that the length of time during which the inquiry should be continued could not be determined at this meeting. It may be added that visitors coming to see the girl will be expected to subscribe to the above-mentioned fund; and it ought to be distinctly understood that in future no visitors will be admitted into the house on Sundays.

The Jump Fund.—Final Announcement.

Dr. Lowe presents his compliments to the editor of the *Medical Times and Gazette*, and will thank him to insert the enclosed in next week's impression:—

	£	s.	d.
Subscriptions already acknowledged	357	4	6
H.R.H. the Prince of Wales	20	0	0
Lord Sondes	3	0	0
Dr. Evans Lombe ...	1	1	0
— Perry, Esq., Reepham	1	1	0
Thomas Alderton, Esq. ...	1	1	0
Small sums by ditto ...	0	18	0
Mr. Womack, Branford ...	1	1	0
Mr. Lamb, Barnsbury ...		10	6
Dr. Greenhill, Hastings ...	1	16	0
Rev. Albert Porter ...	1	1	0
Mr. Pretty	1	1	0
	£389	15	0

(Signed) George Wm. Winter, Fitcham.
Thos. Palmer, Swaffham.

Mrs. Jump and family beg to express their very great gratitude for the kindness and liberality which they have experienced in the response to the appeal in their behalf.

Lynn, March 11.

Sulphate of Quinine in Chorea.

To the Editor of the Medical Times and Gazette.

Sir,—I am induced to offer the following remarks relating to the successful treatment of chorea, after perusing in your valuable journal the cases referred to and cured by Dr. Langdon Down at the London Hospital (see vol. i. 1869, No. 976, p. 272). Some forty-four years ago, or thereabouts, a most obstinate and protracted case of chorea occurred in the Royal Infirmary at Edinburgh, which for a long time baffled all the learning of several clinical Physicians, but in the course of time it fell to the duty of the writer (voluntarily offered, and then an Hospital student) to suggest some treatment in so distressing a malady. On the first trial he was unsuccessful; but on the second attempt to afford relief, he succeeded in curing his patient after prescribing the sulphate of quinine. The cure attracted a good deal of attention, but the mode in which it produced so salutary a change in the distressing muscular movements was supposed to be by the medicine acting as an antiperiodic or as an antispasmodic in thus curing the disorder. Perhaps this mode of treating the disease will be found on trial a much more successful one than by the exhibition of strychnine.

Wallingford, March 18. I am, &c. Willoughby Aading, M.D.

Aneurism Compressor.

To the Editor of the Medical Times and Gazette.

Sir,—I would draw Mr. Hilles' attention to a compressor for the treatment of femoral aneurism devised by Mr. Reid, of Dublin, and which, I am quite certain, leaves nothing to be desired further, either for simplicity or efficiency. It is very like a hernia truss, and the pad is best applied over "Porter's space," from which it is not likely to require shifting. I am, &c.

Wakefield, March 22. Lawson Tait.

Hospital Abuses in Brighton.

To the Editor of the Medical Times and Gazette.

Sir,—I beg most fully to endorse the statement regarding the abuses of the Medical charities of Brighton contained in the letter of "A General Practitioner." I see you have drawn attention thereto in your journal of last week, and I have no doubt, with your well-known impartiality and care for the general amelioration and interest of the Profession, you will kindly give prominence in your remarks on Hospital abuses to the views of the general Practitioners, who form the bulk of the Profession, and whose interests are constantly and most extensively undermined and damaged by the indiscriminate, and indeed, I may say with perfect veracity, wholesale manner in which Medical relief is bestowed and applied in this town, and, I believe, in almost all other towns where there are Hospitals and dispensaries.

I am, &c. William Henay Arthur, M.D.

108, Queen's-road, Brighton, March 17.

The Mauritius Fever.

To the Editor of the Medical Times and Gazette.

Sir,—In connexion with the interesting account of this epidemic by Dr. F. H. Bloxall, R.N., it may be of interest to note the fact that the *Himalaya* anchored in Port Louis harbour for a few days in the beginning of June, 1867, that none of the men were allowed to go on shore, and that, during the voyage home, none of her crew were attacked by ague. I may add that Dr. Bloxall's independent observations on the nature and causes of the fever are almost identically the same as those published in the last blue-book by Surgeon-Major Small and myself; and this is the more important from the fact that there are still to be found Medical men who deny the malarious nature of the fever. Personally, also, it is a matter of gratification to find my early opinions on its nature confirmed by an experienced naval Medical officer, as at the commencement of the epidemic I was subjected to some ridicule for calling the cases which occurred intermittent fever. I am, &c. Wilmot H. T. Power,

March 22. Assist.-Surgeon 2nd Batt. 13th Light Infantry.

A Mercurial Puzzle.

To the Editor of the Medical Times and Gazette.

Sir,—As perhaps some of your correspondents would be good enough to answer the following question, I beg you to give it insertion. Having made a nearly saturated solution of chloride of ammonium in distilled water in the proportion of one drachm of the salt in half a fluid ounce of the solution, with the aid of heat I was desirous of procuring therein a concentrated solution, if possible, of the perchloride of mercury, which I did, as I thought, by dissolving four drachms of this latter in four fluid drachms of the solution of chloride of ammonium, brought up to its boiling point, and before cooling I diluted this mercurial solution with enough distilled water to raise the level to one fluid ounce. What I am anxious to know is whether the perchloride of mercury so treated is to be considered as really existing as such in the solution thus obtained, so as to be even depended on, when diluted to the proper degree and in medicinal doses, for internal administration, or whether some compound has been formed between the ammoniacal salt and the corrosive sublimate whereby the properties of the latter substance have become somewhat altered. The only reagents I used for testing the nature of the solution in question were the iodide of potassium and a concentrated solution of potash. With the former I obtained the usual bright salmon-coloured precipitate of the red iodide of mercury, while with the latter I got a very bulky precipitate, at first yellow, which I thought might be the peroxide, when with vigorous shaking it became converted into a dead, white, thick, pasty mass. A reply to this problem in your next number, if possible, will oblige. I am, &c.

March 16. Experimentalist.

*** Surely our correspondent has made white precipitate without knowing it.

The Warrington Blue School.

To the Editor of the Medical Times and Gazette.

Sir,—I am at a loss to understand why the name of Dr. Jas. Kendrick, of Warrington, should be placed on the list of reformers in your issue of February 6, and, as an eye-witness of the management of the Warrington Blue School for upwards of three years, I must enter my protest against such a designation. I am not about to commence a paper warfare with Dr. Kendrick, but, having been the Medical officer to that institution, I think it behoves me to say a few words in defence of the Medical gentlemen who have had the same privilege as myself, for if such scenes of depravity had occurred as you describe, it would have been impossible for such mismanagement to have continued without our knowledge.

I attended the Warrington Blue School professionally from January, 1865, to May, 1868. I always made a weekly visit, and others whenever necessary. The general health of the school was excellent during the whole three years; my attention was always called to the slightest ailment, and Mr. and Mrs. Bowes' (the master and mistress') attention was invariably kind and considerate; they were anxious to a degree, and aided my suggestions by every endeavour in their power to help back the sufferer to a state of health. As I saw the Blues at all times—having in the course of my duties to see them at a moment's notice from the school-room, in their bed-rooms at various hours, etc.—I state as an undoubted fact, and I defy Dr. Kendrick to prove the untruthfulness of my statements, that their bodies were always clean, their clothes were never either in rags or unfit to wear, and that their beds and bed-linen were everything that could be desired. With regard to the many serious charges the Doctor made against the management of the Blue School—and I could go into them minutely if occasion served—I will just refer to one of his many misrepresentations. In an advertisement in the *Warrington Guardian* of September 1, 1868, he says—"In case of prolonged illness the Blues are sent to the parish workhouse." The truth is, that two single cases of scarlet fever occurred in the school, and, acting under my advice, they were promptly transferred to the fever ward of the workhouse (the trustees defraying all necessary

expenses) to prevent its extension to the remainder of the scholars, but for no other reason have the Blues been sent to the workhouse whilst connected with the Blue School. I think the Doctor will admit that in these cases prevention is better than cure. Again, he says that the Blues have preferred the treatment received at the workhouse to that received at the Blue School. I have no desire to disparage the treatment the inmates of the Warrington Workhouse receive, but I do fearlessly assert that Dr. Kendrick is not only mistaken, but his statement reflects on the Medical officers of that institution, whose testimony I now quote, viz.:—

"During the period 1853 to 1858 that I attended professionally at the Blue School, I never saw a single instance of neglect, but, on the contrary, the scholars appeared to receive constant care and kindness from Mr. and Mrs. Bowes. My impression always was, and is now, that the scholars were well fed and clothed, and very comfortable and happy.

"Warrington, August 11, 1868." "CHAS. WHITE.

"I have very great pleasure in giving a testimonial to Mr. Bowes, who was governor of the Blue School when I was Medical officer to that institution, for a period of upwards of twelve months. I was frequently called upon to attend the inmates of the school, and had ample opportunities of seeing how the establishment was conducted. As regards the sick, my instructions were faithfully carried out. The care and attention received by those who were ill from Mr. and Mrs. Bowes deserves every praise, and as to the general management it needs no comment of mine; the fact of Mr. Bowes having received the confidence of the trustees who have entrusted him with such an important office for so many years will ever be a lasting testimonial. "JOHN ADDISON, M.R.C.S. and L.S.A.

"7, Lune-street, Preston, August 19, 1868."

Dr. Watson, of Newbury, Berks, who held the same appointment for eighteen months, refers to the management of the Blue School in similar laudatory terms. If I had Mr. Abbey's evidence, who was above three years the Medical attendant (he is at present abroad), I should have Medical testimony of the management of the Blue School from 1853 to 1868, with the exception of a few months, and I believe I am correct in saying that during the last twelve years of that period Dr. Kendrick never once entered within the walls of that institution, so that all the charges he brought forward, but never substantiated, depend entirely on hearsay and the evidence of three or four discontented Blues; and this class you find in every community, our own Profession not excepted.

I have made no statement which I cannot prove, and, as I stated at the onset, I do not intend to commence a paper warfare; but if ever it is necessary to defend Mr. Bowes from any future attacks of the Doctor, I shall not flinch from doing my duty, aided and supported by the executive of the Blue School, having the Right Hon. Colonel Wilson Patten as chairman, and the Bluecoat Brotherly Society, which consists of the old Blues, whose number is legion when compared with the number of witnesses Dr. Kendrick brought forward, and who will attest to the truthfulness of my statements. I am, &c. JOHN H. GORNALL,

Late Hon. Medical Officer of the Warrington Blue School, and Resident Surgeon to the Warrington Dispensary.

Jordan-street, Preston, March 19.

COMMUNICATIONS have been received from—

Mr. R. R. HOLLYER; Mr. BUDD; Dr. WILLOUGHBY ARDING; Dr. JOHNSON; Mr. H. BONHAM CARTER; Dr. TICKSTOCK; Mr. SAMPSON GAMGEE; Mr. LAWSON TAIT; Mr. N. ADAMS; Mr. OLLIFFE; Dr. RUMSEY; Mr. J. MITCHELL; Dr. JAMES ROGERS; Dr. M. T. SADLER; Dr. DONKIN; Mr. J. H. GORNALL; Mr. RIGDEN; Dr. J. E. HUXLEY; Dr. ABERATH; Mr. WILMOT POWER; Dr. J. C. L. CARSON; Messrs. A. and C. BLACK; Dr. CHAPMAN; Dr. DAY; Dr. J. WHITEHEAD; Mr. E. L. HUSSEY; Inspector-General GORDON; Mr. BRUCE; Mr. GASKOIN; Mr. J. CHATTO; Dr. E. W. MURPHY; Mr. A. BRUCE.

BOOKS RECEIVED—

Milne's Manual of Materia Medica—Robertson on the Alleged Increase of Lunacy—Marsden on Cancer—Syson's "Cry of the Children"—New Orleans Journal of Medicine, vol. xxii.—Wurtz and Watts's History of Chemical Theory—Journal of Cutaneous Medicine, No. 9—Manning's Report on Lunatic Asylums—Bozeman on the Operation of Vesico-Vaginal Fistule—New York Medical Journal, No. 48.

NEWSPAPERS RECEIVED—

Parochial Critic—New York Medical Gazette—Chemists' and Druggists' Advocate—Anglo-Italian Gazette—Cheltenham Times—Victorian Medical Gazette—Newcastle Daily Journal—Harrow Gazette.

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 20, 1869.

BIRTHS.

Births of Boys, 1116; Girls, 1050; Total, 2166.
Average of 10 corresponding weeks, 1858-67, 2085·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	777	772	1549
Average of the ten years 1858-67	735·6	725·7	1461·3
Average corrected to increased population	...	...	1607
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	...	6	5	...	14	8	1	...
North	618210	...	1	9	2	10	17	1	...
Central	378058	...	2	3	...	10	7	2	...
East	571158	..	3	11	1	13	17	6	...
South	773175	3	8	5	2	29	13	3	...
Total	2803989	3	20	33	5	67	62	13	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·517 in.
Mean temperature	36·9
Highest point of thermometer	50·6
Lowest point of thermometer	28·2
Mean dew-point temperature	32·3
General direction of wind	Variable.
Whole amount of rain in the week	0·57

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 20, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending Mar. 20.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Mar. 20.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3170754	40·7	2166	1462	1549	50·6	28·2	36·9	0·57	58
Bristol (City)	163423	36·1	112*	76	*78	51·6	26·7	38·5	0·71	72
Birmingham Boro')	360846	46·1	269	175	153	...	...	...	...	...
Liverpool (Boro')	500052	99·7	342	295	311	48·9	29·8	37·8	0·87	88
Manchester (City)	370892	82·7	278	210	*239	...	...	...	...	...
Salford Borough	119350	23·1	76	60	63	49·5	29·1	37·1	0·64	65
Sheffield Borough	239752	10·5	180	126	164	48·0	30·0	38·2	0·90	91
Bradford Borough	138522	21·0	107	71	74	48·0	30·0	36·5	0·37	37
Leeds (Borough)	253110	11·7	211	129	161	48·0	32·0	37·7	0·59	60
Hull (Borough)	126682	35·6	92	59	63	50·0	28·0	37·6	0·57	58
Newstl-on-Tyne, do.	130503	24·5	78	60	55	45·0	28·0	34·9	0·12	12
Edinburgh (City)	178902	40·2	122	86	117	47·7	27·0	37·3	0·10	10
Glasgow (City)	458937	90·6	351	268	410	49·9	30·5	38·9	0·15	15
Dublin (City and some suburbs)	320762	32·9	161	158	169	52·3	28·3	41·6	1·21	122
Total of 14 large Towns	6546587	35·5	4545	3244	3606	54·6	26·7	37·8	0·57	58
					Week ending Mar. 13.	Week ending Mar. 13.				
Vienna (City)	560000 (1863)	...	...	...	389	...	...	34·0	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·517 in. The barometrical reading decreased from 29·76 in. on Thursday, March 18, to 29·10 in. on Friday, March 19.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

March 27. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

29. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for stone, 2½ p.m.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

30. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

31. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

April 1. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

HARVEIAN SOCIETY, 8 p.m. Dr. J. Hall Davis, "On Puerperal Convulsions."

2. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. Huxley, "On the Construction of Vertebrated Animals."

WESTERN MEDICAL AND SURGICAL SOCIETY, 8 p.m. Practical Evening, for the Narration of Cases and Exhibition of Specimens.

ORIGINAL LECTURES.

A LECTURE ON THE PHYSIOLOGY OF COMA AND ANÆSTHESIA.

By GEORGE JOHNSON, M.D., F.R.C.P.,
Physician to King's College Hospital, Professor of Medicine in King's College.

GENTLEMEN,—Coma may be defined to be a condition in which the functions of the brain proper—the cerebrum—are more or less completely suspended. The subject of coma has come under our consideration lately in connexion with various diseases. It is an important symptom and result of cerebral hæmorrhage; it is one of the results of a fit of epilepsy; it may be a consequence of uræmic poisoning, or of poisoning by opium, alcohol, chloroform, or ether. A state of drowsiness, passing into coma, occurs sometimes in ill-nourished and exhausted infants; and coma may result from the pressure of a tumour or of a depressed piece of bone upon the brain.

The circumstances under which coma occurs, then, are very various; but if we take an extended survey of the subject, so as to include all cases in which unconsciousness results from disease or accident, or well-designed experiment, we shall find a number of facts pointing to the conclusion that, however diverse may be the remote cause of coma, the proximate cause in every instance is a suspended or diminished oxidation of the brain tissue.

That the oxidation of the brain tissue may be effected, it is necessary—(1) That there be a free current of blood through the capillaries of the brain; (2) The blood must be duly aërated or oxygenised; (3) The blood must be unmixed with any material which prevents or impedes the giving up of oxygen from the blood to the tissues.

The blood being the vehicle by which oxygen is carried from the lungs to the brain, it is obvious that a free current of blood through the cerebral vessels is necessary in order to maintain the oxidation of the nervous tissue. The blood, in moving through the capillaries, undergoes a rapid change of composition. In the pulmonary capillaries it exchanges carbonic acid for oxygen, and in so doing its colour is changed from black to red. On the contrary, in the systemic capillaries, its oxygen is replaced by carbonic acid, and again it assumes the dark venous hue. Each particle of blood, during its brief passage through the capillaries, while giving up its oxygen, of course loses its power as an oxidising agent. Therefore an arrest of the capillary circulation through an organ immediately suspends the oxidation of its tissues, and if that organ be the brain, loss of consciousness is an inevitable result. For the purpose of our present inquiry, it is immaterial whether, as I have here assumed, there is a direct oxidation of the nervous tissue by the blood, or whether, as some physiologists believe, the functions of the brain are maintained by the oxidation of certain materials *within* the capillaries. It is certain that stagnant blood in the capillaries can no more maintain the functions of the brain than stagnant air in the lungs can maintain the function of respiration. This consideration enables us to explain the loss of consciousness in epilepsy and in syncope. In epilepsy, as is now generally admitted, the loss of consciousness is immediately due to an arrest of the cerebral circulation, caused by a sudden and extreme contraction of the minute arteries of the brain. With the arrest of the oxygen-bearing blood stream there is an immediate suspension of the brain's functions, and the phenomena of epilepsy are exactly imitated when death occurs from a rapid and copious hæmorrhage, or when, in the lower animals, the arteries which supply the brain with blood are compressed or ligatured.

In syncope the heart's action is enfeebled, and the circulation ceases more or less completely, and in proportion to the degree in which the cerebral circulation fails, the functions of the brain, and especially consciousness, are suspended.

Closely allied to the unconsciousness of syncope is the drowsiness, sometimes passing into coma, which occurs in anæmic and exhausted infants. The red corpuscles are probably the chief agents by which the oxygen is conveyed from the lungs to the tissues. So that when, with a deficiency of red blood, there is combined a languid circulation consequent on weakness of the heart, drowsiness, and even coma, are intelligible results.

That uræmic coma is in some cases partly a result of a deficiency of red corpuscles is probable, but a more constant and powerful factor in the causation of uræmic coma is to be found in the interrupted blood supply resulting from the contraction of the minute cerebral arteries upon the morbid blood, whose free passage they resist. And here we have anatomical evidence in support of this explanation, for we have found in cases of chronic Bright's disease the muscular walls of the minute cerebral arteries hypertrophied in consequence of their continued over-action; and we know that over-action of the small arteries implies undue resistance to the supply of arterial blood.

As the cerebral circulation, and, with that, the functions of the brain, may be suspended in consequence of an interrupted flow of arterial blood to the brain, so the circulation may be arrested by an impeded return of venous blood from the brain. Thus a tight ligature on the neck may so compress the jugular veins as to cause first a venous and then a capillary stasis in the brain, and with an arrest of the capillary circulation there is suspended function—in other words, coma or unconsciousness.

I have met with several instances of giddiness, and even momentary loss of consciousness, occurring during a violent fit of coughing. This is explained by the check given to the return of venous blood from the head during the violent expiratory efforts of coughing, when the superficial veins of the neck and face are often seen to be enormously distended in consequence of the impediment within the chest. Some pathologists would say that the unconsciousness and the coma which result from obstruction of the veins are due to congestion of the cerebral vessels. It is true that in these cases there is venous and capillary congestion, but it is, I think, equally true that the impaired cerebral function results, not from the excess of blood in the vessels, but from the fact that the blood in the capillaries of the brain is nearly, if not quite, stagnant.

While obstruction of the cerebral arteries causes anæmia, and obstruction of the veins causes congestion of the brain, both the one and the other tend to suspend the functions of the brain, the essential cause of the suspended function in either case being, not the mere excess or deficiency of blood in the cerebral vessels, but the arrest of the blood-stream through the capillaries.

We have next to consider a class of cases in which pressure on the brain is the cause of coma—for example, the pressure of a depressed piece of fractured cranium, the pressure of a tumour or of a clot of blood, the pressure of inflammatory or other effusions within the cranial cavity. In what way does pressure upon the brain cause coma or loss of consciousness? Possibly in more ways than one, but mainly, as I think, by interrupting the circulation, not merely through that portion of the brain which is directly subjected to pressure, but also in the surrounding parts to which, over a considerable space, the pressure may be communicated through the soft and yielding cerebral tissue.

It is obvious that the disturbing effect of pressure upon the circulation and the functions of the brain will be greater in proportion not only to the degree and extent of the pressure, but also to the suddenness of its occurrence.

We have another example of anæsthesia from an arrest of the circulation in the complete insensibility of the skin produced by extreme cold, and in the unconsciousness which Dr. Richardson produces in birds by freezing their brains. The congelation stops the circulation, and with it, of course, the oxidation of the tissues. The application of cold, even before it actually freezes the tissues, lessens sensibility, partly, perhaps, by diminishing the blood supply, and partly by checking the chemical action of oxygen. So the drowsiness which results from exposure of the whole body to extreme cold is probably explained, as the late Dr. Snow suggested, by the diminished consumption of oxygen which is thus induced. For "the flame of mammalian life, like the flame of inorganic combustion of hydrocarbon, can only be sustained at a high temperature; a certain reduction is as fatal to one as it is to the other in the Davy-lamp."(a) Another example of local anæsthesia consequent upon an impeded circulation is afforded by the diminished sensibility, as well as the lowered temperature, of a limb for a certain period after ligature of its main artery. Mr. Moore, of the Middlesex Hospital, tells me that, not long since, he treated an aneurism in the ham by pressure upon the femoral artery, and the interrupted circulation thus induced caused, for a time, complete loss of sensation in the leg below the knee.

I have before told you that, for the normal discharge of the functions of the brain, it is essential not only that there should be a free current of blood, but that the blood be duly aërated

(a) Professor Rolleston's Address on Physiology at Oxford, 1868.

or oxygenised. A suspension of respiration is quickly followed by unconsciousness, convulsions, and coma. When from any cause respiration is suspended, the resulting phenomena are complicated. There is, first, a more or less complete deoxidation of the blood; secondly, the arterial blood becomes dark-coloured, like venous blood, and contains an excess of carbonic acid; thirdly, there is a rapidly increasing obstruction, and soon a complete arrest, of the pulmonary circulation. Each of these conditions—namely, the deoxidation of the blood, the excess of carbonic acid, and the diminished flow through the lungs into the arteries—may contribute to the suspension of the cerebral functions.

The phenomena are much more simple when anæsthesia results from the inhalation of nitrous oxide or uncombined nitrogen gas. Nitrous oxide is a rapidly acting anæsthetic, causing complete unconsciousness in less than a minute. At a high temperature it is a powerful oxidising agent, but at the temperature of the body it gives up no oxygen, and is exhaled again unchanged. When inhaled in place of atmospheric air, it rapidly replaces the oxygen in the blood, and, this being done, the functions of the brain are completely suspended, and there is a state of profound coma, which quickly passes off when atmospheric air is again allowed to enter the lungs.

The action of unmixed nitrogen—in other words, of atmospheric air deprived of its oxygen—appears to be essentially the same as that of nitrous oxide when inhaled, but a longer inhalation of nitrogen is required to produce anæsthesia, probably because nitrogen diffuses into the blood and replaces the oxygen less rapidly than nitrous oxide. There is no reason to conclude that the inhalation of either nitrous oxide or nitrogen causes an accumulation of carbonic acid in the blood. The anæsthesia which results from the inhalation of these gases is due simply to the deprivation of oxygen. The lividity of the surface which often occurs is a result of distension of the veins, and not of black blood in the arteries.

The third condition which I before mentioned as being essential for the integrity of the cerebral functions is that "the blood must be unmixed with any material which prevents or impedes the giving up of oxygen from the blood to the tissues."

The late Dr. Snow, after a careful inquiry into the mode of action of anæsthetic vapours, arrived at the conclusion that "chloroform, ether, and similar substances, when present in the blood in certain quantities, have the effect of limiting those combinations between the oxygen of the arterial blood and the tissues of the body which are essential to sensation, volition, and, in short, all the animal functions. These substances (he goes on to say) modify and, in larger quantities, arrest the animal functions in the same way and by the same power that they modify and arrest combustion, the slow oxidation of phosphorus, and other kinds of oxidation unconnected with the living body, when they are mixed in certain quantities with the atmospheric air."

The influence of chloroform vapour in arresting combustion may be shown by a very simple experiment. Put a few drops of chloroform into a tumbler, then gradually lower a short lighted taper into the tumbler. As the taper descends into the glass the flame begins to smoke, and is soon extinguished by the vapour.

Dr. Snow goes on to argue that all narcotics probably act by impeding oxidation. He refers to the observation of Dr. Prout, who discovered that fermented and spirituous liquors diminish the amount of carbonic acid given off by the lungs. He also refers to Beneke's observation that not only does alcohol lessen the amount of carbonic acid exhaled by the lungs, but also the amount of all the urinary constituents, which, as we know, are products of oxidation. And Dr. Snow proved by a series of careful experiments upon himself and upon animals that the inhalation of the vapour of chloroform and of ether lowers the temperature of the body at the same time that it lessens the amount of carbonic acid exhaled by the lungs. In short, Dr. Snow collected a large amount of evidence in support of the proposition that the action of narcotics is mainly due to their power of lessening the oxidation of the tissues.

Dr. Snow further proved that the diminished oxidation is not explained by the combination of the narcotic substance with the oxygen of the arterial blood; for, as he says, the vapours of chloroform and ether escape, for the most part, unchanged in the expired air. Then, in the case of chloroform, the amount of material capable of combining with oxygen is quite insufficient to deoxidise the blood. And, lastly, "to increase the amount of oxygen in the respired air does not prevent the action of narcotics."

The results of Dr. George Harley's experiments tend to confirm this explanation of the action of narcotics. Dr. Harley has shown that a mixture of chloroform, alcohol, morphia, and other narcotic substances with the blood out of the body lessens the amount of oxygen absorbed, and of carbonic acid given off when the blood is shaken up with atmospheric air.

This, then, completes the evidence in support of the proposition that the proximate cause of coma is a suspended or diminished oxidation of the nervous tissue. So that, while in one class of cases the coma is a result of an arrested circulation of blood, in another defective oxidation of blood, and in a third the addition of some narcotic to the blood, the proximate cause is in every instance identical—namely, a defective oxidation of the nervous tissue.

Believing, as I do, that this conclusion is one not only of much physiological interest, but also of considerable practical value, I have thought it right to bring the subject before you in its present form.

A CLINICAL LECTURE ON ERYTHEMA NODOSUM, AND ON THE DOCTRINE OF ABORTIVE EXANTHEMS.

By JONATHAN HUTCHINSON, F.R.C.S.,

Surgeon to the London Hospital, and Lecturer on Surgery, Surgeon to the Hospital for Diseases of the Skin.

GENTLEMEN.—An excellent example of erythema nodosum, admitted last Friday, affords me an opportunity of drawing your attention to a very curious disease. Our patient is a boy of 12. His illness began by a slight febrile attack, during which large blotches came out on his legs, and a few on his arms also. When he was brought here, the condition of these blotches was very characteristic. They were arranged on the fronts of his legs, knees, and lower halves of thighs, those just over the tibiæ being the largest, and also the most dusky. The largest of the patches were oval, and, being attended by thickening, might be compared as to form and size to a slice taken from the surface of an egg in its long axis. Both the patches themselves and the skin around were œdematous, but there was no trace of vesication. The patches about his knees were round, the size of halfpence or shillings, much less thickened, and much brighter in tint of redness than those lower down. On the forearms the patches, although plentiful, were smaller and less well marked, and were arranged on the back and near the ulnar border. The eruption showed an almost exact symmetry, and it did not occur on the body or head, shoulders or hips, hands or feet. The boy's tongue was a little furred, and his skin a little hot, but the constitutional disturbance was but slight. There was no rise of temperature.

I have not described the colour of the patches, and for the reason that it varies so much from day to day that the terms suitable at one time would not apply at another. At first the patches are usually of a bright florid red, with perhaps a shade of yellow or salmon tint, and this colour persists in the smaller ones. The larger patches, however, especially when much thickened, are almost always livid. The colour, of course, depends upon the blood in the capillaries, and when livid, the lividity depends upon stagnation in venous radicles.

Wishing to have a portrait taken, I was urgent with the artist that he should begin at once, knowing that the disease would rapidly undergo spontaneous cure. I show you the sketch he has made, and you have already seen the patient. You will find good portraits of it in almost every atlas of skin diseases, for it is a very peculiar and definite form of disease. The patches, as they go away, will pass through all the stages which a common bruise does, and will leave the skin stained yellow, just as after a bruise.

The case before us is a good example of erythema nodosum in a medium degree of severity, or, at any rate, not one of the most severe; for perhaps, if we knew the truth, mild cases are often overlooked, and never come under medical inspection. I have seen cases much more severe than this, both in number and size of the patches, in depth of livid congestion, and in attendant constitutional disturbance. In the last case we had in the Hospital (about a year ago), the patient, a young woman, had the patches of much larger size, and covering both arms. The first case that I ever saw (when an apprentice) was in a boy about the same age as our patient, and his legs were so covered with dusky livid indurations, that I certainly expected them to go into gangrene. He recovered, however, as these cases always do.

The diagnosis of erythema nodosum ought never to be difficult to any one who has seen the disease before. The numerous separate patches, the swelling which attends them, their colour, symmetry of arrangement, absence of vesication, etc., are quite characteristic. As regards pain, the patient often complains much of burning, stinging, and tingling, but never of itching. The patches never vesicate, or ulcerate, or suppurate.

As to treatment, this disease offers us no difficulties. It is one of those which run a definite course, and then vanish completely, leaving the patient seemingly as well as before. It presents us, however, with a most interesting problem as to its real nature, and to this question I now ask your attention. So far as I am aware, it has, as yet, scarcely been discussed by nosologists. Hebra, who gives an admirably clear and precise account of the disease,(a) says of it that it differs in form, seat, and cause from the other erythemata, and must be described as an independent malady. He seems to believe, however, that the constitutional fever is the consequence of the skin inflammation, and does not go further, as regards the pathology of the latter, than to conjecture that it is allied to absorbent inflammation, and likewise to the erysipelatous diseases. From these conjectures I am obliged to dissent. In erysipelas and in inflammation of the absorbents the disease is local and induced by local causes, and the pyrexia is secondary to the local inflammation. I suspect that the contrary is the fact as regards erythema nodosum. Let me enumerate seriatim the chief facts which have been observed in the disease in question. Most of them are facts to which all writers on the subject bear testimony; a few are from my own observation. To these latter I will advert in more detail presently.

1. The eruption in erythema nodosum is transitory, and disappears spontaneously.

2. It is attended (preceded, I assert) by some degree of febrile disturbance generally proportionate to the eruption.

3. The eruption never, by any chance, persists, and never deviates, excepting in degree of severity, from its ordinary type.

4. The eruption is symmetrically produced on the two halves of the body.

5. Second attacks do not usually occur, and, but that the infrequency of the malady makes such an inference unsafe, we might believe that one attack prevents another.

6. Successive crops of the eruption have been observed to come out all within ten days or a fortnight of the first, and each ushered in by slight rigor and an accession of febrile disturbance (Hebra).

7. It is most usual in young patients (under puberty), and has been thought to prefer the female sex.

8. No observer has succeeded in connecting it with any special diathesis. It appears, indeed, to come by accident, to the healthy as well as the delicate.

I took some pains, in one of the early lectures of our Surgical course, to give a definition of "Exanthems," and to explain the features of the different diseases which ought to be grouped under that name. We then said that an exanthem was *a skin eruption attending a specific fever*, but that, in common parlance, the word might stand for *a specific fever attended by a skin rash*.

Now, do not the ascertained facts concerning erythema nodosum fit better with the characters of the exanthems than with any other group of diseases? Observing stages, transitory, not influenced by treatment, attended and preceded by fever, keeping close to one type, preferring the young, producing a symmetrical rash, occurring but once in a life—such are its points of similarity to small-pox, measles, and the like. It differs, however, or appears to differ, remarkably in two points. First, it does not seem to be contagious, and secondly, it is infrequent.

Now, although we have defined an exanthem to be *the rash attending a specific fever*, yet it is clearly possible to have a specific fever of the same class without the symptom of rash. The latter is only one of the phenomena which are the usual, but by no means essential, parts of the general disturbance which attends the blood change induced by a specific animal poison. Thus it is well known that children may have small-pox, measles, and the like, without the rash coming out, and in those in which the rash does appear it varies in different cases within very wide limits. In hooping-cough we have an example of a contagious malady which occurs but once in a life, and which resembles the exanthems in nearly everything excepting that a rash is not amongst its symptoms. In chicken-pox we have, in the opposite direction, an instance of a disease in which the general disturbance is so slight that, if the rash did not appear, we should not know that the patient was ill. Probably many children catch chicken-pox (it is very infectious), and, having little or no rash, go through it without its being known. My own belief is that what we might call "abortive exanthems"—that is, cases in which the disease is so mild that it produces no eruption, and is never recognised as such—are very common. I believe that it is in this way that we ought to explain the fact that many individuals appear to escape the exanthems altogether. Persons go about in adult life, seemingly not liable to catch measles, scarlet fever, and the like, and yet believing that they have never had them. Probably they have had them without knowing it.

As regards syphilis, it is very common for patients to have so slight a rash that they never recognise it. I believe that a third of our cases of constitutional syphilis are so slight in the secondary stage that they are not recognised, and yet the patient is liable to tertiary symptoms afterwards. I could relate to you, if time permitted, some very remarkable facts in proof that children may go through exanthems without having any rash. You will, I am sure, in the future not unfrequently meet with such cases as these: one child in a family of several has a rash—measles, scarlet-fever, or the like—the others are freely exposed, they have febrile illnesses, but no observable rash. It is by the conjecture that many children have the exanthemata (as far as they are capable of them) so mildly that it is not known at the time, that I should, as I have already hinted, explain the infrequency of these maladies in adult life. Probably advancing years bring with them no diminution of proclivity; but the fact is that a far larger portion of the community is protected than we are aware of.

To return to erythema nodosum. You must not suppose that I intend to express an opinion to the effect that it is an exanthem. My object is rather to hint at its points of resemblance to such maladies, and to show that it is well worth careful clinical study. There are other facts which show its relationship also with some other varieties of erythema, to the peculiarities of which I hope to ask your attention in a future lecture. Meanwhile, we want, regarding erythema nodosum, better and more extended information on the following points:—

1. Does it often occur twice in the same individual?

2. Are there any instances of apparent contagion or of its simultaneous occurrence in several members of the same family?

3. When it is present in one member of a family, is it ever noticed that the other children are out of sorts, although showing no spots?

(a) New Sydenham Society's translation, vol. i. p. 200.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON
THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,

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LECTURE V.

OF NERVE TISSUE — GERMINAL MATTER AND FORMED MATERIAL OF NERVE—NO ENDS TO NERVE FIBRES—ULTIMATE NETWORKS—DIFFERENT KINDS OF NERVE FIBRES — NERVE CENTRES — ACTION OF NERVE FIBRES AND NERVE CELLS.

(*Continued from page 296.*)

We may now consider the general structure and mode of growth of nerve tissue, and especially the relation which the germinal matter bears to the formed material of nerve fibres and cells. The anatomical question has a very important bearing, and until it is decided we cannot hope to know much about the true nature of nervous actions.

Curious opinions have been advanced concerning the structure and arrangement of nerves in the lowest animals, and the view that nerve matter may be in solution or in a state of very minute division, diffused through the general tissues of the body has scarcely yet been abandoned. On the other hand, it has been affirmed that no fibre ought to be regarded as *nerve* which does not exhibit the dark-bordered character. I hope to show, however, that we are now in a position to discard both these extreme doctrines, for we are able to define, and with considerable accuracy, what is essential to nerve structure.

Of Nerve Fibres.

It is remarkable how very closely the nerve fibre in the lowest and most simple creatures which possess a nervous system resembles the active parts of the nerve fibres in the higher animals, although in many of them there is nothing corresponding to the dark-bordered nerve-fibres, or even to the ganglia or nerve-centres, characteristic of vertebrata. The active part of the nerve-fibre invariably consists of a very delicate thread which exhibits a slightly fibrous character, composed of an oleo-albuminous matter, and connected with it at varying intervals are oval masses of germinal matter. In highly-sensitive peripheral nerve-organs, and in the motor nerves of muscle, these masses of germinal matter are very numerous, and, in some cases, are almost continuous with one another; but in less sensitive textures the masses of germinal matter are often separated from one another by a distance of $\frac{1}{1000}$th of an inch or more. In all cases these masses of germinal matter ("nuclei") are situated very close together at an early period of development, and at first the tissue which represents nerve consists of germinal matter only. As the tissue advances towards maturity, the masses of germinal matter become gradually separated from one another by a greater extent of fibre. The fibre sometimes appears as a very distinct fibrous structure, which, were it not actually traced to unquestionable nerve-fibres, might be easily mistaken for fibrous or connective tissue; sometimes as a very delicate expansion of such extreme tenuity as to be demonstrable only after it has been partially altered by chemical reagents, and the oily matter separated from it in the form of granules or globules, which can be very easily traced. Fibres often pass off at an angle from these fine nerve fibres, and divide and subdivide, joining others, so as to form a network, the meshes of which vary much in diameter in different cases. Every one of these delicate fibres must be regarded as composed of still finer fibres, most of which, after leaving the branch under observation, pursue opposite directions. In using the term *network*, therefore, I do not mean to imply that fine nerve-fibres unite with each other after the manner of capillaries, but merely that the *bundles* of fibres are arranged like networks. The fibres composing the bundles do not anastomose. In lace the appearance of such a network of fibres is produced; but every apparent thread is composed of several, each of which pursues a complicated course, and forms but a very small portion of the boundary of any one single space.

Proceeding from the finest nerve-fibres, no fibres exhibiting *ends* or terminal extremities can be detected, and the general conclusion to which we are led is that nerves are arranged to form continuous fibres which pass amongst the elementary parts of the tissues, but neither become continuous with them, nor terminate in free extremities in or upon them. The active part of a peripheral nerve-fibre with its germinal matter is represented in many of my drawings published in the *Phil. Trans.* 1861, 1862, 1867. *See* specimens 81, 85.

In many of the lower animals I have seen such fibres and masses of germinal matter arranged to form an extensive network amongst the tissues, and in some I believe the entire "nervous system" consists of such a network extended through all parts of the animal. In the common starfish and some other members of the Radiata I have seen indications of the existence of a structure such as I have described, and I have no doubt that when our methods of preparation have been still further improved we shall be able to demonstrate the nerve-tissue wherever it exists, and distinguish it with certainty from the tissues to which it is distributed.

Of the Fibres of the Trunks of Nerves.—Every peripheral nerve network is connected with its nerve centre by fibres, and whenever the distance between the centre and peripheral organ is very great, the nerve fibres are protected from each other, and from the tissues through which they pass, by a thick layer of oleo-albuminous matter, which forms an investment to each bundle of delicate fibres, and separates it by a distance equal to from five to twenty times its own diameter from its neighbours, and from other structures. When the trunks pass through narrow canals, as through holes in the cranium, this protective covering is much reduced in thickness, so that a bundle of nerve fibres is made to pass through a space not more than one-fourth of the diameter which the nerve trunk possesses in other parts of its course. The fibres which have this thick covering are known as "*dark-bordered fibres*," from the dark double-contour line they always exhibit when examined in water or weak serum; the covering itself is known as the "white substance of Schwann," or the "medullary sheath." The double-contour line is not seen in my specimens, because they are mounted in strong glycerine. When one trunk diverges from another, many of these fibres divide, one of the resulting subdivisions continuing onwards in the trunk, while the other passes off to help to form the branch trunk.

In cases where the distance between the nerve centre and the peripheral distribution of the nerves is not very great, the compound fibres are not insulated by a "medullary sheath." In many of the nerve fibres belonging to the so-called sympathetic system there is no "medullary sheath," or "white substance of Schwann;" but where the ganglia or peripheral organs are connected with nerve centres at a considerable distance off, a number of fibres having this investment are found.

Of Nerve Centres.

Next, I must draw your attention very briefly to the minute structure of nerve centres, which invariably contain a vast number of nerve fibres and nerve cells, often of large size. These cells, in some cases, have a highly complex structure. The "nerve centre" thus exhibits the essential structures characteristic of the peripheral portion of the nervous system. In the nerve centre a great amount of tissue is compressed into a comparatively small space, so as to form a collection or a ganglion. In the lowest animals, however, in which nerves are to be demonstrated, there is not this distinction between the central and peripheral parts of the nervous system. The nerve tissue seems almost uniformly distributed. In the higher vertebrata it is probable that the nerve tissue collected in the nerve centres exceeds in amount that which is distributed throughout the tissues in all other parts of the organism.

Central Nerve Cells.—Each central nerve cell consists of a mass of germinal matter surrounded by formed material, which last is drawn off at *two or more points* into fine threads.(a) These divide and subdivide into still finer ones at a short distance from the cell, and are, in fact, processes of the nerve cell which become nerve "fibres." What appears as the axis cylinder of a single nerve fibre in the nerve trunk is made up of very numerous fine fibres, each coming from a different central nerve cell. In following a single dark-bordered or other nerve fibre towards the nerve centre to which it belongs, we find that it divides and subdivides into a great number of fibres which pursue different and often opposite directions, and are implanted in different parts of the nervous centre at considerable distances from one another. So also, in following a single fibre towards its distribution, we find it dividing and subdividing into numerous branches, whose ultimate ramifications are found in different parts of the periphery. If, therefore, a nerve fibre be destroyed by injury, accident, or disease, there ought to be neither *complete* paralysis nor *complete* loss of sensation even of the smallest portion of the body, but, on the contrary, a very slight effect should be produced upon parts situated perhaps at a distance from one another. Experience and observation have proved that this is the fact. By the very free crossing and interlacing and the frequent change in the course of nerve fibres in all nervous centres, very serious damage to any one organ or part of an organ by local disease or injury is effectually provided against. Were all our faculties exactly localised and the great nerve organs composed of numerous distinct parts, each having a separate office, injury to one of these, or even to a part of it, would involve the complete loss of the particular faculty of which it was the seat. As it is, even very extensive disease sometimes impairs, and only to some slight extent, the actions of a number of nervous organs without completely destroying the activity of any one.

Nerve cells exhibit important structural peculiarities, so that in some cases it is even possible to say, after examining a single cell, from what central organ a particular cell was derived.

In vertebrata there are two principal kinds of central nerve cells which are very distinct from one another, and probably differ in function not less than they do in structure. These are, 1, *the angular or caudate nerve cells*, and 2, *the oval, pyriform, or spherical nerve cells.*

(*To be continued.*)

We are fairly puzzled, we do not mind owning it, for our brethren over the water are not always very easily understood. We have received two journals, the one called the *Victorian Medical Gazette*, No. 1, published Jan. 15, 1869, the other, also No. 1, the *Australian Medical Gazette*, containing certain portions of matter identical even to the errors with that of the other. This was published on Jan. 30. Which is which, and what the two are intended for, we do not pretend to be able to comprehend.

(a) It is improbable that a nerve cell having only one single fibre connected with it exists.

ORIGINAL COMMUNICATIONS.

COMPARATIVE MORTALITY AFTER RESECTION OF THE HIP-JOINT IN FRANCE AND IN ENGLAND.

By R. R. GOOD, M.D. Paris.

Whoever will take the trouble to collect the cases of resection of the hip-joint for caries practised in England and in France during a certain number of years, will he not a little astonished at the comparatively small number of this operation performed in France, and especially at the ill success attending them. All resections, however, of whatever nature they may be, find with us but few advocates; many of our Surgeons reject them altogether. We need but scan over the periodicals published in the two countries to be convinced of the truth of our remarks. There exists with us a great diversity of opinion as to the value of articular resections in general; amputation is more resorted to; and years will elapse before certain resections, to-day well established in England, will take a footing in the mind of our Paris Surgeons. And yet, when we reflect upon the terrible disasters which have befallen their attempts at resection of the larger articulations (the hip- and knee-joint, for instance) we can scarcely wonder at their timidity. Let us briefly examine the results taken from our own statistics, which begin with a portion of the year 1860,(a) a period where the tables of M. Le Fort, the first in France, leave off. We there find collected 46 cases for England, of which the definite result of 14 remains uncertain; and 16 cases, of which 2 are uncertain, for France. Now, if we exclude from our count the "uncertain cases," we have remaining 32 English and 14 French hip-joint resections for caries. Of the 32 English cases the operators were:—

	Cases.	Cured.	Dead.
Holmes	6	4	2
Barwell	5	4	1
Gant	4	4	0
Hulke	3	2	1
Pick	2	2	0
Lee	1	1	0
MacGregor	1	1	0
Gillespie	1	0	1
Davis	1	0	1
Le Gros Clarke	1	1	0
Bryant	1	1	0
Ure	1	0	1
De Morgan	1	1	0
Parsons	1	0	1
Smith	1	0	1
Med. Times and Gaz. 1861, August 10, p. 132	1	0	1
Ditto, April 27, p. 444	1	0	1
Total	32	21	11

This gives us 21, or 65·62 per cent, cured, and 11, or 34·37 per cent., dead.

The 14 cases in France were operated by—

	Cases.	Cured.	Dead.
Giraldès	5	0	5
Gosselin	3	0	3
Dolbeau	2	0	2
Verneuil	1	0	1
Boeckel	1	1	0
Shrimpton	1	0	1
Sédillot	1	1	0
Total	14	2	12

which furnished 2, or 14·28 per cent., cured, and 12, or 85·71 per cent., dead, leaving in favour of the same operation the difference of 51·34 per cent. for England. Where is the reason of this great difference? It lies in the delay of the operation. Our Paris cases were operated on too late—when the subject is exhausted from long and continued suppuration, hectic fever, confinement in badly ventilated wards, and, we might add, where good beef and nourishing food is not administered in liberal quantities. Nine of the 12 cases died of exhaustion a short time after the operation, 1 of tubercles, 1 of caries extending to the pelvis, and 1 of pyæmia. Age cannot be brought in as an excuse, for most of the patients were children between 8 and 12 years old—the very age in which the operation has furnished the best results in other countries. And upon this point I do not share the opinion of MM. Larrey and Gosselin, who profess(b) that the resection of the coxo-femoral articulation is especially indicated for adults.

Now, since our resections have given such bad results, let us see if other treatment in caries of the hip-joint is more favourable. I do not mean amputation, which can scarcely be proposed as a treatment for coxalgia, and especially as thereby we should still leave untouched the so much dreaded disease of the acetabulum; but I refer to the treatment by the *gouttière* of Bonnet so universally employed in our Paris Hospitals. Of 12 patients with suppurating coxalgia who entered the St. Eugénie Hospital (M. Marjolin's service), and were observed during the space of three years by M. Gibert,(c) we have the following results:—8 dead; 3 not cured, leaving no hope of success; 1 cured, with limb anchylosed. These patients were all children from 3 to 13 years old, and in every respect in the same condition as those where resection was resorted to.

To strike a balance of the two methods of treatment seems useless; both are discouraging, and they go to prove that coxalgia, once arrived at the third stage, is fatal, and that the French Surgeons who consider suppurating coxalgia a disease nearly always ending in death are not far from the truth. Of course this has reference to Hospital patients only.

In England, where sea air, cleanliness, tonics, and good food are in abundance, the disease is less fatal. MM. Verneuil and Le Fort, the two Surgeons who more than all others of Paris favour resections, quite share our opinion as to the fatality of these hip-joint operations, and both hold that our greatest fault lies in delay, and that heretofore the cases have been operated on only *in extremis*. Let us hope for better results in the future.

(a) R. R. Good, "De la Résection de l'Articulation Coxo-fémorale." Paris. 1869.

(b) Soc. Imp. de Chirurgie, 1861.

(c) M. Gibert, Thèse de Paris, 1859: "De la Coxalgie."

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

WESTMINSTER HOSPITAL.

CASE OF PHLEGMONOUS ERYSIPELAS OF THE LEG IN A PREGNANT WOMAN—DELIVERY—RECOVERY.

(Under the care of Mr. HOLTHOUSE.)

Johanna T., aged 35, a well-built and robust-looking woman, in the ninth month of her pregnancy, was admitted into the Westminster Hospital, under the care of Mr. Holthouse, on January 8, 1869, for œdematous erysipelas affecting the whole circumference of the left leg from the foot to the knee, and extending halfway up the under surface of the thigh. About the centre of the leg, and a little to its outer side, was a patch of inflamed skin, the size of a five-shilling piece, evidently on the verge of becoming gangrenous. The tongue was brown and dry, the pulse feeble; but her appetite was not bad, though she craved for drinks rather than solids.

History.—Swelling of the limb without redness had existed two or three weeks before her admission; but six days ago it began to inflame and be painful, and four days after this she had a severe rigor of an hour's duration.

Treatment.—Two incisions, each from three to four inches long, and carried quite through the thickened and infiltrated tissues, were made on the inner and outer side of the leg, which at once relieved the tension and bleached the inflamed skin. A stick of nitrate of silver, applied sideways, was also freely rubbed over the inflamed skin of the back of the thigh, previously moistened with warm water. The following medicine was prescribed:—Hydrarg. chlor., pulv. Jacobi, āā gr. iij. Ft. pulv. horâ somni sum. Spir. ammon. arom. ɱxx., mist. efferv. ʒj. Misce tertiis horis sum. Full diet; porter Oj.

January 9.—The incisions made yesterday bled so freely that the limb was obliged to be elevated and exposed to the air before any other local means were employed. When all danger of a recurrence of hæmorrhage had passed, the limb was enveloped in flannel wrung out of hot water, with macintosh cloth outside. To-day the limb is decidedly improved, and the erysipelatous redness on the back of the thigh has ceased

to spread, and is declining. The tongue is moist, but the pulse feeble; bowels freely open. The following mixture was substituted for the haust. effery.:—Ammon. carb. gr. v. Decoct. cinchonæ ʒj., tertiis horis sumend.

13th.—Yesterday and to-day the leg has again become more swollen, especially about the calf; an incision was therefore made, which gave exit to a considerable quantity of pus and blood, with relief to the local symptoms. The inflammation of the thigh has entirely disappeared. First medicine continued: cataplasma lini cruri.

14th.—Last night labour came on, and she was safely delivered by the House-Surgeon of a small male child. Is doing well.

15th.—Is much improved in every respect; the incisions in the leg are all looking healthy; tongue is perfectly clean and moist. She is cheerful, but feels weak, and her pulse is feeble. Repeat mixture; port wine ʒ vj.

20th.—Has gone on uninterruptedly well since the date of last note; but another boggy patch has appeared on the outer side of the leg, into which an incision was made.

21st.—Leg easy and looking well; general condition satisfactory, but has not enough milk for the infant. Treatment continued. Milk Oj. for child.

30th.—Leg remains slightly swollen, but all the four incisions are healthy-looking and healing, and no fresh collection of pus has taken place. The general health is perfectly good, though she is still rather weak. The wounds are dressed with ung. zinci.

February 13.—She has been going about since last note, and, though otherwise well, the leg is still slightly œdematous, and the wounds, though healthy-looking, do not heal. Under these circumstances a flannel bandage was applied from the foot to the knee, and the patient was ordered to remain in bed with the limb slightly elevated. Under this treatment the œdema disappeared, the wounds healed, and she was discharged cured on March 9, 1869.

Remarks.—The occurrence of the puerperal state in a woman affected with phlegmonous erysipelas might be looked upon as a serious complication, and as one offering but a small prospect of recovery to the patient. This case illustrates, however, the importance of drawing a distinction between the many forms of disease, which are doubtless as distinct in their origin as are typhoid fever and roseola, and which are nevertheless all confounded together by having the same name applied to them. The inflammatory œdema of the skin of the left leg, the erysipelatous blush upon the surface, and the subsequent sloughing and suppuration which occurred, were no doubt here due to the obstruction to the venous circulation resulting from the pressure of the pregnant uterus upon the iliac veins, and did not indicate the existence of any typhoid or septic condition in the woman's circulation. The value of free incisions in these cases was obvious from the benefit derived from such practice in the present instance, and from the immediate relief experienced by the patient. As the advantage of this method has of late been somewhat questioned, we take this opportunity of expressing our unaltered opinion of its importance. The rapid recovery of the patient after delivery, and the absence of any permanent plugging of the iliac veins, are remarkable features in the case.

HOSPITAL FOR DISEASES OF THE THROAT.

CASES OF LARYNGEAL PARALYSIS.

(Under the care of Dr. MORELL MACKENZIE and Mr. EVANS.)

Case 1.—*Inspiratory Paralysis of the Right Vocal Cord—Great Dyspnœa—Laryngotomy—Recovery.*

H. R., aged 37, an ivory turner, was first seen December 10, 1868. He complained of difficulty of breathing, which had been coming on for eighteen months. It was greatly increased by the slightest exertion, and was so easily induced as seriously to interfere with his occupation. His voice was hoarse, but not completely suppressed, and he had a slight croupy cough. On making a laryngoscopic examination, it was found that the right vocal cord was immovably fixed about 1-16th of an inch from the median line. It was neither abducted in inspiration, nor completely adducted in attempted phonation. This explained both the dyspnœa and the dysphonia. The general symptoms were quite negative. There was no evidence of pressure on the right recurrent nerve, the lungs appeared healthy, and there was no dysphagia. There was no history of syphilis, but the man had been a great drinker and an excessive smoker. Dr. Mackenzie at once recommended laryngotomy. The patient was unwilling to submit to an operation till January 23, 1869, when he was brought to the Hospital late at night in a state of the greatest dyspnœa, and the operation was immediately performed. He made a good recovery, and left the Hospital at the end of three weeks wearing the canula.

Case 2.—*Inspiratory and Phonic Paralysis of the Left Vocal Cord—Great Dyspnœa—Dysphagia—Old-standing Facial Paralysis of Left Side—Laryngotomy—Recovery.*

R. W., aged 45, after having been seen as an out-patient for a few days, was admitted into the Hospital, February 11, 1869. He was suffering from intense dyspnœa and stridulous breathing, and laryngotomy was at once performed. From the history of his case, it appeared that he became hoarse and short of breath six months previously, and that the symptoms had become so severe by Christmas that he was obliged to give up work. Twelve years previously he had been attacked with facial paralysis of the left side, and this latter affection had remained permanent. He complained of a general numbness of the left side of the body. The patient had never had syphilis, but was a drunkard. A clear family history is not often to be obtained from an Hospital patient, but it appeared that in this instance his father had died of heart disease, that both a brother and sister of his father had been paralysed, and that his brother and two cousins had died of consumption. The patient was in a very weak condition when admitted, but after laryngotomy had been performed he soon gained strength on analeptic treatment, and was discharged on March 4.

Case 3.—*Phonic Paralysis of Left Vocal Cord—Paralysis of Left Lateral Adductor (Crico-arytenoideus lateralis)—Aphonia.*

E. T., a robust florid young man, 25 years old, applied for relief December 22, 1868, on account of loss of voice. Two years previously he had contracted syphilis, and had subsequently suffered from sore throat and a scaly eruption on the palms of the hands and soles of the feet (palmar and plantar psoriasis). His voice became hoarse in January, 1868, and was completely suppressed in the following March. On laryngoscopic examination it was seen that on attempted phonation the right vocal cord was not adducted to the median line, but remained immobile at the side of the larynx. There was no congestion or textural change in the superficial appearance of the larynx. There was no evidence of disease of the lungs or pressure on the recurrent nerve, and the case appeared to be one in which a simple inflammation of the mucous membrane had spread to the subjacent muscle. The case was too recent for the presence of a gummy tumour in the muscle, and there were none of the serious constitutional complications which are present when the muscles are thus affected.

Case 4.—*Incomplete Inspiratory Paralysis of both Vocal Cords—Dysphagia—Carcinomatous Stricture at the uppermost part of the Œsophagus.*

T. B., aged 71, a market gardener, from Cambridgeshire, was admitted into the Hospital February 21, 1869, principally on account of great difficulty of swallowing. On admission, it was found that he could not swallow solids at all, though he could easily take liquids. He complained of shortness of breath on the slightest exertion; his voice was rather husky, and he had a croupy cough.

On examination with the laryngoscope, it was seen that the vocal cords were fixed near the median line, and were not abducted in inspiration, and on passing a bougie it was found that the orifice of the œsophagus just below the cricoid cartilage was impassable. There was an enlarged and very hard gland in the right side of the neck on a level with the cricoid cartilage. The patient left the Hospital at the end of a week considerably worse. Dr. Morell Mackenzie considered that in this case the inspiratory paralysis of the glottis was due to pressure on the recurrent nerves by malignant disease in the upper part of the œsophagus.

Remarks.—In calling attention to these cases at one of his demonstrations, Dr. Morell Mackenzie remarked that it was difficult to lay down accurate distinctions for the paralyses of the different muscles acting on the vocal cords without using technical terms, which to some might appear pedantic. He had, however, attempted to introduce terms which would be perfectly intelligible to any Medical Practitioner, and yet were not in any way opposed to scientific facts. It was well to bear in mind that there were two distinct sets of muscles within the larynx—the one which were concerned in drawing aside or abducting the vocal cords in inspiration; the other whose function was to adduct the vocal cords in phonation. When the former were affected, there was inspiratory paralysis;

when the latter did not act, there was phonic paralysis. These two paralyses represented two very different diseases, for inspiratory paralysis was attended with great danger to life, whilst in phonic paralysis there was simply loss of voice. Inspiratory paralysis invariably depended on loss of power of one or both the crico-arytenoidei postici, the abductors of the vocal cords. Phonic paralysis generally depended on impaired action of one or both the adductors; but occasionally it was due to impaired tension of one or both the vocal cords from imperfect action of one or both the crico-thyroid muscles. Whilst both inspiratory and phonic paralysis might occur in the same case—the vocal cord remaining fixed in an intermediate position midway between the side of the larynx and the median line, and being neither adducted in phonation nor abducted in inspiration—it more often happened that only one class of muscles was affected. As a rule, when the recurrent nerve was implicated, inspiratory paralysis was the most prominent and important symptom, and the voice was only slightly affected. The shrill voice and brassy cough which so frequently characterised the pressure of an aneurismal tumour on the recurrent nerve pointed to the fact that the vocal cord was in a state of great tension from paralysis of the thyro-arytenoid muscle. Under these circumstances, as the crico-thyroid was supplied by the superior laryngeal nerve, its action was no longer counterbalanced, and there was undue tension. Dr. Mackenzie entirely dissented from the statement lately made by Ziemssen in vol. iv. of the *Deutsches Archiv für klinische Medicin*, that bilateral pressure on the recurrents caused absolute loss of voice and no dyspnœa. His experience was precisely the opposite—viz., that it caused great dyspnœa and only slight loss of voice. Case 4 clearly showed this. He considered that in investigating the ætiology of laryngeal paralyses there was a tendency to overlook the possibility of idiopathic disease in the muscles themselves. He believed that the greater number of cases were simply myotic. The laryngeal muscles were placed under very peculiar and exceptional conditions. Most movements in the body were effected by a number of muscles, so that if one muscle were impaired others could supplement its use; but in inspiration the laryngeal portion of the act depended entirely on the crico-arytenoidei postici. Again, in phonation, though a number of muscles were concerned, if their action was thrown the least out of gear, it immediately became manifest in the alteration of the voice. Not only, however, were the laryngeal muscles of the utmost importance, but from their very superficial position beneath the mucous membrane—a mucous membrane prone to inflammation—and from the great strain they were subjected to in various exercises of the vocal organ, they were very liable to disease. Sometimes the muscle was simply sprained; sometimes it was probably affected with rheumatism, if we are right in attributing the obscure pains and diminished power of muscles which are seen in lumbago and pleurodynia to rheumatism; sometimes there were probably syphilitic gummy deposits in the muscles, and sometimes the simple superficial hyperæmia so often met with in the larynx extended to the subjacent muscle.

STAMPING OUT THE CATTLE PLAGUE.—It is interesting to find in the life of Benjamin Bell, recently published by his grandson and namesake (Edinburgh: Edmonston and Douglas), that nearly a hundred years ago measures for stamping out cattle plague exactly similar to those more recently adopted were employed with complete success. This is what Benjamin says, writing to his father. After warning him of the extreme caution necessary to prevent the spread of a disorder depending on a venom so subtle that it might be carried hundreds of miles in the clothes and yet prove effectual, he says: "This will show what caution is necessary with regard to allowing strangers, dogs, or any other foreign creatures coming near sound cattle. In case you should be so unlucky (which God forbid) as to observe any of your cattle infected, every one of the rest should be immediately killed and buried. There is an Act of Parliament requiring every person to do so, and at the same time entitling them from the Government to every farthing expense they suffer in that way. And accordingly, when the disease about two months ago broke out in the West Highlands, 200 cattle were immediately killed, which effectually prevented, with other measures, the contagion spreading further." Benjamin Bell was a wonderfully shrewd man; his views, of which a summary has been published by his grandson, B. Bell, in the *Edinburgh Medical Journal*, and which are republished in this volume, are in many respects ahead of their time, and are worthy of attention even now.

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Medical Times and Gazette.

SATURDAY, APRIL 3, 1869.

"DYING DEPOSITIONS."

A CASE has lately been tried at Leeds which illustrates the responsibilities which rest on officials who are required to receive "dying declarations" from persons attributing their death to criminal injuries, the extreme difficulties which the English law puts in the way of the reception of such declarations as evidence, and the chances of escape which the law affords to perpetrators of evil deeds of a particular class. The following were the facts of this case:—An unmarried woman named Laura Eliza Thirkill found herself pregnant in December last. She spoke to one or two persons about the matter, and was advised by them to apply to a woman named Sarah Barrett. Thirkill called on Barrett twice in Fountain-lane, Leeds, where she then resided. Barrett afterwards changed her lodging to Wellington-lane. On the morning of December 15 Thirkill left her home in good health, saying she was going to take a bath. She proceeded to Wellington-lane, and inquired of two persons where Barrett lived, and was shown the house. At 11 o'clock that night she was found at the corner of Wellington-lane in great agony by a cabman. She was taken home, a Surgeon (Mr. Hayward) was sent for, and she died on December 26. Before her death Thirkill was examined before a magistrate in the presence of the prisoner, and her deposition was read over to her and signed. The charge against the prisoner at that time was that she had attempted to procure abortion. The reception of this deposition as evidence was objected to on the part of the defence on several grounds. First, that the deposition was taken upon the charge of procuring abortion, whilst the present trial was for wilful murder. This objection was overruled by the judge on reference to certain cases on record. The next objection was that the deposition was without a caption, stating the nature of the charge at the time the deposition had been taken, although a caption had been inserted afterwards. The presiding judge, Mr. Baron Cleasby, admitted the force of this objection, said it was a matter of great difficulty, and he thought the deposition was inadmissible on that ground. The objection, however, which settled the matter in favour of the defence was that the Surgeon at the examination had, in the presence of the prisoner, expressed an opinion that the weak state of the deceased rendered it dangerous to cross-examine her. This at once confirmed the judge in his determination to reject the deposition, as there had not been that "full opportunity of cross-examination" required by the statute. The prosecution, driven from this point, then offered the same deposition as a "dying declaration." Here, however, they were met by the

objection that the deceased had to the last clung to the hope of life. She said frequently to Mr. Hayward. "Don't let me die, Mr. Hayward; don't let me die." That gentleman, however, deposed that at the time the deposition was taken he had assured her he thought she could not recover. But this was not sufficient. Baron Cleasby said "he must be satisfied from the evidence that the deceased, at the time of making the statement, believed that death was impending, and not that she believed merely that she would not recover." On this nice distinction the prosecution foundered, and the prisoner was acquitted. She was afterwards indicted with using an instrument with intent to procure abortion, but as the evidence produced was the same as that proffered on the previous trial, Barrett was again acquitted, and is now at large. Whether the law has not been expounded with an unnecessary amount of scrupulosity in this case, is a question on which we do not propose to offer an opinion. No doubt a freer interpretation of the law on dying declarations might in some cases be dangerous. But no person will rise from reading this case, as reported in the daily papers, without feeling that there has been a probable miscarriage of justice. To the ordinary mind, a declaration made by a woman who has been assured by a Medical man that she would not recover, in the presence of a magistrate, and duly attested, would seem as good evidence as that which is generally taken in open court. Nor would this impression be removed by the dying woman hysterically imploring her Medical man to save her from her impending fate. As we have said, there are many reasons why the law should scrutinise dying declarations with great care: but, on the other hand, there are very few patients who so thoroughly dismiss all hope of recovery from their minds as to satisfy its requirements as interpreted by the judges. This condition of the law especially favours the class of crimes with which the woman Barrett was charged. The unfortunates who are the subjects of these practices are usually in the heyday of youth or mature life, and do not easily dismiss all hope. No direct evidence can ever be obtained except from the dying woman herself, and it is ten chances to one if she be in the condition of mind required by the law to make her dying declaration valid.

IS HEMLOCK A POISON?

Many of our readers may have encountered an extraordinary statement made by our ordinarily well-coached contemporary, the *Pall-mall Gazette*, and from it copied into a number of other papers, to the effect that conium is not poisonous, but as nearly as possible inert. This astounding statement is further made, apparently, on the authority of Dr. John Harley, but we are rather inclined to believe that the author of the note in the *Pall-mall Gazette* has misunderstood Dr. John Harley, who, as far as we know, has never maintained the impotence of conium, but only of its more common pharmaceutical preparations. Dr. J. Harley maintains that the preparations in use up to the date of the Pharmacopœia of 1867 were valueless, and that the only reliable form for exhibition is the succus conii or hemlock juice. Although in this respect Dr. Harley is not absolutely correct—for the extract of conium, when properly prepared, as it is by Mr. Squire, is very far from being inert—still there is no doubt whatever that the juice is the best preparation. It is further worth noticing that Dr. Harley gives this in much larger doses than has been customary—in some instances, indeed, as much as half an ounce. As there appears to be such general misconception on the subject, a short account of the effects of hemlock may not be out of place.

Dr. J. Harley, in experiments with the succus conii on himself and others, found that when taken in full doses the first effect was a feeling of weakness or weight about the limbs, speedily followed by heaviness of the eyes, confused vision, and giddiness on moving them suddenly, causing the experimentalist to lay hold of something to keep himself from falling, until he has again steadied himself by fixing his eyes on some immovable object. When the dose has been very large, or the patient is not very strong, it may be necessary to assume the recumbent posture for a time. The eyelids may be paralysed so that the individual cannot move them; but all this time the pulse is full and in every way normal, and the senses are in every respect perfect. Such are the effects of hemlock in ordinary doses. Now let us see what they are in cases where the drug has proved fatal, for there are such on record, whatever the *Pall-mall Gazette* may say to the contrary. We shall select a case recorded by Dr. Hughes Bennett, of Edinburgh, and attested as to its cause by Professor Christison, that there may be no doubt either as to the correct observation of the symptoms or as to the identity of the plant concerned. In 1845, a man, after eating largely of hemlock, which he mistook for parsley, was seized in from fifteen to twenty minutes with loss of power in the lower limbs, but he apparently suffered no pain. In walking he staggered, and at last his limbs refused to support him, and he fell. When raised, his limbs dragged after him, and his arms, on being lifted, fell like inert masses. Within two hours after having taken the poison there was perfect paralysis of both legs and arms. The power of swallowing was lost, and in three hours the breathing movements had ceased. The intellect was clear almost to the last. After death the lungs were found to be gorged with dark blood, and the blood throughout the body was thin and of a dark colour. The stomach was found to be filled with a greenish pulp, identified by Professor Christison as being composed of conium leaves, and as yielding conia. This, then, is the mode in which hemlock kills—The first to go is the power of the muscles of the limbs, then the power of other muscular organs, the breathing being apparently the last to fail; but this is not so for the heart continues to beat some time after all outward indications of life have ceased.

So much, then, for actual experience with hemlock itself; but let us see what is said of its active principle, the alkaloid conia. As far back as 1835 Christison had shown this to be one of the most potent and dangerous poisons known to man. It differs from most other alkaloids, with the exception of that of tobacco, in being fluid and volatile, so that it behaves in certain respects very much as solution of ammonia does. Locally it gives rise to some irritation, but this gives way to the intensely sedative effects which speedily follow. This consists in palsy of the muscles in a certain regular order—in fact, exactly as we have seen above—so that the action of conia may be referred to the motor tract of the cerebro-spinal system of nerves. Not affecting the sympathetic system of nerves, it does not influence the heart. Christison says that it acts through every texture where absorption is readily carried on—through the stomach or lungs, the eye or cellular tissue, the peritoneum or the veins. Its activity is increased by neutralisation with an acid, as it is then much more soluble in water. A single drop applied to the eye of a rabbit will kill it in nine minutes, and three drops in the same way will kill a strong cat in a minute and a half. Five drops poured into the throat of a little dog began to act in thirty seconds, and proved fatal in a minute. Two grains neutralised with hydrochloric acid and introduced into the femoral vein of a dog caused death before there was time to note the interval, so that only two or three seconds could have elapsed until all signs of life were extinct. And this is the substance which we are now told is not poisonous. True, we speak of the active principle: but as there is no alteration implied by its separation from the original body, the question of virulence is only one of degree, for if a sufficient quantity of hemlock were taken, it would produce all the symptoms the corresponding quantity of the alkaloid would, although not so speedily.

In reading of the effects of hemlock, one cannot fail to be struck with the great diversity of opinion existing as to its effects both in poisonous and in physiological doses, insomuch

that some would have us believe, as we have seen, that the substance is useless. There could be no greater mistake, but its source lies, we are inclined to believe, in the fact that many other umbelliferæ closely resemble hemlock, and even go by its name. The great characteristics of the plant are the dark or black spots on the stem, and the mouselike odour of the bruised leaves—an odour brought out all the more readily by trituration with caustic potass. Connected with this is another error into which the writer in the *Pall-mall Gazette* would seem to have fallen—viz., the use of this plant among the ancient Greeks as a means of destroying criminals, and as the instrument of Socrates' death. He would attribute this—as, according to him, the conium is useless—to the cicuta virosa; but the effects of cicuta virosa, although it has been mistaken for hemlock, are by no means identical with those of the latter substance, and are quite different from those described by Plato and Xenophon as observed in the case of Socrates, whilst those produced by hemlock do correspond to a nicety. No doubt the confusion between the two and other umbelliferæ has led to the uncertainty described above with regard to the use and value of hemlock. In this respect Dr. John Harley has done good service; not that he has added anything to our knowledge of the action of conium, but he has shown that the ordinary preparations of the drug are almost valueless, that by far the best is the succus conii, and that this must be given in good large doses to secure its proper effects. When properly prepared and properly prescribed, the remedy is a valuable one, and some people have gone on taking it for years—a tolerably safe sign of its real utility. It has been prescribed for a variety of complaints, but perhaps that in which it is most useful is as a sedative in phthisical cough, although this would seem to be opposed to the doctrine of its physiological effects. As far as we know, only two trials for poisoning by hemlock have taken place—one reported by Taylor, and another which occurred at Dessau in Germany.

THE WEEK.

TOPICS OF THE DAY.

The Medical evidence in the Norwich murder established the facts that the human remains found were those of an adult woman. This was proved by the pelvis and by the head of the thighbone with the cartilage attached. The idea that the remains were not those of an aged person had its origin in the well-filled understructure of the skin and the delicacy of the skin. The complexion of the skin was fair. The handbill published by the police in 1851 stated that the age of the woman whose remains had been found was probably between 16 and 26, and it is undoubtedly true that the police were at the time in communication with the Medical men who examined the remains. Mr. Nichols, however, is reported to have stated at the trial that the appearance of the skin and of the flesh was not inconsistent with the age being 54. In his first affidavit he had deposed that the age was about 26. Dr. Dalrymple stated, in cross-examination, that he should have said the portions of the body he examined were those of a person under 54. "I don't say nearer 26 than 54. I think about 40 to 44." However, "there was nothing inconsistent with the portions of the body being portions of a woman of the age of 54." Now, making full allowances for the difficulties of the investigation, we think it is a pity that the Medical witnesses allowed themselves to overstep the statement that the remains were those of an adult female. The delicacy of skin, and the amount of subcutaneous fat to be found in small portions of the body, are not sufficient evidences on the subject of age to warrant the hazard of an opinion in such a case. Medical jurisprudence should not participate in the conjectural character assigned by the public to Medicine. If the first age assigned by the Medical witnesses to the human remains discovered in 1851 at Norwich be an approximation to truth, the murdered woman was not William Sheward's wife. If that age were incorrect by more than double its amount, it will not raise the public estimation of the value of Medical evidence, especially when they are told that there is nothing inconsistent in the woman having been either 26 or 54. If Medical witnesses would on all occasions limit themselves to the facts of which they are certain, it would be more creditable to the science they profess. Sheward has been found guilty because his confession (which he has since retracted) is confirmed by the fact that his wife was suddenly missing about the time when the remains were found. But as far as the Medical evidence goes it has not contributed much to his conviction. Apart from the Medical interest of the case, the story has some remarkable incidents in it, such as the finding the remains by dogs, and Sheward's declaration on giving himself up to the police—"I went last night to a house in Richmond-street, Walworth, where I first saw my first wife, that brought it so forcibly to my mind that I was obliged to come to you and give myself up."

The Government Bill for the amendment of the Metropolitan Poor Act proposes to give the Poor-law Board the power of dissolving at pleasure any metropolitan sick asylum or school district, and of readjusting the liabilities of the parishes. It also throws some of the burdens of the most heavily taxed metropolitan unions and parishes upon the common metropolitan poor fund. In reference to the Medical service it provides that—

"If a dispensary is provided by the guardians under any other Act than the Metropolitan Poor Act of 1867, they must (if required by the Poor-law Board) provide a proper room for the Medical officer to see the sick poor; and he is, personally or by his authorised substitute, to attend at that place during the times fixed by the guardians with the approval of the Poor-law Board. If guardians refuse to provide a dispensary when required by the Poor-law Board, no repayment is to be made to them from the Metropolitan Common Poor Fund for medicines and Medical officers' salaries. Vaccination expenses incurred without the approval of the Poor-law Board are not to be repaid out of that fund."

The whole machinery of the Poor-law has worked so badly by fostering and creating pauperism and demoralising the lower classes that many thinking men are beginning to compare the condition of this country in reference to pauper population with that of the Continent, and to ask what are the grounds on which the present system can be defended. The only answer that can be given to such a question—and we are bound to confess it is a valid one—is a necessity which the system has been the chief means of creating. But of this we are certain—that the way to make things worse instead of better is to convert state relief to the pauper into charity. A taxing Government can never get beyond justice without becoming unjust. In so far as Mr. Goschen's Bill modifies in the direction of justice to the ratepayer the hasty and forced legislation of the last Parliament, it cannot fail to do good.

The question of the introduction of homœopathy into the Queen's Hospital, Birmingham, has been raised, and an endeavour has been made to enlist the Committee of the Working Men's Fund for the extension of that Hospital in favour of such a proposal. The chairman of the Committee, Mr. Sampson Gamgee, has very wisely declined, on the part of the Committee, to discuss the question, as it is no part of the duties with which the members were entrusted by the working classes of the town.

We are glad to see that the Poor-law Board have issued a circular to the various Boards of Guardians in the metropolis, asking to be informed of any obstacles or difficulties which the guardians find in their attempts to effect emigration. After all, it is clear that emigration is the only remedy for the present state of things, kept up as it is by a yearly increase of population requiring 50,000 acres of corn land to support it. It is evidently the destiny of certain of the white races of man to repeople a large portion of the world. Of these races the English is one of the chief, and the terrible increase of our pauper population is an effect of our disregarding, at least

partially, those laws of extension in proportion to increase which our ancestors—Saxons, Danes, and Normans—thoroughly well understood and obeyed.

The election to the chair of Chemistry and Chemical Pharmacy in the University of Edinburgh, consequent upon the retirement of Dr. Lyon Playfair, has called into the field several most worthy candidates. We have before noticed that Professor Anderson, of Glasgow, is a candidate. We have now to notice that he has two not less distinguished opponents in the persons of Dr. Alexander Crum-Brown, Extra-Academical Lecturer on Chemistry in Edinburgh, and of Dr. Maxwell Simpson, F.R.S., formerly Lecturer on Chemistry in the Park-street and the Original Schools of Medicine, Dublin. Dr. Maxwell Simpson has made a very high reputation in the scientific world by papers which have appeared in the German and French chemical journals, in the *Proceedings of the Royal Society*, and the *Philosophical Transactions*. Of these, one of the most important is that on the synthesis of succinic and pyro-tartaric acids, published in the *Philosophical Transactions* for 1861. His processes for the estimation of nitrogen described in his earliest paper are also of great value, and have been incorporated in the last edition of Fresenius's "Text-book of Quantitative Analysis." He is undoubtedly one of the best chemists, especially in the department of organic chemistry, of the day. Dr. Alexander Crum-Brown has also distinguished himself by original work. He has made many valuable experimental researches, amongst the subjects of which may be mentioned the reduction of mucic acid to adipic acid, the action of hydriodic acid on mandelic acid, and the action of ammonia on dichloracetone. He has also, in conjunction with Dr. T. R. Fraser, made some important observations on the physiological action of alkaloids and their derivatives. With three such candidates for it in the field, it is impossible that the reputation of the chair of Hope, and Black, and Gregory should not be sustained in the present generation.

The office of Assessor for the General Council in the University of St. Andrews is vacant, in consequence of the expiration of the term of office of the late Assessor, Lord Jerviswood. At the General Council of the University, held on Thursday last, two candidates, Dr. B. W. Richardson and Dr. Cleghorn, were proposed, and a poll demanded. The election will be conducted by voting papers, which are already out, and the poll will close on April 15. There are three Assessors in the University: one appointed by the Senate, one by the Chancellor, and one by the General Council, consisting of all registered graduates. The three Assessors, with the Chancellor and the Lord Rector, constitute the University Court. The office is therefore of some importance, and if benefits conferred on the graduates constitute a claim on their support, little doubt can be felt that Dr. Richardson will be elected. It is, in fact, through the exertions of the St. Andrews Medical Graduates' Association, of which Dr. Richardson is President, and of which he has been the mainspring, that the graduates of the University are thus represented in its Councils. Dr. Cleghorn, of whom we speak with the highest respect, represents the local interest clustered round the University; Dr. Richardson the graduates of the University, scattered broadcast as they are throughout the three kingdoms. Dr. Richardson's scientific achievements also are of a kind which would entitle him to honour in any university in the civilised world.

Our readers will recollect that in the spring of last year a resolution was passed at a large meeting in Edinburgh to the effect that a large sum of money should be raised for the purpose of rebuilding the Medical Hospital of the Infirmary on its present site. The money has been got together, but in the meanwhile Professor Syme and other authorities have discovered that the present Surgical Infirmary is in a bad situation and insalubrious, and it is quoted by Miss Nightingale as a typical instance of a Hospital where the patients are not allowed the light and air necessary for their recovery. A meeting of contributors to the new Medical Hospital took place on March 19, the Lord Provost presiding, when Mr. Syme proposed—1. That the new Infirmary shall afford accommodation for Surgical as well as Medical patients; and 2. That the new Infirmary shall be built, not on the old site, but on the grounds of George Watson's Hospital. Old Edinburgh students will recollect the "Meadows" where Watson's Hospital is situated, and where nine acres of land can be got for the new Infirmary. The proposal was opposed on the grounds that the removal of the Infirmary would damage the beauty of the city, would separate the Medical School from the University, that the proposed site was damp and ill-drained, and that it would not be an application of the funds to the purpose for which they were collected. Ultimately, however, Professor Syme's motion was carried by a majority of 144 to 50, and there is to be an adjourned meeting to carry out the resolution. To Professor Syme's scheme the great objection seems the separation by distance of the Medical School from the University. All other objections sink before the advantage of planting the great Hospital of the city in an open space at a little distance from its crowded streets and lanes.

Typhoid fever is very prevalent in some parts of St. Marylebone. Dr. Whitmore has called the attention of the St. Marylebone Vestry to the fact, and means are to be taken to limit its spread. The number of deaths from this form of fever registered in the week ending March 20 was 26, but how many of the 16 deaths registered "simple continued fever" and of the 13 assigned to diarrhœa were really due to enteric fever it is impossible to say. Last week the number was—from enteric fever 21, 22 from simple continued fever, and 16 from diarrhœa.

The police reports of last week contained the sequel of a case in which a Doctor's servant was fined forty shillings for driving a glandered horse. That the horse was suffering from glanders was held to have been proved by the evidence of Mr. Sangster, a Veterinary Surgeon. The Doctor, however, has forwarded to the magistrate who inflicted the fine a certificate from Professor Spooner and another Veterinary Surgeon that the horse was only emaciated from extreme age, and was not glandered, but suffering from recent exposure to cold. Some will think, perhaps, that our *confrère* had better have quietly paid his servant's fine.

The case of Heckler *v.* the North-Eastern Railway Company is, we think, remarkable in the history of railway accidents. The plaintiff in this case honestly said that she had sustained no physical damage, no broken bones, no spinal concussion, but that since she had been flung from her seat by the railway carriage in which she was seated going off the rails, she had suffered from hysteria and excitement. She proved this by the evidence of Medical men and others, and the jury awarded her £400 as damages. We have no doubt that the verdict was a well-sustained one, and we admire the honesty of the plaintiff's case; but still a verdict of £400 for hysteria is rather a dangerous precedent.

TYPHOID FEVER IN TRINITY COLLEGE, DUBLIN.

The recent occurrence in Trinity College of half a dozen cases of typhoid fever, one of which unfortunately proved fatal, has led to the appearance, in the columns of the *Daily Express*, of some leading articles upon the subject, and also to a correspondence in which the Provost and the Rev. Dr. Haughton have taken part. Suspicion fell upon the water, and the pump from which the supply of drinking water was taken was ordered to be closed. Whether *propter hoc* or *post hoc*, since that time, happily, no fresh case has occurred. From the Provost's statement it appears that the spring of water formerly used by the residents of the College, and, in consequence of its well-known excellence, by many of the neighbouring householders, failed, and the supply was subsequently taken from a neigh-

bouring well. The report of the College engineer shows that the new well is sunk 20 feet below the surface, and 18 feet below this level through rock. He assigns as the only possible cause of contamination the recent high tides in the river, "which might possibly have affected the water in the well by the penetration of foul water through the strata above the rock." There is no doubt that the state of the river is disgraceful, and it must be highly prejudicial to the health of the parts of the city immediately adjoining the quays, but it is not likely that, unless under very exceptional circumstances, its influence could reach the College, the sanitary condition of which has generally been excellent. We believe, however, that the water of the College has been subjected to chemical analysis, and that its condition has been found to be such as to justify suspicion.

MEDICAL AND SURGICAL TRAVELLING PRIZES IN TRINITY COLLEGE, DUBLIN.

The Board of Triuity College continue their liberal and enlightened efforts for the progressive improvement of the Medical school connected with the University, and for the elevation of the status of the Medical Profession inseparable from the success of their wise measures. It has been officially announced that an examination in practical Medicine and an examination in practical Surgery will be held respectively on June 21 and 24 next, at each of which a prize of fifty pounds, given by the Board of Trinity College, will be awarded. All students who have passed the examination for Medical or Surgical degrees (as the case may be) within the preceding academical year (commencing in Michaelmas term, 1868), may present themselves as candidates. The successful candidates will be required to proceed to Paris, Vienna, Berlin, or London, for the purpose of obtaining three months' Hospital instruction.

THE VOLUNTEER REVIEW.

Our volunteer army on Easter Monday encountered in the weather at Dover an enemy whose tactics were most harassing, and whose temporary success served to bring out into strong relief those defects of organisation and discipline which have justified Lord Ranelagh in the application of the epithet "sham" to the system by which the project which owes its origin to him has been carried out. On these points we must leave those more versed in military matters to decide. There is another, however, on which we feel better qualified to give an opinion, and which struck us very forcibly while the volunteers were recovering from the repulse inflicted on them by the weather. It was evident to us, at a glance, that many of the volunteers did not possess such a degree of physical development as would render them efficient soldiers on a campaign. If the volunteers are to be an auxiliary force in case of an invasion of this country, it is above all things essential that they should be physically fit for all the duties of a soldier. Otherwise they would only add to the embarrassments of all the departments of the army by adding to the list of sick. It certainly appears to us that many a weakly anæmic lad who marched past us as part of the attacking force would on such a day have been much better at home; and we fear that the actual casualties of the day, fortunately very few, if any occurred in the field, will be supplemented by the subsequent effects of exposure to cold and damp. Military zeal, and a desire to participate in the general holiday of a volunteer review—or rather picnic—at reduced railway fares, ought not to be the only qualification for admission to the volunteer ranks. A month's campaign would entail such an amount of physical exertion in carrying the necessary kit in addition to arms and ammunition, and of exposure on sentry duty during day and night in all sorts of weather, as would render a considerable percentage of the volunteers we saw on Monday last, not only inefficient, but an actual burden to others in Hospitals and on the march. We may as well frankly state that we saw nothing of the Medical arrangements for the review. Our natural bashfulness, combined with the surprise inseparable from recognising in warlike panoply shrewd and benevolent features already familiar to us in more peaceful scenes, on suburban roads, prevented us from making such inquiries as to field Hospitals, ambulances, etc., as would have procured us the necessary information.

"THE FAIRY ACTRESS."

Under the above title Miss Lydia Howard, an infant only 5 years old, is advertised as about to perform, for five nights only, in St. James's-hall. She has already attained celebrity as the "Baby Actress," and is now on a professional tour. Most of us can recall with pain instances in which the fond pride of parents has led them to such lengths in cultivating the mental faculties of their children, that it was only when the fatal hydrocephalus carried off their darling, or perhaps a still more lamentable result of their efforts became apparent in the collapse of the budding intellect into confirmed imbecility, that they would admit the necessity and truth of the Professional warnings which they had too long disregarded. When parents or guardians are influenced by the less worthy motives of pecuniary profit, all our remonstrances are still less likely to meet with attention. Nor, indeed, have we much hope in an appeal to the good sense and taste of those sightseers to whom the personal risk of the performers on "trapeze" or tight-rope is only an additional attraction; but we certainly think that, as the Factory Act forbids the too early employment of children in mills, some similar regulation ought to control their exhibition on the stage. It was only the other day, in America, that an infant prodigy, who brought in much gain to his parents by his public performances on the piano, died of convulsions while travelling from one engagement to another.

APPOINTMENT OF MEDICAL OFFICERS FOR THE PARISH OF BIRMINGHAM.

The guardians of the parish have received an official communication from the Poor-law Board in respect to the recent election of District Medical Officers. It is of a highly conciliatory character, and we have reason to believe that the Poor-law Board does not wish to put any obstacles in the way of the guardians to prevent them carrying out their resolution in its entirety. All that the Board insists upon is a guarantee that the poor shall be properly attended to, and that the Medical officers are able to do the work required of them. As regards the latter point, we are given to understand that the five officers who were appointed by the Board stated that they could discharge the duties of their respective appointments, and we ourselves believe that they will be able to do so; but we do not think that they will be proportionately remunerated, for, according to the common principles of equity, it is only fair that if they take extra duties they should receive extra pay. The £50 which has been added to their stipends is only an equivalent of what they have been deprived of in vaccination fees. The proposition which was originally made, and which we are sorry was not accepted by the Board, would have given great satisfaction and have met the requirements of the case. It was to the effect that, instead of £200 a year, the salary should be £240, the stipends of the three retiring officers being equally divided amongst the elected five. This, indeed, would have been a fair rate of remuneration, and would have been nothing too much. Still, even now the guardians have the opportunity of retracing their steps in this direction and of awarding to their officers a just and substantial recognition of the arduous and responsible services which they often render at the very risk of their lives, as the annals of the Poor-law administration, even in their own town, can testify.

FROM ABROAD.—AN ACADEMY WITHOUT ACADEMICIANS—STATISTICS OF LUNACY IN FRANCE—CREOSOTE IN TYPHOID FEVER.

THE scheme broached for the amalgamation of the Medical societies of London into an academy has begun to excite some attention abroad, and one journal asks, Whence are the academicians to come? In truth, this is a very pertinent question, and calls for consideration. We do hope that the projectors of this change will pause before they adopt a title so misleading as that of "Academy of Medicine" would be. That the various societies may deem it expedient to amalgamate for the business purposes of increasing the numbers of their subscribers and diminishing their expenses is quite intelligible, although even this, as regards the progress of Medical science, is at least a questionable procedure in the face of the constant disposition to subdivide into new societies. However this may be, it is evident that the designation of any such amalgamation by the term "academy" would convey an entirely erroneous impression. By this term has always been understood a society of selected learned and scientific men, admission into whose corporation could only be secured by aspirants who had attained celebrity or manifested aptitude in those branches of learning or science which the academy had been established to encourage. The means of testing these may have been different, but the necessity of their existence has always been acknowledged. The danger of allowing these to become too lax has been exhibited in the history of so celebrated a body as our Royal Society—to all intents and purposes an academy—which is even now only just reaping the benefits ensuing upon more rigid scrutiny. The Paris Academy of Medicine is the one such body, so far as we know, if we except its shadow, the Brussels Academy, that has for its sole object the encouragement of the science and practice of Medicine; and admission into any of its sections is rigidly scrutinised, and can only be obtained by those who have distinguished themselves. Indeed, the chief Medical societies of that capital will not admit members without examination of their scientific or practical antecedents. But in the London amalgamation scheme it is proposed that mere payment of subscriptions shall secure admission to membership, while, according to a tariff of prices, a member can belong to one or more sections as he pleases. If such an arrangement is carried out, it will indeed constitute a "breeches-pocket" academy, and will tend much to confirm the prevalent continental prejudice that with John Bull money is all and all, and may do everything. That we have ample scientific *matériel* for the establishment of an efficient Academy of Medicine that need fear no rival, who can doubt? but if this be done at all, let it be done by placing the institution not on a monetary, but on a *de novo* scientific basis. Whether this will ever be desirable, is questionable, but at all events it should not be rendered impossible through its title being forestalled by a body possessing none of the essentials of an academy, and the assumption of the title by which would only make the Profession look ridiculous in the eyes of the scientific world.

The question of the increase of lunacy is exciting a good deal of attention just now in France, as well as the laws regulating the management of the insane, for an examination into which, what we should call a royal commission has recently been appointed. M. Lunier, one of the lunacy inspectors, read a paper at the Academy of Medicine last week, having for its object to show that a more exact examination of the statistics of insanity proves the opinions prevalent concerning the great increase of insanity are exaggerated. He concludes it thus:—1. A superficial examination of the number of insane residing either at home or in asylums would seem to show that from 1835 to 1869 they had almost quintupled in number. Thus there were 16,538 in the former year, or 1 lunatic to 2016 inhabitants, while in 1869 there are 93,271, or 1 lunatic to 412. 2. These results cannot be accepted as exact, for the mode of taking the census of the insane at their own houses has varied much since 1835, while the annexation of Savoy has had the effect of increasing by a tenth the number of idiots and cretins residing at home. From M. Lunier's personal inquiries, it results that the number of lunatics *à domicile* tends rather to diminish than to increase. However, the fact remains that there is in France at the present time at least 1 lunatic to 412 inhabitants. 3. The number of lunatics admitted into special establishments has increased from 10,539 in 1835, to 38,464, having almost quadrupled. 4. The proportion of confined lunatics to the population has risen from 3 to 10 per 1000—*i.e.*, tripled. 5. This increase has continued by from 500 to 600 per annum at first, and then by from 800 to 1831 from 1841 to 1861. 6. From 1862 it has sensibly diminished. 7. The excess of admissions and exits, after having increased from 1835 to 1851, has since sensibly diminished, being only 426 in 1868. The excess, being almost *nil* as regards men at the present time, is still 4 per cent. for women. 8. The increase of insanity has especially shown itself in general paralysis, and insanity arising from alcohol, while cases of idiocy, and especially of cretinism, have diminished.

M. Pécholier, of Montpellier, in a recent note addressed to the Académie des Sciences, stated that, regarding typhoid fever as resulting from an altered condition of the blood produced by an organic ferment, he had been induced to test the efficacy of creosote in its treatment. This he did in sixty cases. The patients took daily by spoonfuls a mixture containing 3 drops of creosote, 2 of essence of lemon, 90 grammes of water, and 30 of orange-flower water, two enemata containing from 3 to 5 drops being also administered daily. In all cases in which the remedy was tried only late in the disease, no effects whatever were produced; but in numerous cases in which the patients entered the Hospital at an early period of the disease, the action of the creosote seemed to be very efficacious in diminishing the intensity of the fever and shortening its duration. M. Pécholier is therefore of opinion that creosote in small doses at an early period of the disease exerts a very considerable effect, and he suggests that it might prove a very useful prophylactic in time of epidemic.

SOMETHING ABOUT ONE OF THE OLD SCHOOL.

R. R. PENNINGTON, F.R.C.S.

THE late Mr. Pennington, who was a fellow-student at St. Bartholomew's with Mr. Abernethy, related to me the following anecdote in the course of a conversation at a very advanced period of his life:—He and Abernethy were dressers at the same time to the celebrated Percival Pott, and each claimed precedence. Pennington was certain that he was entitled to be first, but for some time, in order to avoid a quarrel, gave way to the "pretension" of Abernethy. On one occasion, however, "Johnny" carried his presumption a little too far. Pott was crossing the quadrangle of the Hospital, followed by the students. He was giving a kind of "running clinique" on a case in which Pennington was deeply interested, and, anxious to hear all that was said, he stuck close to the teacher. "Abernethy came up and absolutely elbowed me out of my position. I then found it was time to put a stop to his impertinence, particularly as the insult was given in the presence of so many of our fellows. I took no notice of it at the moment, though the circumstance did not escape the observation of Mr. Pott. Immediately on the conclusion of 'the round,' I made up my mind to act, and accordingly, in the presence of a number of students, I addressed Abernethy—'Jack, this won't do; I have given way to you too long, and for the future you must be content to play second fiddle.' Abernethy began to bluster, and said—'I'll be d——d if I do!' At that time disputes of the kind were settled in a summary way, and I immediately prepared to assert my right by an appeal to

the fist. The place of combat was in the corner of the ground which is near to the anatomical theatre, and thither we repaired, followed by our anxious and admiring *confrères*. I took off my coat and prepared for action. Jack did not follow suit, and began, like Bob Acres, to show unmistakable symptoms of not coming to the scratch. In fact, he declined the ordeal of battle, and I was for the future first. We were closely associated for nearly fifty years afterwards, but we never had an angry word. Dining with him some forty years after in Bedford-row, the old quarrel between us accidentally cropped up. 'Well,' said Abernethy, 'the truth of the case was this—the moment I saw you uncover your biceps, I was certain I should be thrashed, and so, my boy, I surrendered at discretion.'" Pennington was a great physicker, and has often been called the originator of homœopathy. However this may be, he was in the habit of ordering three, four, or six draughts a day, to be "continued" until further orders. These repetitions amounted, on an average, to one hundred a day, and his Dispensary in Keppel-street, behind his house in Montague-place, was a regular manufactory of physic. The boys who "took out the medicine" were furnished with a string and hook, and the parcel was let down into the area by this simple mode. When orders were given by the patient that no more medicine was required, the fact was duly announced in a book kept for the purpose. "Ah!" said Pennington, "I see I must change the medicine; I will call to-morrow." He did so, changed the colour of the dose, and the repetition was ordered for three weeks. In those days this was regarded as orthodox; but chiefly in respect to the "tip-top apothecary." But then Pennington attended eleven out of the twelve judges, and could do pretty much as he liked. In proof of this I may mention a circumstance which was related to me by a gentleman who at the time was one of his dispensing assistants in Keppel-street. This gentleman some years since retired from general practice on account of ill-health, and is now deservedly high in the Profession as a dentist. The late Lord Wynford, then Serjeant Best, was subject to severe attacks of the gout. The serjeant was irritable, and Mrs. Best anxious and nervous. When she wished to see Pennington about her husband, she used to lie in wait for him in Keppel-street, and follow him into his dispensing establishment. Here she would stay with wonderful patience until he had finished his entries. On one occasion, says my informant, Mrs. Best looked up imploringly to "the great man." "The serjeant is very bad," said his wife, "in great pain." "Well," said Pennington, "what am I to do? I saw him yesterday; let him go on with his medicine." "But do tell me when you will kindly see him again." "Well," said he, "I will tell you to a minute. I will see him this day six weeks at 25 minutes to 12." But Pennington, however much he enjoyed a joke, did not carry this one out. He was at Best's house the next morning before breakfast. Pennington boasted that he had never worn a great coat in his life; nay, more, in the coldest weather you might see him in his pumps and silk stockings, for to the last he was proud of his "leg." "Ah," he said to me on one occasion, "I am not such a fool as to neglect my creature comforts. I am clothed in flannel underneath, and have a pair of lamb's-wool stockings under the silk." I may mention here, *en passant*, that the late Dr. Clutterbuck, who lived to nearly 90 years, and then succumbed to an accident, used to boast that nobody had ever seen him wear an outer coat, but he wrapped up almost like a mummy underneath.

Pennington's practice was large and laborious, and, in addition to seeing patients in town, he was frequently called upon to pay visits in the country. These he always managed to make at night. He would, after a hard day's work, take a warm bath, and travel in a post-chaise all the night, getting home in the morning sufficiently early to see his home patients. He had a vigorous constitution, and could sleep almost anywhere. It is said that Pennington made £10,000 a year for many years by Physic. At all events, he accumulated a very large fortune. He sold his practice to Mr. Hillier, who, however, did not succeed in keeping it together. Pennington was a thorough man of business, and did not attend the societies. He was, however, very sociable and hospitable. When the National Association of General Practitioners was instituted, he was elected president, but he was then an octogenarian and did not display any of his former energy or ability. He was not a man of much acquirement, but he was possessed of a large amount of good common sense, had considerable power of diagnosis, and was most successful as a prescriber. He was a remarkably handsome man, with a fine presence and a manner which inspired confidence. He was in harness to the last.

J. F. C.

AMPUTATION OF A LEG BY LIGHTNING.

By Dr. SYCYANKO,
Professor of the University of Cracow.

Flor, a boy aged 12, who suffered from anchylosis of the right knee, with flexion of the leg upon the thigh, which had obliged him to use a crutch since he was five years old, was riding in the fields, when he was overtaken by a violent storm. A loud peal of thunder caused the horse to run away, and the child fell stunned to the ground. On recovering consciousness, he tried to rise, but found that his right leg was missing. His uncle, who up to the moment of the accident was with him, and his horse, had also disappeared, and from exhaustion he soon fell asleep. His uncle having, after some time, caught the horse, came back, and found his nephew sleeping, and to his horror discovered the mutilation. The coat and shirt of the wounded child were torn and burnt almost to the seams, and hence his body was covered with dry scars of different sizes. His uncle put him into a carriage, and conveyed him to a village. The poor child suffered acute pain in the wounded leg, and there was some hæmorrhage from it, which, however, spontaneously ceased. About a week after the accident Dr. Rogowitch examined the wound. He found the surface like that of an ordinary amputation, having fleshy granulations at the circumference, while in the centre the tissues presented a gangrenous appearance. The division of the parts had taken place at the upper extremity of the tibia, leaving the patella and the femur intact; the wound was perfectly round; the border was very regular, and its surface flat. The pain soon diminished, and cicatrisation took place under the ordinary treatment.

The lost leg was found after some days, not far from where the child fell. It had a mummy-like appearance, and gave off hardly any odour. The bones were perfectly black, and laid bare from the point of section halfway down to the foot.

Dr. Sycyanko explains the concentration of the power of the lightning on the knee by two causes, one long known, the other now first noticed by himself.

First Cause.—The density of the current in a homogeneous galvanic chain is the same at all points; but it varies from point to point in a chain composed of bodies not possessing the same conductibility. Thus, for example, when we have a chain formed partly of metallic wire and partly of intervening chemical bodies, an electrolysis is produced in the latter, by which the quantity of the bodies that is decomposed is proportional to their equivalents, while in each of the metallic parts an elevation of temperature takes place proportional to the resistance which the current encounters. When the resistance is much greater at one point than elsewhere, the result is a mechanical division or separation of the parts which offer the strongest opposition to the current. The cause of this phenomenon is due to the property which the current possesses of reducing to a straight line two straight conductors which unite in an angle, consequent on the repulsion which takes place between the two sides of the angle. The stiff knee of the poor child had been broken and amputated in consequence of such an electric action.

Second Cause.—Much has already been ascertained regarding the variable conductibility of the different tissues of the bodies of animals, but no one has made similar observations regarding the conductibility of morbid tissues. From several observations, Dr. Sycyanko is prepared to state that the conductibility changes in morbid tissues. He has proved especially a notable diminution of conductive power in diseased joints. A current from a battery of twenty zinc and carbon plates passing through a healthy leg gives with Siemen's multiplicator a deviation of 15° or 20°, while thirty pairs of plates in a diseased knee give a scarcely appreciable deviation. Anchylosed joints commonly offer an increased resistance to the galvanic current, in proportion to the stiffness of the joint.

In the present case, the anchylosis of the child's knee was at a very acute angle. A strong electric current passing through his clothes burnt them, while his body, being a relatively good conductor, did not suffer much; but the knee-joint, offering a great resistance, was obliged to submit to a mechanical separation of its parts from the causes described above.

Dr. Sycyanko explains the circumstance of the child's not having been killed by so violent a shock, by the fact that he was not struck by the current coming down to the earth from the clouds, in which case his head could not have escaped, but by a current ascending from the earth to a cloud charged with electricity—the *choc de retour* of French physicists.

REVIEWS.

The Alleged Increase of Lunacy. Being a Paper read at the Second Quarterly Meeting of the Medico-Psychological Association, January 28, 1869. By C. Lockhart Robertson, M.D. Cantab., F.R.C.P.

The man who succeeds in dispelling a widespread popular error deserves the thanks of the community, especially when the error is such as to give rise to popular alarm and to inferences calculated to throw into discredit the progress of civilisation. The fallacy which Dr. Robertson has set himself to overthrow in this paper is that, as our civilisation has advanced with rapid strides during the last quarter of a century, and as we have been living faster than our fathers, so has insanity been gaining ground amongst us. *Primâ facie*, this supposition has some basis in fact, for whilst the known lunatics in England and Wales in 1844 were 1 in 802, in 1852 1 in 691, and in 1858 1 in 544, they amounted in 1868 to 1 in 432. The fallacy of inferring an increase of lunacy from these figures lies in ignoring the existence in the earlier periods of a vast number of unknown and concealed lunatics which successive legislative efforts and the increase of national provision for their proper care have brought to light. Dr. Robertson has shown, by a discriminating use of the statistics of asylums, that the increase observed has been solely among the class of pauper lunatics, the known number of whom would naturally be increased as a result of the extended legislation on their behalf, the number of private patients in asylums remaining nearly stationary. He further shows that the increase is in a yearly decreasing ratio. This at any rate is satisfactory, for it proves, in connexion with his other observations, that we are in progress of arriving shortly at the full provision which is needed for the pauper lunatics of the kingdom. But another view of the subject gives us still greater satisfaction. The numbers referred to are those of the asylum population of the country. "Of every 100 patients admitted in a given period into an asylum, it is evident that a certain number must remain over to swell the numbers—viz., the difference over the discharges and deaths. . . . In examining the official returns of these years (1858-68), the remainder is found to be in round numbers 10,000, or, as nearly as possible, the increase in the numbers of the English asylum population during the same period. . . . Of every 100 patients admitted during the decennium 57·4 were discharged, 30·8 died, and 11·8 remain in the asylum. The increase in the population of the English asylums during the decennium 1858-68 was 10,421; the difference between the discharges and deaths is 10,806, and represents, therefore, the whole of the increase. I might almost herewith conclude my remarks, and say that I had now demonstrated that no increase of insanity, as tested by the numbers in English asylums, has occurred in this decennium." The author refers also to the statistics of lunacy in France as confirmatory of the results he gathers from those of our own country.

Histoire des Inhumations chez les Peuples Anciens et Modernes. Par Dr. Favrot. 1868. Paris: Libraire Internationale. London: Williams and Norgate.

It is by no means improbable that the appearance of this interesting volume is in some measure due to the recent threats of Baron Hausmann regarding the cemeteries of Paris. In its connexion with social science, the question of "What shall we do with our dead?" claims the attention of every Physician, and from this volume we can readily ascertain how in different times various nations disposed of their departed relations. Of those who neither burned nor buried their dead, some (as the Bretons and early Irish, the inhabitants of Pontus in Asia Minor, and of Venezuela in South America) ate their friends roasted, in soup, and otherwise; others, including the Asiatic nations conquered by Alexander the Great, abandoned their sick in deserts and forests to birds and beasts of prey; while others, like the modern Hindoos, entrusted their dead friends to the rivers. From time immemorial to the present day certain tribes in the Caucasus have suspended their dead to the top branches of the highest trees, while in Thibet the dead are sometimes exposed on mountains and sometimes divided into small pieces and given to the dogs, the latter being the most popular course. The author believes that these and several other remarkable modes of disposal of the dead may be traced to a general view in olden time that man consisted of a perishable material, the body, and of an immaterial and indestructible part, *the soul*, and with this feeling death was regarded as a deliverance rather than as a calamity. Human life, according to their simple creed, was merely a perpetual transmigration of the soul through different forms of animated matter.

The incremation or incineration of the dead as it was practised amongst the ancient Romans, Greeks, and Hebrews, is next considered, and this is followed by a history of the process as it has more recently been, and is now, performed in Mexico, Florida, the Sandwich Islands, Tartary, Japan, Siam, Hindostan, Ceylon, etc. The subjects of embalming, mummification, hypogeæ, etc. in ancient Egypt are next discussed; after which the author treats of inhumations or true burials, first as occurring amongst the ancients, and secondly amongst modern nations. Both of these sections abound in interesting details on these subjects, and we trust that the following brief description of London funerals affords a hardly fair specimen of their accuracy:—"In London the bodies, forty in number at least, are placed like parcels in railway vans, and conveyed to the place of interment, where they are met by their parents and friends. A single service is read for all in the chapel." (P. 196.)

The work concludes with "General Considerations," which include, amongst a variety of subjects, such topics as premature funerals, the laws bearing on funerals (in France), the uncertainty of the signs of death, the means of warding off decomposition, measures for preventing cemeteries from becoming foci of disease, and proposals for entirely modifying the French system of cemeteries. We will only notice one of these subjects—namely, premature funerals. It may be in the recollection of many of our readers that this question was discussed about two or three years ago by the French Senate, when many striking examples illustrating the uncertainty of the signs of death were recorded, and when especial interest was naturally excited by Mgr. the Cardinal Donnet's narration of his own providential escape. A reference is here made to most of the remarkable cases that were then brought forward, several of which, so far as we know, occurring so late as 1866 and 1867, could not easily be found except in these pages. A Government document, resulting from this discussion, entitled "Measures for the Prevention of Premature Burials," and dated December 21, 1866, is given at length, and contains an excellent practical discussion on the relative value of the ordinary signs of death, as well as admirable rules for the prevention of too hasty interments. Those who take an interest in sanitary matters will read with interest the author's proposal for a new *champ de repos* for Paris, which is intended to replace all the existing cemeteries. We are indebted to Dr. Favrot for a very instructive volume, which must have been the result of enormous reading.

The Increase of Material Prosperity and of Moral Agents compared with the State of Crime and Pauperism. By J. H. Elliott, Esq. (Read before the Statistical Society, June, 1868.)

The bluff, sturdy Anglicanism of the Drake and Hawkins school which pervades this paper is perfectly refreshing. The writer puts the question—How is it that, with a much greater relative supply of all that goes to make up material prosperity, with the increase of schools and churches and chapels, with improved sanitary arrangements, with more temperate habits and better social manners among all classes of the community, we meet with so great an increase as statistics exhibit in violence, crime, and indigence? For these things are calculated, if their work were not somehow disturbed, to produce a *decrease* in moral disease, crime, and misery. The reply which he makes may be gathered readily from the pages before us. The disturbing causes are improvidence in the multitude, and an unreasoning sentimentalism in the upper and governing classes, which interferes with the administration of the criminal law and prison discipline, and indulges in an inconsiderate multiform charity. This paper deserves an extensive circulation; its perusal might shock some Ladies Bountiful and not a few of our modern philanthropists, but would do them good for all that. It is not often that we find dry statistical details dished up in so digestible and palatable a form.

Baron Reichenbach.—This nobleman, so famous in the days of animal magnetism as the inventor of the "Od" theory, and far more usefully known as the discoverer of creosote and paraffin, has recently died at an advanced age at Leipzig.

FOREIGN AND PROVINCIAL CORRESPONDENCE.

FRANCE.

LETTERS ON THE SOUTH OF FRANCE.—No. II.

CANNES, March 29.

"THE stranger in the South is surrounded by a net of conspiracies—conspiracy between his cook and his butcher, conspiracy between his courier and his grocer, conspiracy between the police and the thieves, conspiracy between the administration and the public press, conspiracy between the stranger's doctor and the apothecary, between his doctor and his landlord." So I wrote in my last letter. I will now give a few anecdotes concerning this matter. If they be not all true—I am not able to vouch for every one of them—there nevertheless is nothing improbable in them.

About six years ago I came to Cannes in a miserable state of health, a pitiable victim of Medical ill-treatment. I was addressed to a Polish doctor. Now, in looking out for a dwelling I was ready to fix on a house in the town, wishing to be near the fish market in order to make a collection of fishes. I consulted my doctor about this house. He strongly advised me to take it for the winter. The first hours all went right; but in the evening a fearful noise began, and did not end till far in the night. At four o'clock in the morning a still more fearful noise began, and disturbed my incipient sleep. The first noise was the effect of a microscopic *cabaret* adjoining to the house, and which, by the means of absinthe and vermouth, caused regularly every evening a very unpleasant gaiety in my neighbourhood. The second noise proved to emanate from the market, which was opposite my door, and, according to Mediterranean customs, was very matinal, and enlivened with an inharmonious concert of loud hoarse voices. I was soon aware that the town of Cannes itself is for invalids totally uninhabitable. But my doctor must have known this. Why did he not warn me? The fact is simply this, that the doctor was on intimate terms—in the most Platonic sense of the word (I hope so for the taste of the doctor)—with the lady of the house, and that in the good-natured man his feelings of friendship had the upper hand over his feelings of justice. I must confess that worse motives than this have served as the basis of conspiracy between a doctor and a landlord.

Here is an anecdote of another kind. I had scarcely arrived at Cannes when I made a reputation among those who surrounded me. It was not a very good one, yet not a very bad one. It was, in fact, the reputation of consuming an extraordinary quantity of coffee. My conscience, however, acquitted me of any extravagance in this matter. The case was thus:—A grocer in this place had the generous custom of giving a premium to every servant who purchased a certain quantity of coffee. The consequence was that my faithful *ancilla*—a remarkably ugly and devout woman, with a museum of relics about her—made for me the reputation of an enraged coffee drinker, and took for herself the double profit of the coffee which I did not use and the premium. Here is another trick of the same interesting character. Notwithstanding my care in stamping my letters, I was constantly annoyed by complaints about my letters being insufficiently stamped. The stamps destined for my letters had been confiscated—*in majorem Dei gloriam?* If the relics had any salutary influence on the morals of my servant, I shudder to think what she would have been without them.

I go back to the conspiracy between doctors and landlords. To some people, it seems, few things are more dreadful than the idea of being in a house where there is a corpse. The landlords and hotelkeepers of the South, therefore, take the most scrupulous care to conceal the chance presence of a corpse in their houses, and get rid as soon as possible of such burdens. It not rarely happens that the body of a person who died, or is supposed to have died, in the evening is the same night dragged off the stairs and removed out of the hotel in spite of all remonstrances of his family. A landlord told me himself that, an invalid having died in his house, the doctor came next morning, went into the room of the defunct, and behaved quite as if the man was still alive! "Had I not done this," said this man, "all my guests would have left me." Which is more to blame, the conspiracy or the over-sensitiveness of the guests? I do not know, but I think that, if I was a Practitioner, I should not have lent myself to such a comedy. The administrations of the different localities are not over-scrupulous in the way of making those places flourish. Some years ago the report was spread that cholera reigned at Nice. An Englishman, wishing to stay the winter at that place, thought it prudent to ask the Maire of Nice about the truth of this report. The Maire (*parole d'honneur*) declared there was nothing of the kind. The Englishman went to Nice; scarcely settled, his wife and child died of cholera. They were not the first cases. Our public papers not only keep silent on the reigning epidemics, but, if necessary, deny them on Medical authority. Such was done at Cannes with regard to the cholera some years ago. If you ask Medical men, they will tell you that such things are done in order to prevent a panic.(a) And perhaps they themselves believe that they really do it for that purpose. However this may be, if they were not interested in doing so they would perhaps be convinced that the effect of a panic is not so noxious as it seems, and that a panic has always this good, that it induces people to take proper care. In this case also they would understand that their system of lying not only is an injustice to the public, but necessarily undermines the credit both of their Profession and of the periodical press.

The town of Antibes, between Nice and Cannes, seeing the increased prosperity of its neighbours, came to the conclusion that its climate was as good as theirs, and began to make pretensions to the title of a *station d'hiver*. To attain this object, some inhabitants of this town set up a paper. The editor was known to me, and begged me to favour his paper with a few articles. I instantly put the pen at work, and wrote him a few lines on the South—lines in which I expressed the view that mildness of temperature was not the chief hygienic agent of this climate. The same view is expressed in the last published number of Virchow's *Archiv*. How great my astonishment was when my article was printed! My ideas were rendered, but, like rays in a focus, they admirably converged into a splendid eulogium of the wonderful town of Antibes. Now, I do not like to express an opinion of things which I know so little about as is the case with Antibes. I therefore wrote a protest, and begged the editor to put it into his next edition. In flagrant opposition to the French law, the man did not print my protest. Instead of this, with an enviable *naiveté*, he communicated to his readers that, in the haste of the correction, part of another article had found its way into mine.

A fertile source of deceit and extortion is the custom of embalming corpses. A doctor having been charged to take care of the embalmment of a corpse, charged in his turn an apothecary with the business. The conditions were that the doctor should ask 1200 francs from the patient's family, and give the half to the apothecary. But, in fact, he asked 1600 francs from the family. The apothecary having made known to them the former arrangement, they became uneasy, and told another doctor of it. This doctor, however, declared that 1600 francs was a theft, and the embalmer obtained only 1200 francs. The interesting point of this matter is that the doctor who had declared 1600 francs a theft, had, some years ago, himself asked some thousands of francs for an embalmment. So with one thief you catch another.

A sad thing to say is that even the clergy in the Midi do not always give a good example of sincerity. Last year, the Catholic Curé of Cannes held a bazaar, in order to get money for a church. Now, had he said plainly that his object was to build a church, Protestants would scarcely have contributed. He therefore employed the ruse of announcing the bazaar as *vente de charité*. English people, always ready to give where poor people are in question, did not this time belie their ordinary generosity, and so the object was gained.

From these anecdotes I conclude that the invalid in the South should throw off all credulity, that essential character of barbarism, that he must not believe what is said to him by the inhabitants and the local papers, that he should be very sceptical in regard even of his doctor. The invalid should get the necessary information in his own country before he starts, and in the South itself he should take no decision without careful examination. In taking his dwelling he should look at the neighbourhood, at the windows, at the chimneys, at the walls, at the people. In those things he should be guided by his own eyes, and by the general indications given in good books of hygiene and therapeutics. I hope to give in my next letter some scientific remarks on the South.

(a) The dread of panics in these matters, I think, is very much exaggerated. If the influence of panics were so great, how would an epidemic ever cease? For just at the moment the illness is at its apogee, the panic also is the greatest. Besides, I have seen striking cases from which I conclude that neither the weakest nor the most frightened people are the easiest attacked by cholera.

IRELAND.

March 29.

At a meeting of the Dublin Obstetrical Society, held in the hall of the King and Queen's College of Physicians, on Saturday evening, the 20th ult., Dr. Evory Kennedy read one of a series of papers he is about to publish on zymotic diseases in general, and on puerperal fever in particular as a type of the class. These communications are intended as a continuation of a paper read by him "On Purpuric Puerperal Fever" before the British Medical Association in Dublin, in 1867. Few Physicians have had as extensive experience of this subject as Dr. Kennedy, and his observations will consequently demand the earnest attention of the Profession. We shall, therefore, endeavour to present our readers with the leading points in his recent communication.

Dr. Kennedy commenced with an estimation of the proportion of general zymotic mortality, based upon the tables furnished by London and the other great cities of England. This he stated to be between one-fourth and one-fifth of the gross mortality, and he remarked that it might further be asserted for argument's sake that zymotic diseases result, in nine cases out of ten, from preventible causes. Hence it follows that by the prevention of these causes the mortality may be reduced one-fourth minus one-tenth. It would be quite possible to offer a proximate calculation of the diminution of morbility under such a reduction of mortality; but the misery, suffering, distress, and poverty to be prevented by such a consummation would be beyond human calculation. The condition necessary to such results is the acquisition of an accurate knowledge of the principles that regulate the development and spread of each disease of the zymotic type, or, at least, of those laws which regulate its primary occurrence and subsequent growth. Whether the difficulties which invest the detection and analysis of the subtle poisonous miasm, and which have for centuries hitherto baffled the efforts of Physicians, are to continue unsolved, is a question within the womb of time. But although the miasm or germ has hitherto escaped our detection, as recognised by its sensible qualities, its existence as an entity or primary principle is universally admitted. The laws that regulate its development and spread are within the scope of our observation, and we know and can handle certain morbid solids and fluids in which the poison may be said to possess at least its habitat, if not its essence; witness the lymph of cow-pox, the pus of small-pox and of syphilis, the cutaneous powder of scarlatina, etc.

In the first place, are we to ascribe the different zymotic poisons to a common principle, modified by a variation in natural or physical circumstances or conditions? The fact that diseases of the zymotic character prevail so frequently at the same time would appear to support this opinion. Their being traceable to the same sources would further tend to corroborate it, and although they assume very distinctive characters in their development, yet the same observation holds in the varieties observable among diseases which belong unmistakably to the same genus, showing that they, at least, have been due to a common origin. With the occurrence of metria in Hospital, after other zymotic diseases have either accidentally or endemically shown themselves, all Hospital Physicians are familiar, so much so that they look with the greatest apprehension to the result when either typhus, scarlatina, or erysipelas occurs in their maternities. So frequently has metria shown itself afterwards, that it is now no longer esteemed an accidental *post hoc*, but that these diseases stand in the relation of cause and effect. This fact alone goes far to confirm the idea of a common poisonous principle or miasm. Should the principle of isomerism, which has of late attracted the notice of our chemists and professors of physical science, come to be established, the difficulties in the way of adopting the idea of a common morbific poison would be lessened, as the poisonous principle, which we might denominate zymotosine, would then be classed as an original polyatomic molecule or principle, and would fall strictly within Dumas' definition of what he terms Polymorphism—namely, "one of those variations in the arrangement of integral molecules of a body which influence its physical properties either temporarily or permanently." There is nothing at all unreasonable, therefore, in supposing that, as in the case of polymeric or polymorphous hydrocarbons, we may also have the germs of different diseases produced by polymeric combinations in the same elements.

To descend, however, from the consideration of these general principles to the special subject with which we are more immediately concerned—puerperal fever. This zymotic disease prevails endemically in crowded Hospitals, where it is to be seen in its greatest virulence, and exhibiting its most concentrated fatality, although it is to be met with also in the hovels of the poor and in the chambers of the wealthier classes—when epidemic, showing itself generally in our great Maternity Hospitals in the first instance, but not confining itself to them. Like typhus fever, cholera, scarlatina, and erysipelas, it prevails epidemically, and like them it is contagious.

The difficulties which beset Medical men in investigating the epidemic and contagious nature of puerperal fever were simply expressed by the late Dr. Collins, when, after detailing its prevalence in the early years of his Mastership of the Dublin Lying-in Hospital, and the success of the steps taken by him to lessen it, he adds, "The facts here detailed are strongly calculated not only to lead us to suspect, but even to prove, that this fever derived its origin from some local cause, and not from anything noxious in the atmosphere. To this I should assent," he continues, "had we not proof equally well authenticated of its prevalence and fatality in the houses of the affluent, as already stated." If the views we have arrived at, and which we now venture to propound, with regard to the true nature of the poisoning in these cases, be correct, then the contagious and the sporadic nature of puerperal fever will be perfectly reconcilable. Collins's paragraph above quoted contains the gist of the puerperal fever difficulty in a nutshell. Its local cause approaches more nearly to a constant quantity in the wards of a crowded Lying-in Hospital, whereas it is only an occasional quantity in the houses of the affluent, and the sole influence exercised in its production by the atmosphere is, that in certain states of the latter the constant and occasional quantities become more operative or active in generating or propagating this dreadful malady—a malady thus zymotic in its type and origin, produced by a poison emanating from parturient women, more active in proportion to the concentration of their excretions or exhalations, and consequently in proportion to their number cohabiting in a given number of cubic feet of atmospheric space, but not requiring more than one parturient female to generate it when the poison she herself has generated may, as in the case of blood-poisoning, be reabsorbed into her own system, and self-contamination then strike her down as certainly as if a crowded, ill-ventilated lying-in ward were the generating medium. The most striking parallels that we are acquainted with of the generation and development of diseases under similar conditions are the gaol fever (now fortunately seldom met with), erysipelas in Surgical Hospitals, cholera in our camps and overcrowded human gatherings, and tuberculosis as observed among the poor workpeople in Paris and other crowded cities—a fact that has given rise to the idea that phthisis should also be classed with zymotic diseases. Glanders, too, a purely zymotic disease, produced by crowding horses together in ill-ventilated stables, supplies us with a further example.

Dr. Kennedy proceeds to draw a very practical distinction between peritonitis and metritis in the pure form, as they are occasionally seen to occur unconnected with deliveries, and puerperal fever or true metria, the former partaking more of the character of local inflammation without zymotic indications. These are the cases that will bear depletion best, and the use of the lancet is too much neglected in them. Twelve to eighteen ounces of blood extracted from the arm, followed by the application of eighteen or twenty-four leeches, will often relieve and subdue all inflammatory symptoms, and the pulse, from being hard and contracted, as in ordinary peritonitis, will rise to a more rounded resistance under this treatment. In true metria we have, on the contrary, the characteristics of blood-poisoning—the shrunken features, the depression, the unmistakable expression of countenance in which the practised obstetrician cannot be deceived. Here the use of the lancet is rarely admissible; local depletion must be our sheet-anchor. But, in having recourse to it, the secret of success is to reduce the pain by repetition of the leeching before reaction has had time to establish itself. There can be no doubt of the efficacy of mercury when its specific effects can be produced, but in the worst cases there is not time for this, and, indeed, the system seems to be insusceptible of it. This has sometimes led Dr. Kennedy, when the supervention of peritonitis or metria is to be dreaded—as when the disease is prevalent, after manual interference in labour or for the removal of the placenta—to commence, immediately after the completion of the labour, a mild preparatory mercurial course, as a grain or half a grain of grey powder every third or fourth hour, which can subsequently be pressed more freely if metria or inflammatory symptoms should arise. In metria, further, while our efforts are directed to subdue the local inflammation, the strength

must be supported, and nutritious broths, jellies, milk, and farinaceous food should be administered as freely as the stomach will bear. Stimulants, too, must be judiciously employed, and, while their effects should be carefully watched, their administration should be neither too sparing nor too long delayed. In a form of the disease described many years ago by Dr. Kennedy, in which the symptoms of marked collapse and exhaustion set in early, accompanied with tympanitis, showing, from the very commencement, an exaggerated train of symptoms, sunken countenance, small, rapid, and compressible pulse, but sometimes without a corresponding amount of abdominal pain, stimulants cannot be commenced too early, and can scarcely be administered too freely. It is in this form that the turpentine treatment best agrees. This variety seems to be one in which the intensity of the poisoning and the extent of the inflammatory lesions bear no relative proportion, or rather are found in an inverse ratio to one another.

Dr. Evory Kennedy concluded his highly philosophical and valuably practical communication with some observations upon the variety of the disease denominated as traumatic metria, and also upon that which appeared in an endemic form in the Dublin Lying-in Hospital in December, 1837, during his Mastership, and carried off, between that and the month of April, 1838, no fewer than thirty-five patients. This is the form described by him at the Dublin meeting of the British Medical Association under the designation of "puerperal purpuric fever."

REPORTS OF SOCIETIES.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

SATURDAY, MARCH 20, 1869.

Mr. LIDDLE in the Chair.

DR. VINEN read the following report:—

"In pursuance of a resolution of the Association at the meeting held on January 16, a letter was addressed to each Metropolitan Officer of Health asking him to furnish certain particulars in reference to the epidemic of scarlatina during the year 1868. A request, in the name of the Association, was also made to the Medical officers of public institutions and to those engaged in Poor-law Medical practice for their co-operation by contributing similar information, to facilitate which printed forms were prepared and forwarded.

"Answers have been received from fourteen districts only, comprising the returns of twenty-seven public institutions and parochial districts. From these limited returns comparatively little information of the causation, progress, or localisation of scarlatina can be gained. The chief facts elicited are the following:—Returns were received from eight out of ten of the parochial districts of the City of London. In three of these no cases occurred; in the other five there occurred 67 cases and 12 deaths; in the Bishopsgate district there were 18 cases and 5 deaths; in two districts of the West London Union, 36 cases and 7 deaths, leaving but 13 cases, none of which were fatal, in the other districts. In one of the districts of the West London Union nearly all the cases are reported as having been followed by albuminuria. Heart disease, dropsy, and pneumonia were also frequent sequelæ.

"Returns were received from the Regent's-park, Camden-town, and Gray's Inn-road, forming three out of the six Poor-law districts of St. Pancras. From the three other districts no returns were sent. In these three 184 cases occurred; 14 of these only are reported as having been fatal, but 236 deaths actually took place in this parish from scarlatina.

"In the Poor-law practice of Chelsea 197 cases were reported, but there were no means of estimating the number of deaths amongst them. Between 130 and 200 cases were treated at the Chelsea, Brompton, and Belgrave Dispensary, amongst which were 12 deaths. The total number of deaths from scarlet fever in the parish was 162. The disease did not affect any particular locality, but was spread generally over the district.

"From the parish of St. George, Hanover-square, a return was made of 230 cases treated at St. George's Hospital and three Dispensaries; no return was made of those treated by the Poor-law Medical officers. The total number of deaths was 77, but the proportion which occurred amongst the above 230 cases was not stated.

"The returns from St. Marylebone include the out-patient paupers of the Rectory district and eight Dispensaries. A total of 588 cases were treated. Dr. Whitmore reports it to be impossible to ascertain the number of deaths amongst these, but 109 deaths from scarlet fever took place in the entire parish. In the in- and out-door practice of the Hampstead Dispensary and Poor-law practice there were 33 cases and a total of 7 deaths. In the parochial practice of St. Giles and Bloomsbury 19 cases and 3 deaths occurred: in the Bloomsbury Dispensary 46 cases were treated, 8 of which were fatal. The whole number of deaths from scarlet fever in the district was 71. In the parochial practice of the Whitechapel district 54 cases occurred, and in the Eastern Dispensary 20 cases and 3 deaths. In the entire district 40 deaths took place. In the district of Bow and Bromley 44 deaths were returned, number of cases not stated. In the western district of Mile-end Old Town 48 cases occurred, among which were 3 deaths. The first case appeared in April. There were no deaths until the last quarter of the year. No particular locality was affected. In the outdoor Medical practice of the Hackney district 37 cases were treated. The whole number of deaths in the district from scarlet fever was 52. The Poor-law Medical officers of Lambeth, in a population of 180,000, treated 205 cases; amongst these 20 deaths took place. In the entire parish scarlatina caused 192 deaths. The disease in most cases was traceable to infection, and affected the well-to-do classes more than the poor. In St. Mary, Newington, 56 cases were treated by the parochial Medical officers. The number of deaths among these was not ascertained. In the whole parish scarlatina caused 76 deaths. No grave sanitary defect was discovered in any house in which the disease occurred. In the district of Eltham 5 cases appeared, none of which proved fatal. 53 cases of scarlatina are reported to have taken place in the Greenwich district, but in what Medical practice is not stated, nor the number of deaths. The cases occurred pretty equally among rich and poor. The greatest mortality took place in the low-lying districts and amongst the poorer classes. 9 deaths were caused by scarlatina in Rotherhithe; the number of cases was not stated. St. Olave's 7 deaths, cases not known. It will be readily seen how difficult it is to glean any satisfactory information from these returns. In some districts the deaths only are returned, in others the deaths exceed the number of cases, as the entire mortality from scarlatina is stated, while the number of cases refer in a few instances to the whole, and in others to a part only, of the parochial practice, with or without some of the dispensary patients. The total number of cases returned is 1788, of deaths 1088. In four instances only the deaths occurring amongst a given number of cases were stated—these were 476 cases and 46 deaths, being 9·7 per cent.

It appears, also, that in many public Medical institutions no record of the cases treated is kept. Dr. Letheby states that in the City there are several Dispensaries, but they have either not had any cases of scarlet fever, or that no record is kept of them. Mr. Liddle states that there are two Dispensaries in his district, in one of which no records are kept. Mr. Pink, of Greenwich, says that the records kept by the six Poor-law Medical officers of his district will not bear investigation. Dr. Barclay draws attention to the extreme inefficiency of the parochial returns as indicating the course of the disease, and in my own district of St. Olave no information can be gained from the books of the Medical officer to the Union, the cases not being entered. This fact, therefore, is apparent, that in many public institutions no accurate record of disease is kept. With regard to the period at which the epidemic commenced, the returns seem to indicate the beginning of the third quarter of the year, and shortly afterwards the mortality began to show an increase, the maximum being reached towards the close of the year. This statement accords with the return of the Registrar-General for 1868, the deaths in London from scarlet fever being in each quarter respectively 368, 352, 738, and 1463—2921. And here the question may arise as to whether this high mortality might not have been prevented had there been any recognised and reliable return of sickness periodically published. The first intimation we now have of the prevalence of any disease is through the mortality tables of the Registrar-General, when death is already committing its ravages. As to the class of persons affected by the disease, it may be inferred from the number of deaths other than those which occurred in parochial or dispensary practice, that the better class suffered as well as the poorer. Dr. Puckle observes that in Lambeth the well-to-do-classes have been more affected than the poor. Mr. Pink says that in the Greenwich district the disease has appeared equally amongst the rich and the poor.

Dr. Woodforde says that the disease has fallen chiefly on a newly built district close to Victoria-park, inhabited principally by artisans and persons in comparatively easy circumstances, the houses being in a fair sanitary condition. He suggests as a cause some pieces of waste ground in a damp neglected state, which might be centres of malaria. Dr. Woodforde also states that in Bromley the disease has been much less prevalent, with only three deaths, although the condition of the houses is much less satisfactory, and the poverty of the people extreme. Dr. Whitmore says that in Marylebone the worst cases were often in the best houses; in the poorest and worst localities, and amongst the most wretched children, cases have been seen of a mild type. From remarks made as to the localities in which the disease occurred, it would appear to be spread pretty generally over the district in which it prevailed. With regard to the sequelæ, they were the diseases most usually seen after scarlatina, as dropsy, albuminuria, heart disease, pneumonia, and bronchitis, the first two being the most prevalent. In addition to the point already mentioned—viz., the desirableness of a periodical return of sickness—other points for investigation will readily suggest themselves, such as the influence of temperature on the rise and fall of scarlatina, as stated by Dr. Ballard. The reason this disease should prevail amongst persons living in the better class of houses, in more healthy and less crowded localities, and the comparative immunity of those living in low-lying districts, amid overcrowding, bad air, bad nursing, and all the concomitants of poverty, and the influence of disinfectants in controlling the spread of the disease, etc.—these are some of the points which require further investigation, in the hope of abating the mortality which from this disease alone destroyed nearly 3000 lives last year in the metropolis. Before concluding this summary of the scarlatina returns, mention should be made of the names of those gentlemen who have kindly lent their co-operation. In the City, Dr. Fowler, Mr. Elliott, Mr. Champneys, Mr. Mason, Mr. C. Hogg, Dr. Thyne, Mr. A. B. Thompson, and Mr. G. Brown; in St. Pancras, Dr. Claremont, Mr. T. Harley, and Mr. T. M. Harding; in Chelsea, Mr. A. C. Maybury; Eastern Dispensary, Whitechapel, Mr. J. J. Scott; Western District, Mile-end Old Town, Mr. H. C. Robinson; and to these gentlemen the acknowledgments of the Association are due for the assistance they have afforded."

A discussion followed, in which Dr. Gibbon, Dr. Hardwicke, Dr. Ballard, Mr. Lord, and Dr. Vinen took part, on the unsatisfactory nature of these returns. In some cases the deaths only were returned; in some instances the number of deaths exceeded the number of cases returned; in some parishes the whole of the parish practice was given, and in others only a part. The Medical officers present inveighed against the fact that no records were kept in many Hospitals. They contended that it was a duty these institutions owed to their subscribers to keep and publish such statistics. It was ultimately decided that the return was too imperfect to warrant the Association going to the expense of printing it, and regret was expressed that Government had withdrawn the funds formerly allowed the Association for this purpose.

A discussion on "Outdoor Medical Relief" was opened by Dr. Gibbon, who at some length gave his experience of public Hospitals, tending to show that it was impossible, with 40,000 patients annually at one institution and 120,000 at another, that proper attention could be given. Dr. Gibbon contended that Hospitals both damaged private Practitioners and demoralised the poor.

The Rev. Brooke Lambert spoke at some length on the Hospital system. It was disgraceful, he said, to find well-to-do people taking advantage of these charities, and he proposed a system by which the giver of a letter should state the circumstances of the patient, in order that some charge might be made.

Dr. Hardwicke spoke of the success of the club system, more especially in the provinces, and thought that private Practitioners ought to be very indulgent in their charges to the poor.

Dr. Tidy defended the Hospitals, and maintained that they were necessary if only for educational purposes.

Dr. Lord censured the pseudo-charity which almost forces its gifts upon the people and tends to pauperise them.

Dr. Woodforde said that the outdoor system frequently propagated disease.

The Chairman adverted to the very large proportion of persons receiving Medical relief. He thought the same persons must go from Hospital to Hospital. Patients have been sometimes seen selling the medicine when saleable, or throwing it away. Indiscriminate Medical relief also led to other kinds of relief and to an increase of rates. He also adverted to the anomaly that some of the smaller Hospitals issued larger returns than the greater Hospitals.

Dr. Gibbon made a short reply, in which he maintained that experience might be gained from indoor better than from outdoor patients, and from a smaller number better than from a larger number of cases.

After some other conversation, the meeting separated.

MEDICAL SOCIETY OF LONDON.

Monday, February 22, 1869.

Dr. B. W. Richardson, F.R.S., President, in the Chair.

Dr. Day, of Stafford, read a paper on Cases of Injury to the Brain. The author announced his purpose to be chiefly a record of the clinical history of cases of injury to the brain which bore upon the question of aphasia and the localisation of the faculty of speech. He first showed, from a review of the older writers from Galen downwards, that the question which was now agitated was not a new one. Theophilus assigned memory, and with it memory of words and philosophy of speech, to the third or posterior portion of the cerebrum. It is strange that Dr. Wigan has used the same argument and almost the same words as Dr. Maudsley in the present day to illustrate the philosophy of speech by the philosophy of vision. 1. A man, aged 27, syphilitic, suffered sudden pain in right temple; progressive impairment of sight in right eye, with signs of intra-ocular anæmia; after appearing to be benefited by treatment, he died suddenly eighteen months after commencement of symptoms. The post-mortem showed complete disorganisation of the left cerebral hemisphere, adherent and opaque membranes, and thickening of cranial bones; yet there had been no signs of cerebral implication during life except the symptoms referred to vision. 2. A man of 30, who had suffered from the bursting of a gun, shattering and driving in the forehead. He recovered primary effects, regained perfect intellect and consciousness, was committed to gaol for felony, and died there suddenly with symptoms of compression. At the post-mortem the right hemisphere was completely disorganised, and a mass of iron gun-barrel, weighing two ounces, was found in this side of the brain; yet in this case there had been perfect performance of the cerebral functions. 3. A man of 53, who had enjoyed apparent good health, with ordinary discharge of intellectual functions till twenty-four hours before death. Post-mortem: Disintegration of left hemisphere; cancerous mass; right hemisphere also softened. 4. A boy; fracture of frontal bone; recovered all his powers; sudden death. Post-mortem: Dura mater inflamed throughout; ulceration in three points, and both sides of the brain disorganised. 5. Severe blasting accident recorded in the *Lancet*. The Surgeon who reports the case passed a grooved director from frontal laceration to occipital bone, turning it round and round; he remarks, "both hemispheres must have been made a complete puddle of." Yet the patient recovered all health and function. These cases are completely subversive of the imagining of those who have given to the faculty of speech a habitation in a localised spot of brain matter. One case opposes the view of Majendie, for, though the hemispheres were disintegrated, vision was perfect; the same case seems also to contradict the opinion given by Sir C. Bell—viz., that disease of the general surface of the brain is always attended with derangement of the mind.

A vigorous discussion then ensued, in which Dr. Semple, Mr. Jabez Hogg, Dr. Thudichum, and others took part, the President also remarking that he laid it down as a dogma that definite lesions produce definite symptoms. Post-mortem appearances of the brain may lead to false inferences on account of the rapid decomposition of the brain, and this might occur even during the time occupied by the autopsy.

Dr. Day, replying, said that, with one exception, the inspections were made within four hours after death, and in the cases attested by himself there was no symptom which could indicate, notwithstanding the undoubted physical disorganisation of brain, that the patients were intellectually wrong.

Bristol Royal Infirmary.—The Suple Medical and Surgical prizes have been awarded, the former to Mr. C. K. Rudge, the latter to Messrs. J. L. King and Henry M. Chute, who were equal, and the committee were, in consequence, obliged to award two prizes instead of one.

OBITUARY.

THE LATE SIR JOSEPH OLLIFFE.

We have received the following additional biographical memoranda from the pen of a well-known Physician:—

Sir Joseph Olliffe was a native of Cork, and born in 1808. He came to Paris in 1828, and took his M.A. degree in the Paris University in 1829. For several years he was a tutor in the family of a French nobleman, the Comte de Cresnoi. In 1840 he graduated in Medicine in the above University, and soon after married the daughter of Mr. (subsequently Sir) William Cubitt. He rapidly got into practice. In 1846 he received the Cross of the Legion of Honour, and after the first French Exhibition was promoted to the rank of "Officier" in consequence of his services as one of the British commissioners. When Lord Cowley became Ambassador for France, he was appointed Physician to the British Embassy, which office he held until his death. He was admitted a Member of the Royal College of Physicians of London, without examination, and in the same year elected a Fellow. He was knighted in 1853.

In society Sir Joseph was very popular, and his amiable manners endeared him to his patients both rich and poor. His death will be an especial loss to the British Charitable Fund, for which he had acted as honorary treasurer and secretary nearly thirty years. It was mainly through his exertions that it has so long maintained its position as a most efficient charity, which affords relief in money, bread, coals, and medicine to the amount of nearly 28,000 fr. per annum.

Deauville, on the coast of Normandy, owes its existence as a watering-place to the combined enterprise of Sir Joseph and his friend the Duc de Morny. It is near Trouville, but separated from it by the river Toques. The unexpected death of the Duc seriously interfered with the success of their building speculations, and the consequent anxieties contributed much to shatter Sir Joseph's health.

JOHN HADDY JAMES.

In an obituary of the late Mr. Hodgson a few weeks back we mentioned that he was one of a race of Surgeons who, practising in the provinces, had identified their names with certain localities. Thus he was "Hodgson of Birmingham" to the last. We have now to record the decease of, we believe, the last of his contemporaries, at the great age of 80—John Haddy James, of Exeter. He was born July 6, 1788, at Exeter, in which city he spent the greatest part of a long and eminently useful life. He received his early education at the Exeter Grammar School, and acquired there that love for the classics which has characterised so many distinguished members of our Profession. He was removed, however, from school at too early an age to become a finished scholar, for in 1805 he was apprenticed to Mr. Benj. Johnson, then in large practice in the city; but many an apt quotation from Horace or Virgil would attest in after times his fondness for and familiarity with the subjects of his early studies. From 1806 to 1808 he was a pupil of Mr. Patch, Surgeon to the Devon and Exeter Hospital. From 1808 to 1812 he was a student at St. Bartholomew's, and a pupil of Mr. Abernethy's, in whose house he resided for one year. He was also House-Surgeon at the Hospital.

In 1811 he became M.R.C.S. Mr. Abernethy took the warmest interest in his career, and wished him to settle in London, where he believed a high position would reward his industry and talent. But the appointments at St. Bartholomew's were not at that time open to men who had received a provincial education. Having, therefore, no hopes of becoming attached to the staff of a London Hospital, he accepted the post of Assistant-Surgeon to the 1st Life Guards, and in 1815 accompanied his regiment to Waterloo.

In 1816, being elected Surgeon to the Devon and Exeter Hospital, he commenced that long professional life from which severe illness compelled him reluctantly to retire, while still in the vigour of his powers, in the autumn of 1863. It was a life marked by singular success in the treatment of disease, by unwearied exercise of great powers, by much benevolence; and when his career was finished he said, and with reason, that he looked back upon it with almost unmingled satisfaction.

In 1818 he was awarded the Jacksonian prize for his essay on Inflammation. In 1843 he received the diploma of F.R.C.S., and in 1844 became President of the Provincial Medical Association. Gifted with a singularly vigorous intellect, which enabled him to master any subject, a most tenacious memory, a manner which inspired confidence while it enforced attention, he could not but regret at times that he had been denied the opportunity of metropolitan distinction; being deprived of this, his aim was not merely to attain professional eminence himself, but also to increase the reputation of provincial Surgery. Hence the interest he took in the Provincial Medical Association; hence the efforts he made, by able courses of lectures, in conjunction first with Mr. Barnes, and then with Mr. Delagarde, and by the formation of an extensive museum, to maintain and instruct a good Medical school at the Exeter Hospital. To this museum he continued to devote much care, and the catalogue, with the description of its contents, is largely written by his hand.

His desire to make the experience of his wide practice serve to the advancement of Medical science may be seen in his habit of daily recording notes of all his cases. Every fact worth mentioning is diligently entered in his books, and thus he had a mine of information to which he could refer, and many of his recent hours of increasing blindness were employed in giving to the world from these sources interesting memoirs.

Mr. James had not only a mind, but a body, which seemed incapable of fatigue, and his strong constitution withstood the attacks of more than one severe illness caught in the exercise of his profession; but age told upon the frame, while the mind remained clear and acute, and the brain active to the last, as in his happiest days, and a brief sickness carried him off, still busy with his work, peacefully to his rest. Through life he was an earnest and profound believer.(a)

We must now give a short account of Mr. James's literary works, and first amongst these of his treatises on inflammation, remarking that it is no slight distinction to a provincial Surgeon to have written a book—not a mere practical book, but one treating of the subject from a scientific point of view—which passed through two editions, and has become classical, and will always be appealed to as one of the landmarks of the progress of opinion in English Surgery. The first edition, published in 1821, bore the title "Observations on some of the General Principles, and on the particular Nature and Treatment of the different Species of Inflammation; being the substance of an Essay to which the Jacksonian Prize Essay for the year 1818 was adjudged by the Royal College of Surgeons." A second edition, much increased in size, and fuller of detail, was published in 1832; and thirty-five years later there appeared a "Treatise on the Distinctive Characters of External Inflammations, on Inflammatory or Sympathetic Fever, and the Results of Thirty-six Years' Experience of the Effects of Bleeding, ascertained from Private Practice only." The greater part of this last was originally published in the *Medical Times and Gazette* for 1866, vol. ii. From first to last the key-note of these treatises is the same. The classification of inflammation is founded on the following facts:—"1. That the mode of repairing injury and of arresting the progress of inflammatory disease depends upon the power which the animal economy possesses of effusing organisable lymph. If this exists in any given case in a sufficient degree, the progress of the inflammation will be *limited;* if the contrary, it will *spread.*

"And the danger of the disease being in proportion to the disposition to spread, *cæteris paribus*, more constitutional sympathy, denominated 'sympathetic fever,' will be excited.

"And this sympathetic fever, however salutary in its nature, will, when it exceeds certain bounds, tend to augment, rather than lessen, the mischief. The disposition to spread may be owing either to the nature of the part as a surface, of the cause as a poison, or to the state of the constitution; but the former are circumstances more or less *accidental*, and, though very important, cannot afford a basis of distinction: but the latter as a *permanent* cause certainly will, and when it is similar in nature and degree, and accompanied with the same concomitants, it will be found to produce the same effects, and there is no inflammation in which the disposition of the constitution does not tend either to produce its limitation or the reverse." The orders were founded on the nature of the organ involved—whether (1) of primary or vital importance; (2) of organs essential to the well-being of the animal; or (3) inflammation of common parts. The fact that the degree of general sympathy and disturbance bears a relation to the importance of the organ justifies this arrangement. (1st ed. pp. 13, etc.) The second edition of this work, published in 1832, and very much enlarged, though

(a) "Quatuor robustos filios, quinque filias, tantum domum, tantas clientelas Appius regebat, et senex et cæcus. Intentum enim animum tanquam arcum habebat, nec languescens succumbebat senectuti."—*Cic. de Senect.*

upon the same basis, is one to which we look with the greatest respect, from the immense amount of practical information it contains, from the vigour and precision of the author's style, and from its presenting a vivid picture in small bulk of the state of Medical science and practice in the days immediately preceding the modern microscopical and chemical era. This work will never be obsolete, but must retain its place as a classic. In the third and smaller treatise ("On External Inflammations") published in 1867, the author criticises and reviews his own earlier opinions, comparing them with some of the results of later observation and research, claiming much that he had foreseen, and combating some things contrary to his own views. It is curious to observe how purely *metaphysical* was the conception of vital processes and forces at the time when Mr. James's treatise first appeared, and how difficult it seemed for him in his last work to take kindly to the more *positive* and analytical view which we now are able to get through the labours of modern microscopists, physiologists, and chemists. How distinctly in the quotation above is the idea of "inflammation" distinguished from that of the "animal economy" in which it occurs, and of the "cause" which gives rise to it! Inflammation is represented as a something which is controlled by a "disposition of the constitution." The difference between the metaphysical and the positive conception and description of "inflammation" may be illustrated by a comparison with the kindred word "conflagration." Both signify "fire," an abnormal and mischievous process in which the chemical relations of an animal body, or (say) of a house or hayrick, are altered, so that the subject of the alteration is destroyed or damaged; much useful material is converted into carbonic acid and ashes, and much heat given out. In the case of the "conflagration" the "devouring element" may act in a variety of ways, depending on the arrangement of the burning edifice, on the cause, and on the nature of the construction. It may be a mere smouldering affair and strictly limited, if the "forces" of the building that is fired are such as to limit it. In a well-built warehouse, with iron fireproof doors, substantial party walls, and no timber partitions, the fire may burn itself out *in loco*, like a "phlegmon" on a healthy rustic's head after a blow. Let the "cause" be peculiar, such as the bursting of sundry casks of naphtha, and the conflagration will spread like erysipelas of septic origin. And if the whole edifice be a rickety lath and plaster affair, there will be no "power of adhesion;" the conflagration will go on and on till there is nothing more to burn. The change that is taking place in Medicine is parallel to that which enables us to analyse the phenomena of a house on fire. We do not look on the latter as a "process" to be conceived metaphysically, but we can tell how wood heated to a certain degree gives off hydrocarbon gas; how this gas explodes in contact with air and forms flame; how the redhot carbon of the wood combines with the oxygen; how a stone partition may be calcined and crumble; how fire may be fed by oxidisable substances, as jute and turpentine; how its conflagration is enhanced by actual oxygenophoric bodies, as saltpetre (as was the case at a fire in one of the great City wharves); and how water acts by cooling and by shutting off oxygen from the burning mass. Analogous to this is the knowledge we are slowly getting of the wonderfully rapid aberrant behaviour of the minute germinal constituents of the tissues in inflammation; of their tendency to produce pus and other abortive tissues; of their power to attract streams of blood; of the mechanism whereby both blood-vessel and nerve are subservient to local inflammation; and of the nature of inflammatory fever. Whilst we thus thankfully acknowledge the increased depth and width and the positive character of modern research, it is impossible to refuse our tribute to the industry, accuracy, and sagacity of authors who, like Mr. James, got only glimpses and general conceptions of these processes which can now be analysed in detail. Nor must it be supposed that we yet nearly know all, or that there are not hiatus in our present line of argument which well-informed men of the olden school are not slow to detect. One of the still obscurest parts of pathology is the nature of that change in the blood which occurs in (or, as we believe, which constitutes) sympathetic inflammatory fever. Of the elders, some looked on its seat as being in the nerves; some in the blood; and the blood was looked upon by Mr. James as an "organ"—an instrument with powers, and purpose, and intelligence—"living, feeling, and acting in every part," and "able to control" certain changes occurring in it when tainted. Beneficial changes in sympathetic fever often occur, says Mr. James—*e.g.*, after the opening of abscesses—much more quickly than the composition of the blood can be conceived to be changed. A small ulcer in the cornea will cause as much fever as a sloughing ulcer of the leg; yet the amount of blood contamination cannot be the same. Throughout his works, though Mr. James was from the first a humoralist to a certain degree, he adhered to doctrines implying a preponderance of the nervous element. The doctrine of sympathy, he says, is going out of fashion; but it must never be forgotten that there are palpable effects which may be produced by immaterial causes; and hence that it is not necessary in every case to appeal to reflex action or to contamination of the blood for a solution of the mode in which disturbance of one part of the animal economy may affect the whole.

That Mr. James was not the man to abandon old convictions, or suddenly—after the manner of some persons—to rub his eyes as if awaking from a dream, and to declare that the learning and practice of half his life had been a delusion, is evident by the remarks on bleeding appended to his work on "External Inflammations" (1867). He insists, with the utmost justice, that in bleeding we imitate one of the natural and beneficial operations of Nature. He objects to the idea of making Hospital practice amongst town poor a test of what is applicable to healthy persons in the country attended as private patients. To obtain something like trustworthy data, he refers to his "own records, contained in eleven large folio volumes of cases of all kinds, taken indiscriminately between August, 1816, and August, 1863. I had tabulated every one where general bleeding had been practised, giving the volume, date, age, sex, disease, quantity, and result." Omitting the first four years, in which Hospital and private cases were intermixed, he went through the cases of thirty-six years, divided into "two periods —*i.e.*, from 1827 to 1845, and from 1845 to 1863, the latter period being commensurate with my return to the Registrar-General. . . . The total number of the first period of eighteen years offers 157 cases of general bleeding for diseases of every kind. Of these, 129 are recorded in a way to leave no doubt as to the recovery of the persons." In reality only 16 of the 157 died. These persons were "bled for acute diseases of various kinds. But it will be understood that these form only a small proportion of the acute cases which presented themselves in the eighteen years, the remainder having been treated by other means than general bleeding, and have no place here. It will be seen that the proportion of persons bled was about nine per annum, no very large number when the amount of cases which came under my care during the eighteen years is considered. It will be further seen that the proportion of recoveries to deaths was very nearly nine to one, the deaths being 16 in 157. If we look at the sixteen cases of death (which it will be observed is less than one per annum), we shall probably find that the greater number would have been lost under any treatment whatever."

The second period of eighteen years began with the returns to the Registrar-General, which "came into play in August, 1845, and of course offered most conclusive evidence as to death. I find in these eighteen years my returns amounted to 185 deaths of diseases of every kind, chiefly, however, chronic or subacute. Then comes the question, How many of these 185 were bled? The answer is two. One was a case of much complicated pneumonia, attended by a very experienced Physician as well as myself, and bled to 15 oz., after anxious consultation. The other had the character of fever with pneumonia. In a little more than a fortnight after the bleeding an abscess burst into the stomach, and she died four days after. The next and all-important question is, whether in the course of my practice during the eighteen years any other persons were bled. The answer is 24, all of whom recovered. We may now sum up the two periods of persons bled during the thirty-six years, amounting to $157 + 26 = 183$, from which take 18 deaths. This would give a proportion of about ten recoveries to one death."

Mr. James then shows the number of persons bled annually, which fluctuated from 0 to 23, thus relieving him from the charge of indiscriminate phlebotomy. "In the second place, we perceive that the numbers remarkably diminished about the year 1837. It may be asked if this arose from any diminution in my practice. The answer is, certainly not! for it was more extensive from 1835 to 1855 than at any other period. Did it arise, then, from any opinions at that time promulgated in opposition to the practice heretofore in use? The answer is, No! for at that period no opinions that would have had any weight had been promulgated. It must, therefore, be referred to an alteration in my opinions, as resulting from my own observations of a change in the character of diseases, and not from any previous ill-success of the measure." Mr. James shows most truly that, in his earliest work, the practice of giving stimulants in appropriate cases and the antiphlogistic virtues of tonics are fully pointed out, and he intimates that

indiscriminate stimulation may have taken the place of indiscriminate depletion.

Mr. James's papers on the "Mortality after Amputations," published in vols. xvii. and xviii. of the *Transactions of the Provincial Medical Society* for 1850, are valuable contributions to a subject still of daily increasing interest. Mr. James ascribes an almost complete immunity from pyæmia which has been the case in his practice to the excellence of his Hospital.

"The Devon and Exeter Hospital not only stands insulated in an open situation, but has had the great advantage of possessing for a very long period small wards of separation, lofty, and sufficiently spacious, receiving only one patient, with every advantage of ventilation, light, and air, as regulated by the occasion, free from noise and disturbance, and the moral and physical causes which must operate more or less in wards where a number of severe cases are accumulated; and more especially are exempted from the injurious effects of an atmosphere tainted, it may be presumed, by the effluvia of so many bad cases, whatever care may be taken to lessen their influence. I take it that such an atmosphere may be regarded much in the same light as that of a ward where erysipelas or hospital gangrene are prevalent; and that the pyæmic influence is rather induced through the atmosphere than caused by any mixture of pus with the blood, for this might just as well take place in our own small wards of separation as in the large ones alluded to, and such an admixture would equally apply where limbs are amputated for disease as for injury, which is by no means the case. The advantages of these small wards of separation I cannot urge too strongly."

He testifies to the much greater mortality after primary operations for injury than after operations for disease, and ascribes the difference to the depressing and poisoning nature of *shock*. Of his primary amputations of the thigh for injury, $\frac{5}{13}$ were fatal; of secondary amputations for injury, $\frac{5}{15}$; and of amputation for disease, $\frac{11}{173}$. These differences cannot, he thinks, be due to other than the cause he assigns.

In 1849 Mr. James was selected to deliver the Retrospective Address in Surgery before the Provincial Medical Association at a meeting in Liverpool. This address contains such a summary as might be expected of recent improvements in Surgery, and includes much useful matter for reference. Its highest point of interest, however, lies in the glimpse which it gives of the profound dissatisfaction of the Profession in the provinces at the centralising influence and blighting monopolies perpetrated by the London teachers of Medicine and Surgery, who, as Examiners and Councillors of Royal Colleges, were enabled to provide for the interests of themselves and their pupils and friends as teachers in the metropolitan schools. Mr. James speaks bitterly of the eminence which has been enjoyed by small cities on the Continent as schools of Medicine, claims the same capacity and power for English cities, and complains that "the legislature, by delegating the whole of its power to the members of the Profession who reside in the metropolis, have taken the most effectual mode of blighting, instead of encouraging, the means of improvement which exist elsewhere. . . . . Amongst this assemblage of provincial Practitioners," he continues, "must be many who feel that a great injustice has been done to many cities and towns of less size possessing excellent means of instruction, of which no account worthy of notice is made by our chartered bodies, who have determined, with little evidence or examination, that unless a school is complete it is not to be considered at all."

We must pass lightly over Mr. James's observations on Operations for Hernia, 1859; on Cicatrices after Burns, 1868 (a practical protest against an unwarrantably dogmatic assertion in Holmes's "System of Surgery"); Remarks on Fibrous Tumours, in the *Lancet* for 1857; Some Remarks on Bloodletting, in the *British Medical Journal*, February 24, 1866; on Diseases of the Heart, *Med. Chir. Trans.* vol. viii., 1817; on Bronchocele treated by Seton, *ib.* vol. xi.; on the Removal of Cicatrices after Burns, *ib.* vol. xiii.; and a case in which the femoral artery and aorta were tied for aneurism of the external iliac, *ib.* vol. xvi.

We need add little to complete the picture of activity and vigour of mind and body of which Mr. James was an example. He was cautious in forming an opinion; but once formed, stuck to it with indomitable resolution. He liked to have his own way in everything, and usually had it. Like Cato Major, he delighted in agriculture, which formed the amusement of his earlier years and the solace of his age. Altogether he was a man whose name will remain amongst the choicest Surgical worthies of his century.

MAURICE HENRY COLLIS, M.D. Dub., F.R.C.S.I.,

Surgeon to the Meath Hospital and County Dublin Infirmary.

Numerous as have been the breaches caused by death within the last few years in the ranks of the Medical Profession in Dublin, in no instance perhaps was a feeling of more profound sorrow and sympathy excited than by the announcement, on Easter Sunday, that Maurice Henry Collis had that morning succumbed to an illness of little more than four days' duration, the result of a wound got in the exercise of his profession. Many circumstances combined to produce this deep regret. Apart from the recollection of those sterling qualities which had procured for Dr. Collis the respect and attachment of his colleagues, it was felt that a meritorious and industrious Surgeon, scarcely arrived at the prime of life and just attaining to well-deserved success, had been cut off, apparently by accident, at the very time that he was commencing to reap the fruits of years of well-directed labours, leaving a large and youthful family to deplore his loss.

On Monday morning, March 22, while engaged in the Meath Hospital in removing the upper jaw for a cancerous tumour in the antrum, Dr. Collis punctured his finger, but thought no more about the occurrence until, on Wednesday, at 3 o'clock a.m., he was seized with a severe rigor, speedily followed by other symptoms of blood-poisoning, and eventually by secondary pneumonia, under which he sank and died at 6 o'clock on Sunday morning.

Maurice Henry Collis, son of the Rev. Robert Collis, was born in the year 1824, and, after receiving a good preliminary education, entered Trinity College, Dublin. Having obtained honours during his undergraduate course, he took the degrees of B.A. in 1847, M.B. in 1848, and M.D. in 1867. In February, 1842, he was apprenticed to his uncle, Maurice Collis, Surgeon to the Meath Hospital; in 1847 he became a Licentiate, and in 1850 a Fellow by examination, of the Royal College of Surgeons in Ireland. On his uncle's resignation he was, on October 11, 1851, elected Surgeon to the Meath Hospital. He has since filled the office of Examiner in Surgery in the Queen's University, and at the time of his death he was Examiner in the same department in the Royal College of Surgeons in Ireland. He was also Member of Council of the Surgical Society, and President of Council of the Irish Medical Association. He was well known to the Profession as the author of a valuable work on the "Diagnosis and Treatment of Cancer and Tumours analogous thereto," of "Contributions to Operative Surgery," and of papers on Cancer, Cleft Palate, the Treatment of Anthrax by Pressure, Vesico-vaginal Fistula, and the Æsthetic Treatment of Harelip.

We cannot better close this brief tribute to the memory of Dr. Collis than by quoting the concluding paragraph of the opening lecture delivered by him in the Meath Hospital on November 4, 1867, of the truth of the warning conveyed in which his own career was, alas! so soon to prove a striking illustration:—

"Whether, then, you seek to follow your profession at home or abroad, in the busy haunts of man, or in the comparative retirement of the country, remember that, to fill it as you ought, the same diligence, the same cultivation, and the same rectitude of purpose should be yours; and fret not yourselves if, in this world, an equal reward to others be not given to you. The time is short; work while it is day, for a night will come when work will give place to rest, and after that, the dawn of a perfect day."

We need in this country a naval Medical school, conducted upon the same general principles as those in such successful operation at Toulon, Rochefort, and Cherbourg in France, where Medical men may be prepared for the duties of naval Surgeons, by suitable lectures and other exercises given by an able corps of professors. Some of the most brilliant naval and military Surgeons of France, as Broussais and Larrey, not to mention others, received their education in these institutions. Such a seminary, surrounded with proper safeguards, could not, in the slightest degree, interfere with the interests of the regular Medical colleges of the country, while its beneficial effects in supplying the service with a more thoroughly trained corps of Surgeons would be incalculable. There is just as much need of such a school as there is of a school for the education of sailors and officers of the line.—*Address of Samuel D. Gross, M.D., LL.D., President of the American Medical Association.*

NEW BOOKS, WITH SHORT CRITIQUES.

Recollections of Central America and the West Coast of Africa. By Mrs. Foote, widow of the late Henry Grant Foote, Esq., H.B.M. Consul at Lagos. London: H. C. Newby. 1869. Pp. 220, 8vo.

*** This simply written but entertaining volume contains some curious notices of climate which are interesting in view of modern enterprise, and no less so in connexion with the earlier annals of these countries. The work also contains a short description of Madeira. Salvador, which was the place of residence of our authoress, is described as having a very healthy climate for the tropics, the fevers among Europeans being rarely fatal. In point of health, a temperate man is as favourably situated there as in Europe. There is a great variation of climate from the mountain ranges, and this conduces greatly to health, "as the fever-stricken invalid may, in half a day's journey, be transported to a cooler atmosphere, like that of the South of France—in fact, cooler, as oranges even will not thrive in the open air, and ice is to be seen in the roads in December." The country of Salvador and the isthmus generally is one of surpassing beauty and cheerfulness, and there is little real want in the inhabitants. In local features it is distinguished by morass and volcano, but also by verdure of the liveliest hue. The following is of interest (page 107):—"We had to sleep one night on the road at a very miserable place called Guarmoco—the most dreary-looking town in all Salvador—a collection of mean dirty-looking houses, and one ugly whitewashed church built upon a dusty plain unrelieved by a single tree or a blade of grass. Such is Guarmoco. No wonder that the people, or even the animals, are sickly in such a depressing place. Men, women, and children are all subject to goitre, a common complaint throughout the country; but this is the only place where cows, horses, pigs, and poultry are equally affected. This disgusting disease cannot arise from either the water or climate of Salvador, as a clever French Physician who had lived in the country thirty years told me he had never known a single Englishman afflicted with goitre during all that time. It does not seem to cause idiocy, as in the Swiss cantons." Of the authoress's experience of Lagos, which is far less pleasant in recollection, we add the following, which shows that leprosy is not considered to be contagious there:—"A dreadful old woman, a mass of leprosy, was among the communicants, and took her place with others at the altar. The horrible disease was additionally revolting in contrast to her black skin; but her neighbours did not seem to dislike her proximity in the least, which struck me as very strange and unnatural."

A History of Chemical Theory from the Age of Lavoisier to the Present Time. By Ad. Wurtz, Membre de l'Institut. Translated and edited by Henry Watts, B.A., F.R.S. London: Macmillan and Co. Pp. 220.

*** This is really an admirable treatise, and has been written by Professor Wurtz as an introduction to that Dictionary of Chemistry in three volumes which is to surpass Watts in five. His introduction is characteristic. "Chemistry," says he, "is a French science. It was founded by Lavoisier of immortal memory." The author, notwithstanding this vehement exordium, does not fail to do justice to chemists of all nations.

An Introduction to Scientific Chemistry, designed for the Use of Schools. By F. S. Barff, M.A. Cantab., Assistant University College Laboratory. London: Groombridge and Sons. Pp. 315.

*** So many works dealing with chemistry, good, bad, and indifferent, have recently appeared, that one could hardly anticipate any great degree of public favour for a new comer into a field already well occupied. Mr. Barff, however, aims at a less highly educated class than do some of his more pretentious and less able contemporaries, and for the purpose designed the book seems a good one.

Manual of Materia Medica and Therapeutics, embracing all the Medicines of the British Pharmacopœia. By Alexander Milne, M.D., L.R.C.P.E., etc. Second Edition. Edinburgh: Livingstone. Pp. 256.

*** This is not a bad little book. It contains a good deal of sound sense, and a good deal of original observation. It has this merit, that it does not run straight in the rut of its predecessors. It is nicely printed and got up, and it will prove a good pocket companion for the student.

A History of the Medical Department of the University of Pennsylvania. By Joseph Carson, M.D., Professor of Materia Medica and Pharmacy in the University of Pennsylvania. Philadelphia: Lindsay and Blakiston; London: Trübner. Pp. 227.

*** This volume is interesting to both Americans and Englishmen—to the former as the history of the oldest institution of the kind in their country; to an Englishman as being the eldest offshoot from the parent stem. The close relationship which also existed between the University of Pennsylvania and this country for many years, and the interest taken in its welfare by Englishmen at that early period, would tend to bind its alumni to English modes of practice and of thought.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, March 25, 1869:—

Abbott, George, Nottingham.
Cotterill, Alfred, Brigg, Lincolnshire.
Davies, William Henry, Penna House, Newport, Monmouth.
Grover, John Pollington, Lewes, Sussex.
Lawrence, Charles Hinds, Sunderland-terrace, Bayswater.
Liddard, William, Lambeth-terrace, Lambeth.
Lougher, Richard, Pontypridd.
Pippette, Walter, The Close, Salisbury.
Rees, Howell, Maesteg, Glamorganshire.
Roberts, Arthur, Stalybridge.
Solly, Stephen Francis, St. George's-circus, Blackfriars-road.
Walford, Augustus David Ceely, Uppingham, Rutland.
Wilder, Henry Beaufoy, Lulham, Reading.

The following gentlemen also, on the same day, passed their First Examination:—

Kavanaugh, Michael Thomas, Guy's Hospital.
Lidbetter, Thomas George, Guy's Hospital.

As Assistants in compounding and dispensing medicines:—

Barrow, Francis Clarke, Stainton Hall, Ulverston.
Bilney, Joseph Thomas, Beverley-villas, Penge-park.
Carr, James Bonwell, East View, Preston.
Cooke, Henry John, Lime-street, E.C.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Galton, Edmund Hooper, F.R.C.S. (Exam.)—Medical Officer to the City of London Freemen's Orphan Schools and to the City Almshouses, Brixton.

Perkins, J. R., L.R.C.S., L.S.A.—Surgeon to the Hendon, Finchley-road, and Mill-hill Districts of the Midland Railway.

Tuck, B. J., M.R.C.S.E. and L.S.A.—Medical Officer to the Fourth District of the Newhaven Union, Sussex, *vice* J. Noakes, L.S.A., deceased.

BIRTHS.

Bleckley.—On February 27, at Simla, India, the wife of T. M. Bleckley, Esq., B.A., M.D., Staff Surgeon, Secretary to the Inspector-General of Hospitals, H. M.'s British Forces, of a son.

Carr—On March 16, at Warley, the wife of Surgeon-Major J. K. Carr, M.D., Royal Artillery, of a son.

Payne.—On March 29, at Wimbledon, the wife of Charles Henry Payne, M.D., of a son.

MARRIAGES.

Colclough—Hill.—On February 9, at St. Mark's, Bangalore, Captain Beauchamp Colclough, Adjutant 2nd Batt., H.M.'s 19th Regiment of Foot, to Jane Eleanor, youngest daughter of the late J. Barton Hill, M.R.C.S., of Guildford-place, Russell-square, London. No cards.

Farr—Smith—On March 20, at St. John's, Lambeth, Archer Farr, L.R.C.P. Ed., 88, Waterloo-road, to Elizabeth Medora, youngest daughter of George Alexander Smith, Esq., of Hemel Hempsted, Herts.

Hector—Monro.—On December 30 last, at Christ Church, Nelson, New Zealand, James Hector, M.D. Edinburgh, F.R.S., to Maria Georgiana, eldest daughter of Sir David Monro, Speaker of the House of Representatives.

DEATHS.

Campbell, Frances Helen, the youngest daughter of the late Colin Campbell, Physician-General in Bengal, at Siena, Italy, on March 9.

Carr, Jeannette, the beloved wife of Surgeon-Major J. K. Carr, M.D., Royal Artillery, at Warley, on March 20, aged 41.

Collis, Maurice Henry, Esq., M.D., Surgeon to the Meath Hospital and County Dublin Infirmary, at 25, Lower Baggot-street, Dublin, on March 28, in his 45th year.

James, John Haddy, F.R.C.S., Consulting Surgeon to the Devon and Exeter Hospital, etc., at his residence, Chichester-place, Exeter, on March 17, in his 81st year.

Kemp-Welch, Edward Asheurner, M.D., at his residence, Fairfield, Downton, Wilts, on March 24, aged 61.

Lomi, Da. Mark, of Massa Carrara, at Florence, on March 19, aged 74, Friends will please accept this intimation.

Rand, Ethel, second daughter of John Rand, Surgeon, at Felixstow, near Ipswich, on March 27.

Lyel, Dr. B. B., Medical Officer of Mile-end Union, at 23, Grafton-street, on March 19, aged 35.

Rimington, Turnley Spencer, the youngest child of Joseph Latter Rimington, Surgeon-Major, Bombay Army, at Weston-super-Mare, on March 9, aged 2 years and 4 months.

Scholfield, Mary Julia, third surviving daughter of the late Edward Scholfield, Esq., M.D., of Doncaster, at Hastings, on Easter-Evening, in the 19th year of her age.

Tilt, Dorothy Emma, the beloved wife of Dr. Edward John Tilt, after long illness, at 60, Grosvenor-street, Grosvenor-square, on March 17.

Watters, Thomas, Surgeon, late of Woking, on March 20, aged 62.

Watson, J. P., L.R.C.P. Edin., of Aberdeen, on March 15, aged 46.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Bradford Infirmary and Dispensary.—Two Physicians; must be graduates in Medicine of one of the Universities of the United Kingdom, or Fellows or Members of one of the Colleges of Physicians, and be registered under the Medical Act. Diplomas and testimonials to Mr. Chas. Woodcock, Secretary, Sun-bridge, Bradford, on or before April 15. Election on May 5.

Brighton Hospital for Sick Children.—Surgeon. Certificates of qualifications and testimonials to the Medical Committee of the Hospital on or before April 9. Election on April 16, at 5 o'clock p.m. Further particulars may be obtained on application to the Secretary of the Medical Committee.

County of Chester.—New Lunatic Asylum being Erected near Macclesfield.—A Medical officer; candidates must be duly qualified. Applications and testimonials (with a statement of Medical qualifications) to the Clerk of the Peace for the county, in Chester, on or before April 9. The election will take place shortly.

Dowlais Iron Works.—Assistant-Surgeon; must be a Welshman, legally qualified, and unmarried. Applications and testimonials to Mr. Peacock R. Cresswill, Chief Surgeon, Dowlais, Merthyr Tydfil.

Eastern Dispensary, Bath.—Resident Medical Officer; must be duly registered, and have both Medical and Surgical qualifications. Applications and testimonials to Mr. Edmund Smith, Hon. Sec., on or before April 14. Approved candidates will receive notice of the day of election.

General Hospital and Dispensary for Sick Children in Manchester.—Assistant Medical Officer; must have both Medical and Surgical qualifications, and be unmarried. Applications and testimonials to Dr. Burchardt, Manchester, on or before April 13.

General Infirmary, Leeds.—Four Assistant Resident Medical officers; must possess at least one qualification. Applications and testimonials to C. Bradley, Esq., at the Institution, on or before April 12; election on April 17.

Gray's Hospital, Elgin.—House-Surgeon. Testimonials to Fife Duff Robertson, Town Clerk, Elgin, on or before April 27. The duties will commence on May 15. The gentleman who holds the above appointment is usually elected Medical Officer to the Lunatic Asylum for Elginshire, which adjoins the Hospital.

Hospital for Sick Children, 49, Great Ormond-street, W.C.—Assistant-Physician; must be F. or M.R.C.P.L. Applications and testimonials to S. Whitford, Secretary, on or before April 7.

King's College Hospital.—Assistant-Physician; for particulars apply to J. W. Cunningham, Esq., Secretary at the Hospital

Lincoln General Dispensary.—House-Surgeon and Apothecary; must be M.R.C.S.E., and either L.S.A. or L.R.C.P.L., and be unmarried. Applications and testimonials to James Ward, Esq., Lincoln, on or before April 13. The election will take place on the same day.

Midhurst Union.—Medical Officer for the Fernhurst District. Candidates must be legally qualified and registered under the Medical Act, 1858. Applications and testimonials to Mr. Edwin Alderey, Midhurst, on or before April 6. Election the same day.

Nottingham County and Borough Lunatic Asylum.—Assistant Medical officer; must be duly qualified and registered under the Medical Act. Candidates must be unmarried. Applications and testimonials to the Chairman of the Committee of Visitors, under cover to Mr. K. Sanby, on or before April 12. Election on April 15.

Rotherham Union.—Medical Officer for the Wentworth District. Candidates must be legally qualified. Applications and testimonials to J. Barras, Esq., Rotherham Union Offices, on or before April 10. Election on April 12.

Royal Hants County Hospital, Winchester.—Dispenser and Clerk. Applications and testimonials to W. A. Richards, Esq., Secretary, on or before April 16.

Sunderland Infirmary.—House-Surgeon; must possess both Medical and Surgical qualifications, and be registered. Testimonials and diplomas to the Secretary, on or before May 1. Election on May 10.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Gainsborough Union.—Mr. J. R. Wilan has resigned the Haxey District; area 8113; population 2157; salary £26 per annum.

Sevenoaks Union.—The Fifth District is vacant; area 14,394; population 4154; salary £80 per annum.

Wisbeach Union.—Mr. W. J. Hodgson has resigned the Tenth District; area 4516; population 919; salary £19 per annum.

APPOINTMENTS.

Chesterton Union.—John Bridger, M.R.C.S.E., L.S.A., to the Seventh District.

Dulverton Union.—Rawlon B. Robinson, L.R.C.P. Edin., M.R.C.S. Edin., to the First District. Edward Nason, M.R.C.S.E., L.S.A., to the Third District.

Maidstone Union.—Alfred S. Wood, M.R.C.S.E., L.S.A., to the Fourth District.

Melton Mowbray Union.—Burford Norman, M.R.C.S.E., L.S.A., to the First District.

Midhurst Union.—George Hills, M.R.C.S.E., L.S.A., M.D. St. And., to the Milland District.

South Stoneham Union.—William J. Harnett, L.R.C.P. Edin., M.R.C.S. Ire., to the Fourth District. Charles J. Symonds, L.R.C.P. Edin., M.R.C.S.E., to the Fifth District.

St. Mary (Lambeth) Parish.—John Harman, M.R.C.S. Eng., L.S.A., to the United Eighth and Ninth Districts.

Dr. Sandwith, C.B.—In the event of a vacancy in the representation of Marylebone, Dr. Sandwith will come forward, provided the payment of his election expenses is guaranteed. At a recent meeting of the Electoral Association, it was resolved that "the utmost endeavours should be made to return Dr. Sandwith free of cost, should Mr. Harvey Lewis resign his seat."—*Daily News.*

The Riberi Prize.—It may be desirable again to remind intending competitors that their MS. essays or printed works must be sent to the Turin Academy of Medicine by the end of 1870. If printed they must be in the French, Italian, or Latin languages, or translations must accompany them. The prize (a magnificent one—20,000 lire, about £800) is to be awarded to the author who, in the judgment of the committee appointed by the Academy, has produced some remarkable improvement in Medicine or Surgery during the three years 1867-70. For the first period (1862-64) no one of the sixty competitors was considered to have produced a work sufficiently meritorious for the whole prize, and it was doubted whether it could be legally divided amongst the five or six of the best candidates. The prize for the second period (1864-67) was awarded to Professor Bruns, of Tübingen, for his work on laryngoscopy—to the great dissatisfaction of the Italian competitors, as expressed by Professor Borelli.

"Palmam qui meruit ferat."—The honorary medal of the Royal College of Surgeons of England, which was recently awarded by the Council to Mr. William Lodewyk Crowther, of Hobart Town, has just been struck at the Royal Mint. It is a very handsome medal in gold, having on the obverse in high relief the arms of the College, and on the reverse Galen contemplating a human skeleton, with the name of the recipient, who has contributed many and valuable additions to the museum of the College. The medal will be accompanied by a record of the award, with the names of the Council present at the meeting, and signed by the Secretary, and another specially from, and signed by, the President, Mr. Richard Quain, F.R.S. From the "Standing Rules" of the College we find that "the leading considerations in awarding the honorary medal of the College shall be liberal acts, or distinguished labours, researches, and discoveries, eminently conducive to the improvement of natural knowledge and of the healing art" The value of the medal is enhanced by the few occasions on which it has been awarded, and by the high character of its recipients. The first occasion was in 1800, when Professor James Wilson received it; in 1822 it was conferred on Mr. James Parkinson. The only surviving College medallists are Mr. Joseph Swan and Mr. George Bennett, of Sydney. To the latter it was awarded in 1834 for contributions to the museum.

Donations to a Hospital.—Amongst the donations to the General Hospital and Dispensary, Cheltenham, recorded in the annual report for 1868, are the following:—The fees from two coroner's inquest juries; various sums from the Committee of Club Balls; some fines for mischief; contributions by visitors to the new church at Charlton; a sewing machine; sixteen small cushions; eleven pair of white wool armlets, nine pair of gaiters, and two pair of wool socks; homely ballads and parables from nature; some medicine bottles; some shirts; some grapes; a basket of oranges; two pots of turnips; eight pheasants and three hares; a hamper of old clothes; a valuable collection of Surgical instruments; some dolls; some toys, bricks, and a lamb; and many parcels of old linen.

From Dr. Thurnam's report on the Wilts County Asylum for last year, it would seem that insanity and an advanced old age are not incompatible. No fewer than 16 of the deaths, or one third of the whole number, among the patients occurred in the case of individuals over 70, ten being more than 75, and three 80 years of age and upwards. Unfortunately Dr. Thurnam does not give the periods during which these had been insane, so that we cannot ascertain whether they were cases of dementia occurring in old people, or ordinary cases of insanity.

Glasgow Maternity Hospital.—On the 17th ult. the students attending the Maternity Hospital took occasion to present R. D. Tannahill, Esq., M.D., one of the Physicians of that charity, with an elegant silver mounted walking cane, as a mark of their appreciation of the benefits derived from the excellently practical lectures on Midwifery delivered by that gentleman during the present session. Dr. Eadon expressed the sentiments and feelings of the students as to the cause of the presentation. Dr. Tannahill replied in a speech replete with counsel for the student. Messrs. Griffiths, Moon, and Stewart took part in the proceedings.—*North British Daily Mail.*

Borough of Leicester Lunatic Asylum.—Out of 37 candidates for the office of Resident Medical Superintendent, the following were requested to attend the committee:—1, Dr. Casey, County Asylum, Gloucester; 2, Dr. Deas, Royal Asylum, Morningside, Edinburgh; 3, Dr. Finch, Leicestershire and Rutlandshire Asylum; 4, Dr. Mitchell, Mount Pleasant Asylum, Yorkshire; 5, Dr. Rutherford, Borough Asylum, Birmingham—from whom the committee selected Dr. Finch and Dr. Mitchell, and recommended that one of those two gentlemen should be appointed by the Council.

Meath Hospital.—Tribute of Respect to the Memory of the late Dr. Collis.—At the meeting of the Standing Committee on Monday, immediately after the formal confirmation of the minutes of the last meeting, it was proposed by Mr. Leslie, seconded by Surgeon Porter, and resolved—"That we have learned with deep grief the sudden and painful death of our friend and colleague, Surgeon Maurice H. Collis, by an accident received in the discharge of his duty to the poor and sick. That we desire to place on record our high esteem for his ability and character, and our sense of the loss the Hospital, the public, and the Profession have sustained by his death, and to express our deep sympathy with his afflicted

widow and family. That, as a slight mark of respect to his memory, this Board now adjourn without proceeding with any business."

Poor-law Medical Service.—*City of London.*—The Poor-law Board have approved of the payment of £100 each to Mr. T. B. Humphreys and Mr. F. G. Brown, district Medical officers. *St. Pancras.*—The Poor-law Board approve of the appointment of Mr. Barnes as out-door Medical officer for No. 5 District. *Mile-end Old Town.*—A letter of condolence was directed to be sent to the widow of Dr. Lyel, Medical officer of the house, lately deceased. The chairman and other members spoke in high terms of the tact, discrimination, and zeal of so young an officer. Mr. Foster was appointed to act as his substitute for a month at £4 a week, pending the filling up of the vacancy thus created.

Extraordinary Birth.—The account of a very extraordinary case comes to us by way of Dantzig, near to which, close by a town called Dirschau, a young woman has given birth to a fœtus containing another and smaller one on its back. Here is the report of the Medical man who examined the child. Dr. Preuss, Medical Officer of Health for Dirschau, writes thus:—"I was summoned on February 1 to Schliewen to give an opinion on the child of a young woman, the wife of a shepherd, who had been delivered by the aid of a midwife on the previous day. The child was a very strong and healthy female infant, from the lower part of whose sacrum sprang a tumour the size of two fists. One could notice in this well-marked and powerful movements, and in its interior I felt the parts of a fœtus of the size ordinarily seen at five months. It was evidently a double birth of a very rare, but not a new kind. Rokitansky says of it, in the first volume of his 'Pathological Anatomy,' 'Double birth by implantation—(1) Cryptodidymus (Gult), the so-called *fœtus in fœtu*, where a large and perfect fœtus bears in some spot under the skin, or in a cavity of the body, a second smaller and imperfect fœtus.' To this class the foregoing case evidently belongs. They are allied to the following varieties:—'(2) Omphalocranodidymus, where the navel-string of one fœtus springs from the skull of another; (3) Epignathus, where an imperfect fœtus springs, with its blood-vessels, from the roof of the mouth of another fully developed.'" Such imperfect beings generally speedily perish, but in this instance such is not the case, for on March 4 Dr. Preuss reports both alive and well, the tumour being larger and its movements more active than when first seen. It has been suggested that the tumour is produced by spina bifida containing a cystic sarcoma, but the movements cannot then be accounted for. Meanwhile, two months after the birth, everything seemed going on well, and the child has been taken to Berlin for inspection by the Medical authorities.

Trousseau.—We extract a passage from a eulogium on Trousseau delivered before the *Société de Thérapeutique* by M. Pidoux. After describing him as, under the inspiration of Bretonneau of Tours, whose pupil he was, the restorer in France of faith in the power of medicinal agents, wellnigh extinguished by the influence of Broussaism, M. Pidoux says: "Strange was it to witness the interested curiosity of the pupils, and still more of the Practitioners of mature age, under whose eyes Trousseau gave himself up with imperturbable confidence to the employment of those medicinal agents so re-doubted by Practitioners of a generation brought up in the fear of irritants. He seemed to them as if manipulating burning coals. Those who had seen him prescribing insoluble preparations of iron, combined with quinine and aloes, to chlorotic subjects suffering from acute gastralgia, palpitating heart, vibrating arteries, and a congested and dysmenorrheic uterus, were sure next day to be found surrounding the poor girl's bedside, anxious concerning the gastritis, the cardio-arteritis, or metritis, which were sure to be exasperated by the incendiary medicines which had been administered. And when, under the influence of this tonic and stimulating medication, they found a return of appetite for nutritious food, an assuagement of gastric pains, relief to the cardiac and arterial spasm, while the regenerated blood-globules were penetrating the colourless lips and cheeks, they were not only surprised, but felt themselves also relieved. Their faith in the agents of the materia medica was restored, and through these effects of medicinal agents they began to conceive other ideas of disease. I do assure you, gentlemen, that this was quite as interesting as therapeutical experiments on healthy animals." M. Pidoux adds that the effect produced was all the more remarkable because the chlorosis of those days was so much better characterised than in our own. It was both more frequent and more decided than at the present time, owing to the debilitating regimen and therapeutics which were then in fashion.

Life Assurance and the Profession.—A case of considerable importance to life assurance offices and to the Profession was decided a few days since before the Lords Justices of Appeal. It appeared that a Mr. Bird had assured his life for £500 in the British Equitable Company, which had refused to pay on the ground that material facts had been withheld from the Company as to the state of Mr. Bird's health. Vice-Chancellor Malins had decided that the policy was void, and this was an appeal against that decision. It appeared that the policy was granted in 1863, a favourable report having been given of his health by his ordinary Medical attendant, Dr. Davies. The Medical officer of the Company had also examined Bird, and regarded his life as a first-rate one, except that he was rather too corpulent. The Company accepted the proposal on August 19, putting on an extra rate of premium on account of his full habit. He was informed that the premium must be paid on or before September 9, and that if any alteration in the state of his health had taken place between the Medical examination and the actual payment of the premium, the policy would be void, unless such alteration was communicated to the Company, and the premium afterwards accepted by them. It appeared that on August 17 Bird had consulted Dr. White, of Cardiff, who considered he was suffering from Bright's disease. Dr. Davies did not, however, coincide in this opinion. Bird died suddenly in May, 1864, and an inquest having been held on him, the verdict returned was death from fatty disease of the heart. An action was commenced on the policy, a bill was filed, and hence these proceedings. The Lords Justices were of opinion that Bird was bound to communicate to the Company the result of his consulting Dr. White, and that, as he did not, the policy was void, and the Company were fully justified in resisting payment. The appeal was dismissed with costs.

The Edinburgh Cattle Plague Reports and the United States of America.—Our readers doubtless remember the elaborate reports on rinderpest drawn up by Dr. Andrew Smart, acting under the instructions of the Lord Provost and magistrates of Edinburgh, and which were published in our columns at the time. The reports were characterised by earnest practical and experimental inquiry, and the conclusions arrived at by Dr. Smart were the result of a careful study of the disease as it appeared in this country. The subject of cattle plague or rinderpest has for some time been under discussion by the New York State Agricultural Society, with a view to gather up information from all available sources for preventive purposes. It must be complimentary to Dr. Smart to find that his reports have been taken as the basis of the volume on rinderpest which that Society has just issued for public guidance, and in which he is spoken of as a leading authority with the highest respect.(a) While noticing most fully the reports of the Royal Commission and the Edinburgh Medical Committee, the researches of Professors Simonds and Gamgee, and other authorities, British and Continental, Dr. Smart's practical experiments and recommendations are the leading theme of the volume. The beautiful coloured illustrations which Dr. Smart appended to his reports are also reproduced most faithfully. It is not less complimentary to Edinburgh than to Dr. Smart to find that the action taken at the time by the magistrates resulted in a series of experiments and conclusions whose importance has been recognised in so conspicuous a manner.

Medical Evidence.—In a late action in the County Court at Cheltenham, in which the question arose as to whether Mr. Sims Reeves was in a condition to sing on a certain occasion, the following evidence was given by Dr. Rumsey:—Dr. Rumsey said: I am a Doctor of Medicine of the University of Dublin and Fellow of the College of Surgeons. I was called in to see Mr. Sims Reeves at the Plough Hotel between three and four o'clock on December 17 last. I must ask you to allow me to refer to my notes of the case. He complained of cough, hoarseness, weakness of voice, indigestion, and general debility. I found his throat looking red, relaxed, and congested—that is, the minute blood-vessels were enlarged or distended. I found want of tone in the action of the heart. He assured me that he was unable to use his voice. I prescribed remedies which I hoped might afford relief, and left directions with Mr. Smith, who was good enough to apply the

(a) "First and Second Reports of the Special Committee appointed by the Executive Board of the N.Y. State Agricultural Society of the Statistics, Pathology, and Treatment of the Epizootic Disease known as the Rinderpest." Albany, United States of America.

remedies. I advised him not to sing unless he found his voice return. By Mr. Gough: I am unable to say whether he could sing—it is a matter of opinion. I cannot say positively whether this complaint had been coming on long. Mr. Gough: I must have an answer to that question. Dr. Rumsey: I decline to give any opinion as to how long it had been coming on. I believe I formed no opinion as to the length of time. Mr. Gough: From the state of his health do you think those symptoms came on in a day, or might they have been coming on two or three days? Mr. Montague Williams: I think Dr. Rumsey has answered that question by telling you that he formed no opinion as to the length of time the disorder had been coming on. Dr. Rumsey: The symptoms might have appeared on that day, or they might have been the growth of two or three days. When I saw him I was very doubtful whether he would be able to sing or not. I advised remedies which I hoped would have the effect of enabling him. I was not informed that they did not have the desired effect until between eleven and twelve o'clock the next morning, when I found him much better in every respect. Mr. Gough: Was Mr. Sims Reeves suffering from nervousness? Dr. Rumsey: There was considerable nervous debility. Mr. Gough: If a person gives way to nervous feeling, would that tend to increase a complaint such as this? Dr. Rumsey: That is a question which any sensible man, even though he be not a Physician, might answer. Mr. Gough: What is your opinion as a sensible man? Dr. Rumsey: I am here to give evidence as to facts, not to state opinions. The Judge informed Dr. Rumsey that he was called as a scientific witness, and should esteem it a compliment in being asked to give an opinion—that was his position. Dr. Rumsey: I know my position. We should be glad to think that the position of the Medical witness was such as that described by Dr. Rumsey, but, if we are not mistaken, certain of the judges of the supreme courts have ruled otherwise.

PARIS MILK AND WATER.—The Paris *Constitutionnel* states that the consumption of milk in Paris is 500,000 litres per diem, at the price of 25 centimes the litre, to which 50,000 litres of water are added, bringing the depredations in this article to the sum of 4,500,000 per annum. The dairy proprietor, the milk merchant, the collector, and the retail milk seller, all add their quota of water. The price, 25 centimes per litre, less than 2½d. per quart, is, in fact, not remunerative, and hence the constancy of the fraud. Chemical experts cannot prevent it, for there is no normal standard of the quality of milk; nor can such exist, since its density varies from numerous causes dependent on the animal, such as food, localities, time of milking, the mode in which this is done, etc.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

D. D.—The Surgeon alluded to died last year.

Arthur Thomas.—Apply to any respectable Medical Practitioner in Hastings.

Student must pass the preliminary examination.

Chirurgus in Rure will receive one guinea a day so long as he attends the assizes, and reasonable expenses for journeys, etc.

A. B. C. should give notice of his removal to Dr. Francis Hawkins, Medical Registration Office, Soho-square.

Reader.—Akenside, Garth, Goldsmith, and Smollett were all members of the Medical Profession.

Civis would be received as an out-patient without a letter of recommendation.

A Poor Patient.—The fellow is an arrant quack. He possesses no legal qualifications. The case is curable, and a respectable Surgeon should be consulted, not an advertiser in the class of diseases mentioned.

W. A. S. R., Reading.—You are no doubt morally entitled to a fee, but we doubt whether you could recover it. Apply to the defendant himself; if he is a respectable person, he will pay you.

A Student.—No award of the Jacksonian prize has yet been made. The dissertations for the Collegial biennial prize must be sent in before Christmas-day, 1870.

An Intending Proposer.—It is usual in the case of a life not coming up to the "average" to add such a number of years to the age as will make it safe for the office to insure it. The Albert Life Office, with which was amalgamated the Invalid Assurance Office, undertakes, on a scale drawn up by Dr. Farr, to insure invalid lives. Our correspondent can obtain further information by applying to the Manager of that office.

Erratum.—Col. 1, page 347, March 27, *instead of* "Haddy, John James, *read* "James, John Haddy," etc.

A Surgeon, R.N.—The case is fairly and clearly stated by Dr. F. J. Brown, in his pamphlet entitled "Conduct of the Admiralty in reference to the Revenues of Greenwich Hospital, etc." Mr. Childers, being in 1865 Civil Lord of the Admiralty, said, in reference to an Act passed in the Parliament of that year, "With respect to the Doctors, the Government did not propose to take away any part of their employment. He hoped that the House would resist the attempt to retain sinecures at Greenwich, and that the offices of governor and lieutenant-governor would not be maintained." "After this remark," says Dr. Brown (announcing the principles of the change), "the Bill passed into committee. Since that time, the complete reversal of both these propositions has been effected, so that we now see Greenwich Hospital with a greater number of infirm and unhealthy persons in the establishment than at the period of the passing of the Act, with fewer Medical officers to attend them; and the very same sinecure deprecated by Mr. Childers in 1865, established by his own act as First Lord of a Liberal Admiralty in 1869." Dr. Brown forcibly shows that this was an act of great injustice, the clause in the Act having reference to the appointment of a governor of Greenwich Hospital being, in fact, merely permissive, yet Mr. Childers spoke, in making the appointment of governor, as if it was his duty to take that step. The consequence is that the payment of £1200 a year (the payment of a sinecure governor) "will absorb the pensions of 157 seamen and marines—men driven from active service at 50 years of age by sickness, shattered health, or wounds." We quote from Dr. Brown's well-timed pamphlet the following, as to abridge it would be rendering an injustice to the Medical branch of the navy, a class of men who have been treated worse than any other in her Majesty's service:—

"Mr. Childers said in Parliament, 'With respect to the Doctors, the Government did not propose to take away any part of their employment.' Seeing that the Doctors were still to be employed in the Hospital, pensions were not allowed to Inspectors-General, although ten pensions, of £150 each, were allotted to Admirals. This strongly marked exception was presumedly due to the understanding that the Doctors would continue to be *actively employed in the Hospital*. But what are the facts? The same Board of Admiralty(a) that memorialised her Majesty on September 8, 1865, to allow them to appoint two Inspectors-General and two Deputy Inspectors-General for the Hospital duties, have abolished the office of an Inspector-General, and have left the entire Medical responsibility to an officer of the rank of Deputy Inspector-General. If their Lordships had foreseen in 1865 that the two appointments of Inspector-General promised by Order in Council were not likely to be made, it was due to the Medical Profession (similarly with other classes of officers) that pensions should have been instituted for the grade of Inspector-General. To have effected this, three of the Admirals' pensions must have been granted to the 'Doctors,' leaving seven for the 'magnates.'

"Repression of the Profession is further shown in the proceedings of the year 1866. By a memorial to her Majesty, an Order in Council, dated February 16, 1866, was obtained modifying the previous one so far as to reduce the Medical staff of the Hospital to one Inspector-General and one Deputy Inspector-General; yet no appointment of an Inspector-General was made. It is clear, therefore, that the Liberal Admiralty do not employ the doctors at Greenwich Hospital in accordance with the powers that they possess by Order in Council, or in good faith with the words of Mr. Childers uttered in Parliament in 1865.

"Once more, when the *Liberals* constituted the Opposition, and the Conservative Government appointed an Inspector-General to Greenwich Hospital, *they, as a party*, with Mr. Childers as the naval oracle of the party, so strongly opposed that legitimate measure, *on the ground of economy*, that the Admiralty (Mr. Corry being First Lord) cancelled the appointment. Thus, a saving of £900 a year was effected in the case of a doctor in an institution *where doctors are needed*; whilst £1000 (b) a year is now bestowed on a Governor, *whose duty*, it is expressly stated, *is not to govern*—that is to say, he is not to interfere with the ordinary government of the Hospital and Schools thereof.

"Where is the justice—where the political honesty of these proceedings? Are these the acts of a Government placed in office to effect economy in the public expenditure? Surely we are in a dream, or our public men are beside themselves!"

Corrigenda.—In Dr. Richardson's lecture of last week, in line 50, for the words "silicate of potassa and soda" read "silicate of potassa and *silica*." And in lines 53, 54, and 57, for the word "silicate" read "silica."

ON THE USE OF THE CATHETER IN FEVERS WHEN THE PROSTRATION IS CONSIDERABLE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I believe that the use of the catheter in fevers, when the prostration is considerable, is a practice not generally known to the Profession. I will therefore, with your permission, point out some of its advantages, when timely and properly performed. Its use is indicated first of all when no urine has been evacuated for some length of time—say from ten hours and upwards; when also there is a perceptible fulness in the hypogastric region, immediately above the os pubis; when also any sense of pain or uneasiness may be referred to, or complained of, in the same region. If the urine is drawn off by the catheter in these cases, sleep is almost sure to follow the evacuation, and a great improvement in all the symptoms will immediately supervene. The operation of introducing the catheter must again and again be resorted to, till the patient has regained sufficient strength to micturate without further assistance. The instrument used should be one of medium size, either No. 8, or No. 9, or No. 10, and should be well lubricated with olive-oil all down its whole length, before its introduction. The left hand is then to take hold of the glans penis with its thumb and one or two of the forefingers, and afterwards with the right hand the catheter is to be passed into the urethra with the convexity of the curve upwards, and then worked down the urethra to the arch of the pubis; then at this point the instrument is to be turned round, so that instead of its

(a) The Board was the same politically, and partly the same personally as those at present in office.

(b) *Postscript, February* 16.—It is stated that an Admiral has been appointed on £1200 a year.

convexity the concavity of the curve may be upwards; then, with a little more manipulation, the instrument will pass right on into the bladder. To draw off the contents of the bladder, the catheter must be again turned round in the bladder, when, instead of the concavity, the convexity of the instrument may be uppermost; then remove the stilette, and on the principle of the siphon, you will be able immediately to draw off the urine (if there is any) into any convenient vessel ready to receive it. Again, in order to remove the catheter from the bladder and urethra, it will be necessary to reverse the above method of introducing the same.

It is scarcely necessary to make any remarks how the catheter is to be passed into the female bladder, as the urethra is so simple compared with the male—only that in bad fevers, it is as requisite to draw off the contents of the bladder from time to time as in males. I consider that the drawing off the urine in fevers, when there is great prostration, is only of secondary importance to the employment of aperients when treating such cases of febrile disorder. I am, &c. Willoughby Arding, M.D.

Wallingford, March 25.

A Mercurial Puzzle.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I beg to offer a few remarks on the above, which you are at liberty to publish. The first question asked by "Experimentalist" is in substance—"Was the concentrated solution of ammonium chloride and mercury perchloride attended by any chemical decomposition?" Assuming there were no visible signs of decomposition, I answer No; for let the salts be decomposed in solution, and there would be ammoniated mercury formed or calomel, both of which are insoluble in water; and further, the dilute officinal solution of mercury perchloride with ammonium chloride after long standing answers to the qualitative test of mercury perchloride. The precipitate obtained by "Experimentalist" may be thus explained:—A part of the caustic alkali set free the ammonia, which, combining with mercury, gave white precipitate; caustic alkali, being a little in excess, decomposed a small portion of the white precipitate, which accounts for the yellow colour observed possibly some yellow mercuric oxide was precipitated at same time). The subsequent agitation of the mass of white precipitate would entirely mask the small amount of decomposed mercury salt.

Dulwich, March 27. I am, &c. J. B. S.

COMMUNICATIONS have been received from—

Mr. Sampson Gamgee; Mr. Mitchell; Mr. C. Wooncock; Mr. R. Mutzell; Dr. J. E. Morgan; Dr. Willoughby Arding; J. B. S.; Mrs. Baines; Mr. W. Parkes; Dr. Day; Dr. George Johnson; Mr. J. Chatto; Dr. B. W. Richardson; Mr. A. Bruce; Mr. J. Hutchinson; Dr. Lionel S. Beale; Inspector-General Gordon; Dr. Moore; Mr. Edward H. Galton; Dr. Murray; Dr. Brakenridge; Mr. Royds; Mr. W. A. Richards; Mr. C. F. Maundee; Mr. B. J. Tuck; Mr. Arthur Thomas; Mr. J. R. Perkins.

BOOKS RECEIVED—

Ophthalmic Hospital Reports, vol. 6, part 3—Dental Journal, No. 150—Good sur la Résection de l'Articulation coxo-fémorale pour Carie—Brown on the Revenues of Greenwich Hospital—Journal of the Scottish Meteorological Society, Jan.—MacCormac on the Antiseptic Treatment of Wounds—Gibb's Discoveries in Science—Wilts County Asylum Report—Britannia for April—Wood's Bible Animals, part 16—Journal of Mental Science, No. 69—Practitioner, No. 10—Edinburgh Medical Journal, No. 166—Pharmaceutical Journal, April.

NEWSPAPERS RECEIVED—

Edinburgh Daily Review—Gazette des Hôpitaux—L'Union Médicale—Gazette Hebdomadaire—New York Medical Gazette—Australian Medical Gazette.

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 27, 1869.

BIRTHS.

Births of Boys, 1121; Girls, 1056; Total, 2177.
Average of 10 corresponding weeks, 1858-67, 2054·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	800	790	1590
Average of the ten years 1858-67	741·1	715·9	1457·0
Average corrected to increased population	...	...	1603
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	433385	1	4	6	...	16	4	4	...
North	618210	...	3	9	2	23	15	5	...
Central	378058	...	4	5	1	5	9	2	...
East	571158	...	5	17	...	14	12	3	...
South	773175	1	14	6	1	13	17	2	...
Total	2803986	2	30	43	4	71	57	16	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·821 in.
Mean temperature	38·7
Highest point of thermometer	50·4
Lowest point of thermometer	29·2
Mean dew-point temperature	34·0
General direction of wind	N.N.E.&N.E.
Whole amount of rain in the week	0·27

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 27, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1863.)	Births Registered during the week ending Mar. 27.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending Mar. 27.	Temperature of Air Fahr. Highest during the Week.	Temperature of Air Fahr. Lowest during the Week.	Temperature of Air Fahr. Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London Metropolis	3170754	49·7	2177	1462	1590	50·4	29·2	38·7	0·27	27
Bristol (City)	169423	36·1	117	76	*101	53·1	26·1	39·4	0·01	1
Birmingham (Boro')	360846	43·1	262	175	118	48·5	28·4	38·5	0·12	12
Liverpool (Boro')	500852	99·7	315	295	305	48·9	33·1	40·0	0·05	5
Manchester (City)	373892	82·7	293	210	*225	...	...	...	...	...
Salford Borough)	119350	23·1	74	60	57	51·5	27·8	39·4	0·08	8
Sheffield Borough)	239752	10·5	191	126	144	52·0	28·0	39·5	0·42	42
Bradford Borough)	138522	21·0	100	71	83	51·1	28·5	40·3	0·03	3
Leeds Borough	253110	11·7	191	129	102	53·0	31·0	42·2	0·15	15
Hull Borough	123682	35·6	94	59	72	...	...	...	...	...
Nwestl-on-Tyne, do.	130503	24·5	100	69	65	48·0	26·0	37·0	0·38	38
Edinburgh (City)	178002	40·2	140	86	124	49·7	31·0	41·3	0·20	20
Glasgow (City)	458037	90·6	374	268	403	53·4	28·7	40·3	0·09	9
Dublin (City and some suburbs)	325762	32·9	186	158	202	51·5	27·7	40·2	0·04	4
Total of 14 large Towns	6546587	35·5	4623	3244	3594	53·4	26·0	39·7	0·15	15
					Week ending Mar. 20.	Week ending Mar. 20.				
Vienna (City)	(1863) 560000	...	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·821 in. The barometrical reading decreased from 30·12 in. on Tuesday, March 23, to 29·46 in. by the end of the week.

The general direction of the wind was N.N.E. and N.E.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

April 3. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

5. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London, 8 p.m. Dr. B. W. Richardson. "On the Insusceptibility of certain Animals to the Action of Opium, with Experiments." Mr. Edwin Canton, "Case of complete Removal of Os Calcis." Dr. Sansom. "On Fermentation within the Living Body," and "On the Action and Use of the Sulpho-carbolates."

Odontological Society, 8 p.m. Ordinary Monthly Meeting.

Royal Institution, 2 p.m. General Monthly Meeting.

6. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Anthropological Society, 8 p.m. Meeting.

Pathological Society, 8 p.m. Meeting.

Royal Institution, 3 p.m. Prof. Grant, "On Astronomy."

7. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Metropolitan Association of Medical Officers of Health, 4 p.m. Meeting.

Obstetrical Society (Meeting of Council, 7 p.m.), 8 p.m. Mr. J. Hyde Houghton. "Hæmorrhage fatal in forty Minutes." Dr. James Wynne. "On the Treatment of Ulceration of Cervix Uteri." Dr. Saboia, "Case of Ovarian Disease treated by the Injection of Iodine." And other Papers by Dr Rogers and Dr. Cory.

8. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Royal Institution, 3 p.m. Prof. Tyndall, "On Light."

9. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Clinical Society, 8½ p.m. Dr. Broadbent, "Cases of Anæmia and Chlorosis treated by Manganese, Nickel, and Zinc." Dr. Greenhow, "Case of Nerve Disease, and Report thereon." Mr. Holthouse, "Case of Sub-glossitis." And other Cases.

Royal Institution, 8 p.m. Dr. W. B. Carpenter, "On the Temperature and Animal Life of the Deep Sea."

ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By SAMUEL WILKS, M.D.,
Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.

Treatment.

The remedies for nervous diseases are mostly of two kinds. There are those which act directly on the nervous system, and are hoped to cure either by setting up a counter-action, or by producing a temporary soothing effect until time works the result, and there are those which are styled the nervine tonics, consisting mostly of the metals.

It is remarkable how little has been accomplished with the first class of remedies—those which have a physiological action on the nerves. For it does not seem to follow that a medicine which has a striking physiological action is of any value in a therapeutical point of view. It might be thought that strychnia was the remedy to rouse the dormant nerve centres, or opium to allay their excitability; but the happy anticipation is not realised, for opium seems to have no curative influence on such diseases as chorea or tetanus. Far more efficacious remedies are to be found in simple tonics. There is, however, another class of remedies to be thought of before either of these, and which has no especial relation to the nervous system. You must remember that an affection of the nervous system need not originate therein, but be altogether dependent on an external or independent cause, and in such case our nervine medicines would be useless—as, for instance, in a convulsive attack arising from an intestinal worm. Therefore the absurdity of any system which is founded on treating symptoms alone. Suppose a brain or spine disease arose from some affection of the skull or vertebra whereby an inflammatory lymph or syphilitic deposit irritated the adjacent nerve structure, you would, of course, direct your efforts against the cause. Now, since it often happens that various nervous diseases have such an origin, I should recommend you in all doubtful cases to commence with such remedies as iodide of potassium or mercury as bichloride, for you may, by such means, actually cure your patient whilst tonics would be useless. In cases of epilepsy and many obscure nervous affections I usually commence with this class of remedies, knowing that a curable disease has sometimes ended fatally because they have been overlooked. I have seen a case of epilepsy dependent on syphilitic disease treated thus ineffectually by zinc, and I have seen a case of painful affection of the leg ending in paraplegia treated in vain by strychnia, when, according to the post-mortem revelation, iodide of potassium would have been the effectual medicine. I remember some years ago seeing a case of severe epilepsy treated by Dr. Rees with mercury, and apparently with the happiest result. Cases of the same disease apparently cured by the iodide of potassium are very numerous. In epilepsy I always like to try the iodide of potassium, although, as I have told you, there are other remedies, such as bromide, which are supposed to have a specific effect. You must not forget the class of medicines to which I allude in reference to extraneous causes of the disease.

Amongst the medicines which act directly on the nervous system there are few which I believe can be regarded as valuable remedies in its diseases. Thus *opium*, which, by its indirect influence on nutritive processes, is one of the most valuable remedies in the Pharmacopœia, is all but powerless in such diseases as mania, chorea, tetanus, and convulsions of all kinds. An all but poisonous dose may arrest the symptoms for a time, but only for them to recur with the same violence as before. *Belladonna*, again, may, through the nerves, control the disordered action of a particular part, but I think very little can be said favourable to its influence over diseases of the brain and spinal cord; I except a few cases where epilepsy has been apparently relieved by it. So with *conium* and *henbane*, remedies which are useful in complaints of other organs than the brain. I would say the same of *strychnia*, a medicine the effects of which are slight, considering the extent to which it is administered. Its general effects on the nervous system are as disappointing as its direct effects on the stomach are encouraging, for I regard it as one of our very best tonics in some forms of dyspepsia. I would say the same of *aconite;* it is a drug which, acting powerfully on the nervous system, influences nutritive processes in various parts, but its direct operation on the centres to alter their morbid states appears to be very slight indeed.

Chloroform, which, as a temporary remedy, produces such a wonderful stillness of the nervous system, produces no permanent effect. I can say little more of *cannabis indica*, *camphor*, *physostigma*, *prussic acid*, and suchlike medicines, which have such a powerful physiological effect on the nervous system; in the treatment of disease they could not be exchanged for the more simple drugs, as nitrate of potash or sulphate of magnesia.

Since in very many nervous diseases a disordered action of the centres has been of long duration, you can see how a temporary soothing or exciting remedy can be of little use compared with one which shall have a slower but more permanent effect. Thus we find that remedies which act indirectly, it may be, upon the blood-vessels of the centres, such as the metals, have contributed more than any other means to the cure of nervous disorders. Foremost stands *iron*, and then *zinc; silver* has been found useful in some cases, and in not a few *arsenic*. The most striking effects are seen in neuralgia, where iron and arsenic are often found to produce a cure without any possibility of doubt. In this class of affections I should say that arsenic is one of the most important medicines which we possess; it is difficult to foretell a cure, but in tic of the face, sciatica, pleurodynia, gastralgia, and other nervous affections its beneficial effect is often most marked. There is again *quinine*, which has cured more nervous disorders than all the physiological remedies combined. I have also given the tinct. *actææ racemosæ*, but cannot at present say much about it.

Then I must not forget to mention the novel method of introducing medicine by the skin—the hypodermic method. A small syringe contains the solution, and, having a needle-point, is inserted into the skin and the fluid forced in by gentle pressure or by means of a screw. Many remedies have been thus used, but more especially morphia. When first adopted it was thought to be eminently efficacious by acting directly on the painful part, but further experience has shown that an equally good result is obtained in whatever part of the body it is thrown. The advantages are that it acts speedily, and does not injuriously affect the system as when taken by the mouth. I have seen a gentleman who suffered agonies with spine disease take morphia in the usual way, and it produced sickness, parched mouth, and other unpleasant symptoms, and, at the same time, long before the system responded to its influence; but when injected through the skin it speedily soothed the system, relieved the local pain, and no unpleasant consequence resulted.

Then, again, amongst the remedies for local nervous affections we have local remedies, and these are of various kinds. There is the class of soothing medicines already named, made into the form of liniments, ointments, etc. These are sometimes useful, but often less efficacious than applications of an altogether different kind, as blisters and hot applications. There are many instances where a blister is efficacious after every soothing remedy has failed, and, as regards hot applications, I cannot speak too highly. These are popular remedies, but nevertheless much more seldom used than a particular medicine which can be taken from a bottle, because, indeed, the latter practice entails far less trouble; but I know from experience that there is many a sciatica or lumbago which can be cured in a few hours by a constant application of heat. Besides the heat, stimulating lotions are often highly efficacious, as the tincture of capsicum or mustard. I dislike to hear that a patient has failed to gain relief from the medicine of some eminent Physician or Surgeon, when some old woman or quack has effected a cure by a simple method. Amongst popular remedies is the tinctura arnicæ. I cannot say that my experience of it has been large, but I have seen enough of it not to ignore it, but consider it to be sometimes a useful remedy. In one case of a patient who had a violent neuralgic pain following shingles, we used the arnica, and the patient soon got relief, but at the same time an eruption came out, which is very usual after the use of this drug. The lotion was then discontinued, the eruption faded, and the pain returned. In this case it seemed to act as a counter-irritant.

I should say that just as hot applications are useful in many painful affections of the nerves, so is the cold douche in some paralytic conditions. I have seen cases of writers' cramp and suchlike maladies much benefited by allowing a stream of cold water to run upon the weakened limb.

As regards medicated plasters, they may relieve directly by the influence of the remedy which is on them, or by simply producing a new sensation instead of the old one, or generally. I believe, by the support they give to the part to which they

are applied. If the pain be due to what is usually called muscular rheumatism, they prevent the movement of the muscle and its attachments.

Electricity.—After the discovery of electricity as one of the forces of nature, and its remarkable effects on the animal body, it was naturally thought that its services might be commanded for the alleviation of sickness; but it is only of late years that it has been applied in a scientific method. One reason for its neglect by Physicians was no doubt the early meddling with it by charlatans, and thus for a long time the only electricians were the most notorious quacks. There was the mountebank who travelled the country with his electrifying machine made out of an old glass vessel and a Leyden jar, consisting of a bottle with a nail inside, wherewith to "shock" the people, and the cures, of course, were numerous, as that of a bishop long paralysed who jumped out of his chair at the first application. After this, we heard of the wonderful properties of pulverised loadstones, and when the galvanic battery was invented, the effects of this in vivifying weak mortals were marvellous. We can now scarcely credit the fact that the celebrated quack Graham instituted in Leicester-square a temple of health, where, amongst the furniture, was a celestial bed provided with costly draperies, and standing on glass legs, so that married couples who slept in this couch were sure of being blessed with a beautiful progeny. For its use £100 a night was demanded, and many persons of rank were foolish enough to comply with the terms. When, shortly afterwards, Franklin dragged the lightning from the clouds, and showed its identity with electricity, we heard how an old woman, whilst at work in the fields, was struck with the flash, and how her uterine function was restored, and she was blessed with a second family. It can scarcely, then, be wondered at that respectable Medical men up the present day held aloof from the subject of electricity, and regarded it at the best as a pretty plaything for their patients. It has been quite of late years that the subject has been investigated in a scientific spirit; and I think we at Guy's may be proud that it was at this institution, under the auspices of the late Dr. Golding Bird, that it began to be systematically used as a therapeutic agent. The instrument which you now see in our room was the same which this Physician used for many years. His instrument was a simple cylindrical electrifying machine, and an insulated stool on which the patient sat. By this means the patient was charged, and sparks were drawn from his back or elsewhere. The Leyden jar was also sometimes put into use. At this time galvanism had not been used for therapeutic purposes.

You may remember that it is now some eighty or ninety years ago since Galvani made his experiments with the frog's legs, and believed that electric currents run through the animal body, and that this was supposed to be refuted by Volta, who placed together a number of pieces of metal separated by wet cloths, and gained the same result. He believed that the forces were generated in the metals, and that the animal body merely acted as a conductor. That Volta had a force developed by the chemical action of the metals was no doubt correct, but Galvani's surmise was also true that electric currents were continuously passing in the animal body. The well-known experiments made of late years by Matteucci, Bois-Reymond, Radcliffe, and others have sufficiently confirmed this. There are currents continually developed both in muscles and nerves. Just as the electrifying machine had been in unscientific hands attempted to be used as a therapeutic agent, so the galvanic battery was thought to possess wonderful curative properties, and currents were passed through the body. It was found, however, to be all but useless in the manner applied, and the machine, together with the galvanic bath, remained in the hands of charlatans—at least I am not aware that the bath has been put to any scientific purpose. The object proposed was to extract metals from the body which had been introduced as medicines or in various trades. The patient sat on a wooden stool in a bath containing some acid, and, by his holding one pole of the battery and the other being attached to the outside of the bath, the metals were said to be drawn out. I am not aware that there are any facts corroborative of these statements, although there is a gentleman in London who is such an adept with the method that before his patient has left the premises he has been enabled to evaporate the water and to present his customer with the several metals which he has extracted, unless, indeed, as is more usual, he can collect them as they float on the surface.

The subsequent discovery of electro-magnetism gave a new impulse to the use of this agent in Medicine. You know how a current of galvanism in the conducting-wire of a battery induces a current in another wire, and how, if the latter be made into a coil and a piece of iron inserted in its midst, the iron becomes a magnet, and how by this means, if the current is applied or cut off, a series of minute shocks are felt. You know also the counter discovery of Faraday of the magnet giving rise to an electric current whenever contact is made or unmade with one of its ends. Now, whether the current induced by the galvanic battery and that induced by the magnet differ in therapeutical effects I cannot tell you. The magneto-electric machine has of late come more into use because more convenient. This induced or intermittent galvanism, when used for the treatment of disease, is usually styled faradisation, in distinction to the constant galvanic current from the simple battery.

On the discovery of this form of galvanism, and its striking effects on the muscles of the body when the poles were applied to different parts of the limbs, the method of treatment by faradisation came at once into favour, and we are indebted especially to Duchenne for the stimulus which he gave to its use. This Physician made long and careful experiments on healthy and diseased persons, and thus not only supplied us with new methods respecting the cure of disease, but with new facts as to the action of particular muscles in the body. If you read his works, you will see that if he applied dry metallic points to the surface, the skin was merely affected, but that if wet sponges were firmly applied over the portions of a muscle this was excited to contraction, and more especially if applied to certain spots towards the edges. This is said to be due to the nerves entering at these places. This electro-magnetic apparatus then, more especially owing to Duchenne's writing, came into general use, and it is the instrument which we have hitherto been solely using. Every ward has had one, and if a patient was recommended galvanism this was used, the poles of the battery being applied to the muscles in the manner mentioned. Now, its efficacy was very uncertain when used indiscriminately in all cases. In those where a set of muscles were inactive from long disuse, its value was great. Thus, in the case of a girl who had hysterical paralysis of one leg, and, in consequence of her having been long bedridden, the limb was much smaller and weaker than the other, the galvanism effected an entire cure; so also in some cases of facial paralysis. In the progressive muscular atrophy, as in the remarkable case of the girl already mentioned, it is very useful. On the other hand, we found it quite inefficacious in the infantile paralysis, and in a similar class of cases sometimes met with in the adult, where a limb, without any apparent cause, becomes wasted and useless.

Thus we went on until other observers, and especially Remak, informed us that in the supposed efficacy of the induced electric current we had overlooked the effects of the constant or continuous current as produced by the simple cell; and, moreover, that the effects of the two forms of galvanism were different on the human body, and consequently had their own special curative properties in different diseases; that not only was faradisation or the induction currents of the magneto-electric and galvano-electric machines useless in some forms of paralysis, but actually injurious; and that diseases which could not be remedied by one method could by another. Remak undertook many elaborate experiments on the human body, and he stated that the constant current was a much more useful agent. Its application is to produce a soothing influence on the nervous system, although at the time when it is applied it stimulates all the nerves of the body.

It was not long, as you may imagine, before a galvanic battery was obtained for the use of the Hospital for Epileptics and Paralysed, and, under the superintendence of Mr. Radcliffe, the statements of Remak were confirmed. In consequence of what I heard, I paid a visit to the institution, in company with Mr. Branford Edwards, when Mr. Radcliffe was good enough to show us some of his cases. There was one of a man who had been suffering for some months with wasting and paralysis of the right arm. Faradisation was powerless in producing contraction of the muscles, and therefore valueless as a remedy, whilst the new machine was producing a rapid cure. When the poles were applied a sudden contraction of the muscles ensued, and they were daily growing in strength. As we had always taken a great interest in the subject of electricity as a means of cure at Guy's Hospital, we had at once a galvanic machine fitted up in our room, consisting of a hundred cells, which can be used in any number at a time. Mr. Edwards has been indefatigable in his trials of the instrument, and the results have fully borne out all that was anticipated—in fact, some of the cures have been most remarkable. Its value has been greatest where the faradisation had previously failed. Thus in lead paralysis, where very little result had previously been seen by the induced current, a more

marked effect was here obtained. This was not only seen in the final cure, but in the greater susceptibility to the influence. Thus in the man now in Stephen Ward who is recovering from lead palsy of the arms, an action was produced by the combination of fifteen cells, and a most marked result by twenty-five, whilst in a healthy man there was no evident effect. In the progressive muscular atrophy the constant current has been recommended not in the course of the muscles or nerves, but along the spine, and faradisation is said to be useless. Now, the first statement we have proved to be true, but not the last. The case which I have already mentioned of the girl who was little more than a skeleton, and who quite recovered under the use of faradisation, is sufficient to show this; at the same time we have already had cases which prove the assertion of Remak. Dr. Fagge has had under his care the case of a man with commencing progressive muscular atrophy, and who rapidly recovered by the use of the continuous current down the spine, one pole being placed over the nape of the neck and the other over the lumbar region. That the whole nervous system is affected is certain from the sensations which the patients experience—they almost always experience a metallic taste in the mouth, sometimes have flashes of fire in the eyes, and sometimes a more troublesome symptom of vertigo. I much want to see the application of the continuous current in cases of infantile paralysis, which hitherto have been those which have baffled us. One of the most remarkable cases I have seen of its efficacy has been in the man who has just left Stephen Ward. I can give no other name to his complaint than partial paraplegia. For six years he had been weak in his legs, so that they dragged when he walked, and he had great difficulty in raising them from the ground. I ordered the continuous current to the spine, and he began to improve at once. After each application he said his legs were more free, and at the end of two months he left well. Of course there was no organic disease, but recovery after such length of time was most remarkable and encouraging. I gave him no medicine, in order not to complicate the case.

We do, then, find that there are different kinds of paralysis in which the induced current and the constant current have respectively their curative effects; but much yet has to be learned as to the further application of the remedies. It is beginning to be used in painful affections of the nerves and muscles, as neuralgia and myalgia. Cases have been reported of its efficacy in sciatica, and as regards the muscular painful affections in hysterical women its value I have seen. Even the pains attendant on organic disease of the spinal cord are relieved by the application of the continuous current. Much care is required in its management, for, if galvanism is a useful agent, we may suppose it also to be injurious if wrongly applied. In the experiments on frogs and other animals, if a current pass down a motor nerve, the function is increased, but an opposite effect produced if the poles be reversed. Whilst the current passes downwards the hind legs are moved; if the poles are reversed, the front legs are moved, and the animal, at the same time, cries out.

It has already been put into use to stimulate the uterus; also the bowels in constipation, also in aneurism to produce coagulation of the blood.

How far galvanism is really an anæsthetic has yet to be made out. A few years ago the public mind was excited by the discovery of painless tooth-drawing. One wire was attached to the tooth instrument, and the other the patient held in his hand; at the moment contact was made a shock was experienced. If the tooth came out at the same time, the patient was uncertain what his sensations were: if the two did not coincide, he suffered a galvanic shock, besides the horror of the extraction. I apprehend that when the pain was not felt it was covered by the greater commotion produced by the galvanism, the explanation having the same principle as that which is known to most schoolboys who can pull out a hair of the head without your feeling it. The method is to give you a slap of the face at the same time.

ROYAL INSTITUTION OF GREAT BRITAIN.—At the general monthly meeting held on Monday, April 5, Sir H. Holland, Bart., President, in the chair, Charles Chapman, Esq., Mrs. Cunliffe, Walter Graham, Esq., Archibald Hamilton, Esq., and Henry Stone, Esq., were elected members of the Royal Institution. The presents received since the last meeting were laid on the table, and the thanks of the members returned for the same.

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

ON THE CAUSE AND PREVENTION OF SEPARATION OF FIBRINE IN THE BODY.(a)

(*Concluded from page 327.*)

Relation of Serum.—In the class of inflammatory cases the specific gravity of the serum is, as a rule, reduced, from which we infer that the albumen or the saline constituents, one or both, are lowered. The albumen and the salts of the serum in healthy blood may be taken, in combination, as representing 82 parts in the 1000, the albumen representing 70 and the salts 12 parts. Unfortunately, sufficient care has not been taken to determine the difference of relationship, in disease, between the albumen and the salts, the practice usually adopted being to weigh all the solid residue of serum, albumen and salts together. Some exceptions have, however, been made to this rule, and they are worthy of notice. In two cases of pneumonia Becquerel and Rodier found the albumen reduced, in one case, to 61 parts in the 1000, in the other to 59·7 parts. In a case of pleuritis the same observers found the albumen reduced to 65·4 parts, and in two cases of pericarditis they found, again, a reduction in one example to 60·4, and in the other to 53·0 in the 1000 parts; in acute bronchitis they found it, in four observations on males, 64·9, and in four observations on females 68·8. Andral and Gavarret, on the other hand, in two observations on one case of acute bronchitis, found the albumen forming 80·6 and 86·9 parts in the 1000 of serum.

Very few observations, indeed, have been made to determine the actual amount of the fixed saline constituents in acute disease. In five cases of erysipelas Andral and Gavarret determined the saline matter of the serum, and found, in every instance, a marked reduction. In one of these cases the fixed saline constituents amounted to not more than 6·2, and in the case where the amount was greatest it reached only to 7·3 in the 1000 parts. In a case of puerperal fever Heller determined the salts at 6·0 in the 1000 parts. These facts all tally with the observations which have been made on the specific gravity of the serum in acute inflammatory disease, and we may consequently accept that, as a general rule, the solid residue of the serum is decreased. To this rule there are, nevertheless, exceptions, or, rather, there are periods in the course of acute diseases where there is exception. A free loss of water from the body by the skin, kidney, or bowels may turn the scale, and produce an excess of saline constituent.

In the second class of cases (cases of stasis) there is no necessary modification in the amount of saline matter of serum.

In the third or cachectic class the solid residue of the serum is reduced in amount. In a case of typhus, Guenean de Mussy and Rodier found the residue as low as 60·1 in the 1000 parts. In his nine cases of malarial fever, Jones determined the solid matter in 1000 parts of serum to be in one case 80, and in another 64; in all there was marked reduction. He further determined the amount of fixed saline constituents of the blood altogether, in his cases, and of the serum alone. In one case there were only 3·316 parts of saline matter in the 1000 of blood; and, in the case representing the largest quantity of saline substance, the proportion was but 7·692 in the 1000 parts. The fixed saline matter of the serum was, in its largest amount, 5·747 in the 1000 parts, and in its smallest amount 2·938 in the 1000 parts.

In the fourth class of cases (cases of acute flux) there is a great increase in the amount of the solid constituents of the serum. In cholera, the solid matters of the blood have been found raised from the normal standard of 220 parts in the 1000 to 260. In the serum the solid residue has also been discovered raised from the natural standard of 82 parts to even 124 parts in the 1000. It is worthy of remark also, in reference to the blood in this disease, that the excess of solid matter in the serum is often the albumen. Thus in one case Simon saw the albumen reach 114 parts in the 1000, and in a second case 110. In phthisis pulmonalis, during the stages marked by great exudative action, there is increase in the amount of solid matter of the serum, although not of the blood altogether. Thus Popp in one case found the solid matters of the serum reach 110, and in another case 100 in the 1000 parts.

Relation of Water.—In the first class of our cases, cases of the acute inflammatory type, the amount of water is increased

(a) Delivered on Tuesday, January 12.

in the blood. In febrile arthritic rheumatism, Popp saw the water reach to not less than 859 parts in the 1000, 79 parts above the usual standard. In acute rheumatism Andral and Gavarret saw it represent 839 parts, in pneumonia 834, in pleuritis 845, in peritonitis 851, and in angina tonsillaris 830. In puerperal fever Heller found the water in one case making 833 parts of the 1000; in carditis Lecanu found the water holding the remarkable proportion of 880 in the 1000 parts, and in pericarditis 847. This strange fact respecting the increase, or, more properly speaking, the accumulation, of water in acute inflammatory conditions, is of the utmost importance as an addition to our knowledge. I dwell again and again upon it. In a physical point of view it relates to the increased action of the involuntary muscles of the body, and bears also, in the most distinct manner, on the separation of fibrine.

In the second class of cases (cases of stasis) the relation of water to the other conditions of the blood is not necessarily changed.

In the third class of cases (the acute cachectic series) the quantity of water present is again above the average. In typhoid fever Becquerel and Rodier saw the water representing 891 parts in the 1000, and in the same disease Andral and Gavarret saw a maximum of 862 parts. In typhus, Guenean de Mussy and Rodier found the water of the blood in one instance forming 826 parts in the 1000; and, in his nine analyses of venous blood in malarial fever, Jones determined the amount of water as follows, from the first case to the ninth:—830·509, 850·888, 877·553, 831·294, 827·901, 860·976, 839·589, 840·511, 833·419.

This remarkable increase, or rather accumulation, of water in the blood is not less important in the class of cases named than it is in the true sthenic inflammations.

In the fourth class of cases the quantity of water in the blood is decreased. In a choleraic case which ended fatally, Becquerel and Rodier determined the amount of water in the blood, and found it reduced to 722 parts in the 1000 on the day of the death.

There is one other line of research which ought to be followed out in regard to the changes of blood in disease. I mean the determination of the amount of fatty matter in cases of acute inflammatory fever. I have several times observed, on dissecting the bodies of children after death from separation of fibrine in the right side of the heart, that the surface of the fibrine has been covered with globules of fatty or oily matter. In one case, from a clot weighing in the moist state fifty grains, I extracted, with ether, two grains and a half of fat.

Reviewing the conditions of blood above described, and connecting them with the fact of separation of fibrine within the body, we gather several significant truths. We see as a preliminary that fibrine may separate, as it does in the aneurismal sac, from pure local cause, without any known change in the general parts of the blood, or in the relation of the other parts to the fibrine. Slow motion of normal blood and exposure of such blood to an enlarged surface seem, in this instance, all-sufficient causes to bring about the separation. The separation under these conditions is naturally a slow process, occupying weeks, and perhaps months, as a rule; it is a gradual stratification—I should not be far from correct in saying it is selection of particle for particle, somewhat as in growth of animal structures.

We learn that in two other classes of cases—the acute inflammatory and the cases of flux—the fibrine is increased in quantity as compared with what exists in normal blood. There is, however, a difference in the two classes of cases. In one—the inflammatory case—the fibrine is absolutely increased; in the other—the choleraic—the fibrine is relatively increased. We learn, once more, in studying the inflammatory class of cases by the side of the acute cachectic case, that the relationship of fibrine itself is very different. In the first class it is absolutely increased; in the second, it is absolutely decreased. In two respects, however, the blood in both classes is the same. In both classes the matter of the blood-corpuscle is reduced, and the water is largely increased. What bearing these two facts have to each other I do not as yet know; whether the decrease of corpuscle in any way depends upon the accumulation of water, or whether there be some common agency leading to the decrease of the one and the increase of the other, I cannot say with exactness; but this I may say without doubt, that, in regard to the separation of the fibrine, the increase in the amount of water is of the greatest moment. Let me illustrate this point by an old experiment. In this tall glass jar is a half-pint of blood in the fluid state. The fibrine has not been removed from the blood, but is retained, still in its liquid condition by the addition to the blood, so soon as it was drawn, of a salt, chloride of ammonium. To this fluid blood I add water in excess, and see now what happens; when a sufficient time has elapsed for the water to diffuse, the fluid mass suddenly solidifies—in other words, the fibrine takes up so much water and coagulates. The change waited for the water.

There is here another tall glass jar; I put into it the same quantity of blood held fluid in the same way—viz., by an equal weight of chloride of ammonium. I now add water, but not in excess. The blood in this fails to solidify. I next plunge into the blood a bottle-brush clean and new, and with the brush I churn this blood. I take out the brush, and on its fibres I find the filaments of a separated fibrine.

Lastly I churn, in a similar manner, some blood held fluid by the same quantity of the same salt, but without the addition of water. I get no separation.

Thus the increase of water in blood—and this is a grand point to remember—is directly favourable to separation of fibrine; and such increase, even in a moderate degree, is aided immensely, in effecting change of fibrine from the fluid to the solid state, by quick motion. In the inflammatory cases, *par excellence*, we have therefore the disposition to separation. Increase of fibrine, increase of water, and rapidity of circulating action are combined, and the wonder is, not that so many cases of separation occur, but that, in the large number of inflammatory cases which take place, so many patients escape the accident of separation. In the cachectic cases the reduction in the actual amount of fibrine is a source of partial, but only partial, protection; for we know now that a very small portion of fibrine may render solid or gelatinous a very large quantity of water, and that the mass produced may be a fatal obstruction to the course of the blood. In an early lecture after this I shall show the relation of increment of heat in the body as connected, and perhaps primarily connected, with those changes of blood which have been under our consideration during the past hour.

ORIGINAL COMMUNICATIONS.

DIGITAL COMPRESSION IN POPLITEAL ANEURISM.

By C. F. MAUNDER, F.R.C.S.,
Surgeon to the London Hospital.

In the *Med. Times and Gaz.* of March 13 I made some remarks upon the theory and the method of cure of aneurism, using as an example the popliteal. After reviewing the method by moderate alternate compression and relaxation, as reintroduced to the Profession by our Irish brethren, I ventured to express the opinion that although this method would often be successful, yet it was so at the expense of much time and comfort, and, indeed, might in some instances, if not early successful, have the undesirable effect of maintaining the disease *in statu quo*. My argument in support of the last proposition was that—in process of time the collateral circulation would become so fully established, and the flow of blood through the sac be so free, that nothing short either of firm continuous compression extended over many consecutive hours, or the application of a ligature after all, would suffice for coagulation. The following case now under care (March 19) is a striking illustration of the value of the former method.

Mr. R. J., aged 33, of fair health and temperate habits, had experienced uneasiness in his right leg for about eighteen months before Mr. White was consulted. A pulsating tumour of the size of an egg was detected at the upper part of the popliteal space (aneurism), associated with pain and swelling below the knee.

On November 30, 1868, I confirmed Mr. White's opinion, and we agreed to try flexion—the leg forcibly flexed on the thigh. This method, although gradually accomplished, gave the patient a good deal of discomfort about the knee.

On December 12 the tumour was perhaps slightly firmer, and we added a conical ten pound weight, to be worn as much as possible upon the femoral artery in the groin night and day, and relaxed the flexion somewhat.

By January 18, 1869, no impression had been made on the cyst, and a clamp-tourniquet was employed alternately with the weight.

February 14.—Chloroform was administered with the intention of employing prolonged compression upon the femoral artery, and its inhalation was repeated for a short time on

eight other occasions, but Mr. White could not continue it for more than an hour at a time on account of its injurious effect upon the patient.

On March 13 I again saw the patient, an interval of three months having elapsed since my last visit, and although alternate compression and relaxation of pressure had been vigorously conducted during this period, no good resulted. It was now agreed that we should try prolonged digital compression. To effect this, I procured the aid of six gentlemen, students of the London Hospital—Messrs. Baker, Harvie, Ley, Mugliston, Sheffield, and Thornton, and I record their names because they performed their duty so efficiently over a period of twenty-two hours and thirty-five minutes. Each firmly compressed the femoral artery during ten minutes, chiefly with the thumbs, and was thus on duty once in the hour.

Mr. Sheffield reports that "on the 18th, at 10.40 a.m., digital compression of the femoral artery was commenced at the upper part of Scarpa's triangle. At the end of the first hour the patient became a little restless and complained of pain, due to the pressure on the integument at the immediate point of compression. The part was freely dusted with oxide of zinc, and one grain of morphia given. After a little time he was calm, but did not sleep. A horse-shoe tourniquet with a pad was applied below the tumour about 12 o'clock. At 1.30 p.m. he partook of dinner. At 2 p.m. Mr. Maunder visited the case with Mr. White, and found the patient very comfortable. The swelling felt firmer, and, as the tourniquet had slipped, a roller was firmly held in the popliteal space by means of a handkerchief tied round the leg and tightened by twisting it on a stick, as suggested by Mr. White. During the afternoon the patient smoked and went to sleep for about three-quarters of an hour. He partook of tea and supper, made no complaint, but rather expressed himself as being very comfortable. Up to 10 o'clock at night no very marked difference could be perceived in the tumour since 2 o'clock, but between 10 and half-past it suddenly became very hard, and it had to be carefully examined to detect any pulsation in it when all pressure was removed from the superficial femoral. No pain was experienced. The compression was kept up as vigorously as before. At 11 p.m. he had some brandy and water and a grain and a half of morphia. He dozed a little. 19th.—About 2 a.m. he said that the aneurism was very tender and painful when touched. At 3 a.m. he took another half-grain of morphia, and slept for about an hour and a half. At 5 a.m. the aneurism was carefully examined, and much of the tenderness had passed off. No pulsation could be detected. Compression was again resumed until 9.15 a.m., when Mr. Maunder and Mr. White saw the case in consultation, and agreed that continuous compression might be discontinued. The vessels about the knee were evidently enlarging, as one could be felt above and on the inside of the joint, and another upon the tumour. The patient was advised to wear the weight occasionally upon the artery in Scarpa's triangle during the next forty-eight hours. The skin of the groin was slightly red, and the cuticle abraded to the least possible extent. The compress below the tumour was loosened in the afternoon of the 18th, and removed at 5 a.m. of the 19th."

Throughout the whole progress of the case, the patient was allowed a mixed diet with a fair amount of stimulant. He took an occasional opiate and, for a few days, some iodide of potassium; but Mr. White thinks this latter drug did more harm than good.

Remarks.—The above case shows, I think, that prolonged alternate compression and relaxation, when it does not cure within a few weeks of its commencement, is very likely to be of no avail. During the first fortnight there appeared to be some slight benefit from flexion, but alternate compression and relaxation added, and vigorously maintained during three months, left the swelling *in statu quo*. The patient himself thoroughly understood the principle upon which the treatment of his case was conducted, and, under Mr. White's supervision, carried it out most efficiently. In time, he could bear the tourniquet screwed down so as to prevent all passage of blood through the femoral artery for an hour. He would then relax it for a short time, and then reapply with equal effect, or replace it with the weight. Indeed, I know of no instance in which this method has been more thoroughly tried than in the above.

With this fact in view, we had little hope that continuous digital compression would avail, and in this idea the patient concurred, he knowing even better than ourselves how carefully he had carried out our directions.

The value of the treatment, thumb compression, speaks for itself. It was borne with the least possible discomfort, and Mr. J. expressed a belief in his capability of endurance for many hours longer.

Mr. White informs me (March 30) that during some forty-eight hours subsequent to a cessation from digital compression, feeble pulsation was felt in the aneurism occasionally, but is no longer to be detected, and, indeed, the limb bids fair soon to be serviceable.

CASE OF

ENORMOUS HYPERTROPHY OF THE NECK OF THE UTERUS DURING LABOUR, WITH ADHERENT PLACENTA.

By CLEMENT GODSON, L.M.,
Resident Accoucheur, St. Bartholomew's Hospital.

On March 3, 1869, at 11 o'clock p.m., I was sent for by a pupil in attendance to see Mrs. C., aged 22, who had been in labour about three hours. This was her second confinement. I found her exhausted. Protruding from her vagina was a soft tumour about an inch and a half in length, which was apparently connected to the anterior lip of the cervix; the whole about three inches and a half long, and of the shape of a pear. The os uteri was fully dilated, and the head of the child was in the cavity of the pelvis. The pains were slight. I ruptured the membranes and applied the forceps, and extracted a large male child alive. In about twenty minutes, upon attempting to remove the placenta, copious hæmorrhage ensued, and I found a considerable portion of the placenta firmly adherent. This I quickly removed; but the hæmorrhage continued profusely, so much so as to occasion alarming prostration. Efficient contraction of the uterus was secured by well-maintained pressure, which was materially aided by the injection of very cold water. The general powers of the patient were supported by brandy and milk. For many hours so great was her prostration that her life was in serious jeopardy. She ultimately fell into a profound sleep. Awaking somewhat prostrate, she was freely supplied with essence of beef and other nourishment. The following day she had considerably rallied, but still continues in a very enfeebled state of health, owing to incipient phthisis, to which there is a strong hereditary tendency. The enlargement of the neck of the uterus, which had become so considerable as to be a formidable obstruction to the passage of the child, underwent a remarkable diminution within three days, and had almost subsided at the end of a week. It is worthy of remark that this extraordinary enlargement was only noticed by the patient three days previous to the accession of labour.

ON THE SUBCUTANEOUS INJECTION OF MORPHIA AS A REMEDY IN SEA-SICKNESS.

By THOMAS JOHNSTON,
Surgeon Cunard Royal Mail Steamship *Aleppo*.

Many have been the remedies tried and speculated upon for the cure of sea-sickness, but little seems to have been gained from all the sources to any advantage. A few medicines have been temporarily christened as specifics by various authorities, all of which, after a trial in other hands, fell to the ground as utterly useless. Another class of Medical authorities, forgetting the inconvenience of sea practice, or probably to a great extent ignorant of the Surgeon's resources in such, prescribed a certain regimen from the minute on entering the ship, which, in the first place, subjected the traveller to an ordeal, to carry out which was actually worse than the disease. The first idea in finding a specific in some drug has failed, as far as our present state of knowledge extends. The regimen, as recommended by various authorities, is practically useless and impossible to adopt. An antidote for sea-sickness has been sought for in vain, and the field has been unsuccessfully explored by Medical travellers up to the present. It is still so far open, and the fortunate explorer may rest assured of conferring a boon on the travelling portion of humanity should success fully crown his efforts. Rolling these thoughts about in my mind, with no definite aim further than a most anxious wish to be the discoverer of such a remedy, I joined the Royal Mail steamship *Aleppo*, crossing the Atlantic in the month of June, 1868, as Surgeon.

Since a certain period of my appointment to the ship, I began, after seeing many severe and even dangerous cases of sea-sickness, to try and overcome by some means or other the distressing complaint. I began the task fair, but with a mind pregnant of misgivings as to the success awaiting me. How far I was justified in forming such an opinion the sequele will tend very much to show, and will further demonstrate another useful lesson to the Practitioner of Medicine—that although many diseases are not now within the reach of Medical science, yet we should not be the less discouraged in our humane undertaking, but bear in mind that patient and repeated attempts are generally certain to issue in victory: and diseases too numerous to mention, although they appear at the present not within the grasp of Medical science, may probably in the future be overpowered by it, when it reaches a period of more refinement—a period, viewing our past progress, we have no reason to doubt we shall attain.

The following cases of sea-sickness, together with the remedies used, which I now offer to the Profession, especially those who devote their life to the sea, will tend considerably to show that my efforts have not been altogether devoid of success, and have exceeded my most sanguine expectations.

I view sea-sickness as being caused by a continual motion of the stomach, that motion acting upon the internal coats of the stomach and the pneumogastric nerve, giving rise, first, to vomiting, attributed to the motor influence of the nerve; secondly, to pallor, giddiness, and in some cases to complete syncope. The seat of irritation is, in my observation, the stomach, which irritation, acting at the distal extremity of the nerve, produces certain symptoms referable to the brain. Viewing the aforesaid theory as correct, one can easily account for the distressing symptoms on physiological grounds which sea-sickness produces. How far I am correct I am not to judge; others will be found more competent and less prejudiced; but my theory is not unsupported, as the reader may imagine, by practice. *Au contraire*, pretty and reasonable as it appears, it has a sounder recommendation than physiological theory. It is supported by the successful results of sound practice, the greatest recommendation it is possible for it to gain. Many theories seem beautiful, but the beauty is to obtain good practical results, testing them fairly and fully before sanction or condemnation; striving to arrive at the truth, and observing if we get practically the good from our experiments we expected theoretically. No matter how sceptical any may be, if a practice confer a boon on suffering humanity, it soon will be gladly accepted.

I imagined if I could apply any anodyne in any other way than by the mouth to the stomach and irritated pneumogastric nerve, I might at least be able to tranquillise that portion of the nervous system more intimately connected with sea-sickness. If I succeeded in allaying that and arresting the vomiting, I believed the other symptoms would soon disappear.

In mentioning my practice of the subcutaneous injection of a solution of morphia over the region of the stomach to a few well-informed Medical friends, all of whom seemed to think highly of it, I was asked by one, "Why not give the morphia by the mouth?" For one plain and decided reason, that the stomach could not retain it. I was asked by a second how I could get the patient to undergo it. Well, the operation—if such I may call it without bringing operations into contempt—is trifling, gives little pain, and, if Richardson's anæsthetic spray-producer be used, it gives absolutely none. Such being the case, no obstacle can be thrown against its further trial on that score, and my kind interrogators are, I fear, not aware of one fact characteristic of sea-sickness—viz., the patients lie in a semi-dead-and-alive state scarcely possible to imagine, from which the news of the ship foundering would hardly be possible to arouse them. They are too willing to grasp at any idea, however faint the chance of relief, if you submit to them the possibility of a cure.

The advancement of science may possibly develope something even more suitable as a remedy, but it is difficult to imagine one more safer and easier of application than the subcutaneous injection of morphia, which I have some confidence in bringing under the notice of the Profession. In doing so, I would remark that it is not meant to be applied in every case of sea-sickness. I claim its value in those more severe cases, which cause no small amount of trouble, or even imperil life. With these remarks, I give the history of three cases, asking those who have the chance to give it a fair trial, and, according to its value, to accept or reject it.

Case 1.—M. D., aged 27 years, sailed from New York on board the *Aleppo;* she was seven months gone in her first pregnancy; thin and pale; states that she always enjoyed good health. She was seized with sea-sickness after being in the ship a few hours, in which state she continued for three hours more when I was called to see her, and found her in a low and somewhat exhausted condition. I tried various medicines in vain. She continued ill for one week, gradually getting weaker; stomach very irritable, unable to retain any food for more than a few minutes; vomiting very distressing; skin bathed in cold perspiration; pulse low and intermittent; the whole countenance betokened suffering and anxiety. She had now been eight days in the ship; night and day had been passed much in the same distressing manner. I began to get anxious about her safety, as she showed no signs whatever of amendment, but was gradually sinking. On the ninth day I again saw her, and then formed the idea of using morphia subcutaneously. I mentioned it to her; she grasped at the idea, and begged me to perform the operation. At 4 p.m. on the ninth day I injected fifteen minims of a solution of morphia containing one eighth of a grain of morphia. It had been done scarcely one hour before she fell into a sound sleep, which continued uninterrupted till 12 p.m., when she awakened much refreshed and expressed her thanks for the relief. She called for food, and had some cold beef-tea, which she took with a relish and retained with no bad symptom. This was the first sleep and the first food she retained on her stomach since the beginning of the voyage. On the tenth day, at 6 a.m., at her own request, I again injected ten minims of the same solution. I had some reluctance in doing it again so soon, but I gave way to her entreaties, and considered the long period of exhaustion and the trying ordeal she had undergone, and felt that twenty-four hours' sleep would be a poor recompense for the many wearied and sleepless nights she had spent in the ship. Before the second injection she looked a considerable deal better, and the change was remarked by many in the ship. After again injecting the ten minims she soon fell into a sound sleep, and continued asleep till 1 p.m. She awakened with a livelier countenance, had some food, which she retained, and she had also some wine; kept it well. I never again found it necessary to resort to the injection; in fact, further than merely seeing her on a complaint of debility, the case was out of my hands. She left the ship at Queenstown pretty well. After the first injection the vomiting, which had been so severe as to imperil her life, never once returned, and the nausea and sick sensation vanished also, and to the end of the voyage she was in tolerably good health and spirits. I dwell particularly on this case as one well suited to illustrate the value of the subcutaneous injection of morphia in sea-sickness. This case was seen and watched by many intelligent persons, and the utility and value of the remedy was placed beyond doubt.

Case 2.—M. A., aged 20 years. Sick for four days; could retain nothing. Injected mxv. of the same solution over the region of the stomach, as in the preceding case; patient fell asleep at 10 p.m., one hour after injection; awakened at 5 a.m. next morning, the vomiting and sickness gone; had some breakfast at 9 a.m., and to the end of voyage never had again unpleasant symptoms.

Case 3.—John H., aged 30 years. Had been very sick and unwell for three days. I again used the morphia in a precisely similar manner, and the results were quite in accordance with the two preceding cases.

I find it would be an unwarrantable trespass on the pages of this valuable paper were I to go on enumerating more cases. I have done sufficient to show the Profession that I am warranted in arriving at the conclusion I have done in reference to the use of morphia injection in sea-sickness—at least, in violent and prolonged cases. A trial of it by any Practitioner will soon elucidate its value. I have never heard of it being applied in these cases; the results are most encouraging, and should stimulate to its further trial in suitable cases. If any Surgeon will do me the honour of testing it, I shall be glad to hear the results. Meantime, I have thrown out the suggestion as it occurred to me, and have given so far the results. They are of such a nature as to lead us to hope that the armoury of Medicine thoroughly explored is not destitute of a weapon able to fight and vanquish a disease which, if not usually deadly, is most annoying, the ravisher of the tourist's pleasure, and a no less formidable assailant of the humble emigrant.

THE LEEDS FINE ARTS EXHIBITION AND THE NEW INFIRMARY.—At a meeting of the subscribers to the new Infirmary and the Exhibition Guarantee Fund, held on Monday week, to devise means of raising funds to complete the building, upwards of £10,000 were subscribed in the room.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

GUY'S HOSPITAL.

ACUTE DEATH OF THE SUPERIOR MAXILLARY AND MALAR BONES AFTER MEASLES—PURIFORM INFILTRATION OF THE ORBIT—SLOUGHING OF EYE—CEREBRAL SYMPTOMS—DEATH.

[From notes by A. K. Newman.]

William C., aged 4, was admitted into Guy's Hospital on October 24, 1868, under the care of Mr. Poland. The child had always been delicate. His mother had frequently had cervical abscesses, and had lost several children during their early life, but there appeared to be no history of syphilis. About ten weeks before the child had a very bad attack of measles, which prostrated him very much, and about four weeks after his breath became very offensive and almost unbearable. The right eye was noticed to be somewhat prominent. An offensive and sanious discharge issued from the right nostril and side of the mouth. These symptoms becoming aggravated, the child was brought to the Hospital in the course of the following week.

On admission, the child was anæmic and wasted. He did not appear to be suffering from much pain, but seemed listless and disposed for quietude; pulse 116 and rather weak; urine free from albumen; takes liquid nourishment well. There is a sero-sanious discharge from the nose and mouth, and the stench therefrom is very great. The whole of the right side of the face is swollen, more especially towards the orbit and outer canthus of the right eye. The skin is somewhat tense, shining, and of dusky red. The right eyeball is very prominent, and is thrust upwards and outwards, and is almost immovable. The cornea is clear, and the pupil acts feebly. It is difficult to ascertain clearly whether vision is affected by the great stretch put upon the optic nerve. The upper lid is œdematous and red, and cannot close over the protruded eye. There is chemosis of the conjunctiva of the lower lid, which is bathed with a semi-purulent discharge. On examining the mouth, the whole of the right superior maxillary bone seemed to be in a state of necrosis, in part movable and in part quite fixed. Several of the teeth had fallen out.

Mr. Poland stated that probably he should have to remove the whole of the upper jaw, and thus lay open the lower part of the orbit, so as to relieve the pressure, which was evidently situated in the direction of the eye, whatever the cause might be.

Under chloroform the loose portions of bone were removed; one piece was very large, and included the floor of the orbit, so that the finger readily entered the orbit, but no pus escaped, nor could any abnormal condition be detected. There was still a large quantity of dead bone left, chiefly the malar bone and part of the sphenoid, which were firmly fixed, and could not be forced away by the amount of traction that it was thought advisable to adopt. It was further deemed advisable not to proceed to any other measures, more especially as the object for which the operation had been undertaken—viz., the removal of the floor of the orbit—had been accomplished.

The operation was not followed by any relief of the condition of the eye; on the contrary, it became more fixed and prominent, the cornea sloughed, the globe gave way, and its contents were evacuated. The child became semi-conscious; he was constantly picking his nose and face when not watched; great restlessness; skin hot and dry; pulse nearly 200, full but compressible; face flushed; tongue brown and dry. Mr. Poland considered the case to be one of phlebitis of the ophthalmic vein, extending to the cavernous sinus and the cerebral veins.

The child died on October 31, seven days after admission, and eleven weeks after the first attack of measles.

Examination of the Body Forty-two Hours after Death.—Dr. Moxon's report: Eyeball protruding, but collapsed; cornea separated from its sclerotic part; sloughy and very foul condition of lower lid; superior maxillary bone gone, with the exception of the nasal part; malar bone dead and moveable; external angular process of frontal bone yellow, and the bone itself for two square inches denuded of pericranium; it was not, however, dead, and its dura mater was practically sound. The dura mater at the back of the orbit and about the cavernous sinus was thickish, and the latter especially had its walls distinctly fleshy; the interior of the right cavernous sinus was full of nasty brownish fluid; the veins from the brain entering the cavernous sinus were stuffed with similar grumous matter; the other cerebral veins were full of gelatinous clot of post-mortem formation. There was no pus in the arachnoid cavity; the internal arachnoid in all its great lower spaces was full of semi-solid lymph of the colour of pus; this ascended around the central peduncle, and entered the velum interpositum, so causing external inflammation of the ventricles, which were full of limpid fluid. There were no granulations on the surface of the ventricles, but their walls were softened. Other viscera healthy; no pus in the joints.

REPORT OF PRACTICE IN THE COTTAGE HOSPITAL, WALSALL,

During Thirty-five Months from March, 1866, to January, 1869, inclusive.

By JOHN BURTON, Jun.

The Institution above-named is really not a "Cottage" Hospital, architecturally speaking, but an institution possessing all the disadvantages of a large ordinary Hospital. In the first instance it consisted of two conjoined dwelling-houses in a very noisy throughfare in the heart of the town, surrounded by houses on three sides, backed up by an extensive stable-yard, and having its wards one above another, being each capable of holding four beds were it required. Now, however, although it is removed to a more open part of the town, it still consists of the old form of Hospital; it is composed of four wards, one 32 ft. long by 20 ft. wide and 15 ft. 4 in. high, another 27 ft. long, 17 ft. wide, and 10 ft. 4 in. high, forming together the ground-floor, over which are two other wards of like dimensions. Each ward is furnished with a bath-room 7 ft. 6 in. square and a water-closet of like dimensions. Of my operations, their results, etc., I send the following account:—

Necrosis of Femur, etc.—Amputated through the lower third. Cured.

Necrosis of Tibia.—Amputated through the middle third of femur. A very deceptive case, in which excision of the tibia (leaving the periosteum) was performed, when it was found that the disease extended into the ankle-joint. Amputation was then performed through the lower fifth of femur, and as the periosteum of that bone stripped up like a sleeve, about three inches of the shaft had to be also removed. (Made a good recovery.) Cured.

Cancer of the Sole of the Foot.—Removed thirty months ago; has not yet returned; foot sound. Cured.

Necrosis of Metatarsus, etc.—Three toes with metatarsal bones removed by disarticulation. Cured.

Crushed Foot, Compound Fracture of Metatarsus, etc.—Three toes with metatarsal bones removed by disarticulation. Cured.

Disease of Knee-joint with Necrosis of Femur.—In this case amputation was performed through the trochanters, by a new plan of operation, which I can recommend in cases where assistants are few and it is desirable to lose as little blood as possible. Make a long incision in the line of the femur over its external aspect, through which, after very little clearing, the bone is to be sawed through; the limb is then removed by circular incisions, leaving the femoral artery till the last. This, if necessary, can be tied previous to being divided. I am of opinion that the limb could be removed at the hip-joint by the same incisions. In the above case I used a small ordinary saw 5 inches long by 1 inch broad, but a chain saw would be better, as I think. This patient went on very well for about three weeks, but albuminuria, dropsy, and other evidences of disease of the kidneys set in and carried the patient off in a little over six weeks after operation. Died.

Compound Comminuted Fracture of Arm.—Amputated through upper third—primary operation. Cured.

Compound Fracture of Leg.—Amputated through upper fourth—primary operation. Cured.

Compound Fracture of Forearm.—Amputated through lower third—primary operation. Cured.

Compound Comminuted Fracture of all the Bones of the Face.—A more severe case could not, I think, be imagined. The external wounds, however, were small and insignificant, except one at the root of the nose, through which I could pass a finger into the throat. The face presented the appearance and felt like a bag of marbles. The chief feature of interest was the fact of a vulcanite splint being used inside the mouth (I think for the first time in this district in the treatment of facial fractures), enabling the bones of the upper part to be supported by the lower jaw, which was only divided through

the symphysis. The splint was a model of both sets of teeth as far as could be got, and was deep enough to allow of a half-inch hole in front to feed the man through. It was made by Mr. Harry Grove, of this town, to whom all credit is due, and whose skill and kindness I must thank for the assistance rendered, without which I do not think it possible that the case could have been conducted to nearly so successful an issue. The man, after having lost a large portion of one lung (sloughed and coughed up), and gone through a severe attack of erysipelas of the head and face, was discharged cured, sixty-one days after the receipt of the injury, which he got in a coal mine by a "shot" going off before he expected it, and when he was close to it. Cured.

Femoral Hernia.—Strangulated over fifty hours. Bowel almost sphacelated. Died.

Amputation at Hip-joint.—Performed under the most desperate circumstances on a child three years and a half old, after an accident on the railway, by which its leg was nearly ground off at the groin. The femoral artery and vein were exposed in front, and about six inches of the sciatic nerve were lying exposed in the wound behind. The vessels were secured by a needle being passed under them, and as there was no muscular tissue fit for the purpose, the flaps were composed of skin only. The patient died in fourteen hours after the operation. Died.

Compound Fracture of Forearm.—Amputated through upper fourth—primary operation. Cured.

Compound Fracture of Leg.—Amputated through upper fourth. Cured.

Simple Fracture of Superior Maxilla.—Treated without splints at all, the jaws simply being fixed so that the month could not be opened. Cured.

Compound Fracture of both Superior Maxillæ.—In this case also Mr. H. Grove made a splint which enabled me to keep the parts in position, and still be able to dress several severe wounds about the head and face. Cured.

Compound Fracture of Metatarsus.—Three toes and metatarsal bones removed by disarticulation—primary operation. Cured.

Compound Fracture into Ankle-joint.—Amputated through lower fifth. Cured.

Compound Fracture of Humerus.—Amputated through upper fourth—primary operation. Cured.

Gunshot Fracture of Radius.—Amputated through upper fourth. Cured.

Rectal Fistula operated on. Cured.

Femoral Hernia operated on. Cured.

Two Tumours on the Back.—Removed. Cured.

Compound Fracture of Carpus.—Amputation through lower fifth. Cured.

Total—Cured, 21; died, 3.

Remarks.—Of the cases in the Hospital during the time I have held the appointment of Surgeon to it, the above are the most worthy of notice. I have, however, attended during that time 396 patients in the Hospital, and 4905 as out-patients. Among the in-patients I can number 54 cases of burns, of which 5 died. These burns were all treated with cotton-wool and baths, the patients being placed in baths till all the wool soaked off them and floated away. They were then taken out, and the wounds re-covered with dry wool, which treatment being repeated every second or third day, as required, has in my hands been most successful, the wounds healing rapidly, and not corrugating so much in the cicatrices as burns usually do. I may say some of the burns extended over the whole anterior or posterior surface, as the case might be. The five who died did not live to receive any treatment, all dying within a few hours after admission. Ninety-seven cases of fracture, chiefly of the lower extremities, but including three of the spine (which three ended in death), and three complicated with internal injury; of the others the general treatment has been by extension over a pulley with a weight, which I have found very successful, especially where the fracture extended into or was near the ankle-joint. Twenty-eight Wounds: Of these I have only to say that their treatment consisted of exposure to the air, as were all wounds made in amputation or other operations (except of course, in hernia), they never having a covering of any kind, nor any lotion or other dressing, being only syringed with cold water if there was much suppuration, but that was required only very occasionally. All hæmorrhage was controlled by acupressure; and all flaps were composed of nothing but skin and cellular tissue. Among the 4905 out-patients I can number the following:—702 abscess, 292 burn, 26 dislocation, 259 fractures (chiefly of upper extremity), 245 sprain, 115 tumours (chiefly removed), and 968 wounds.

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Medical Times and Gazette.

SATURDAY, APRIL 10, 1869.

THE LONDON UNIVERSITY EXAMINATIONS.

The *Saturday Review* of last week, in an article on the matriculation examination in the London University, has made some severe, but none the less truthful, remarks on the examining system adopted by the University of London. It has always been a matter of surprise and regret to us that out of the vast number of Medical students who come to London to be educated for the Medical Profession, not more than from twenty to twenty-five of them annually succeed in obtaining Medical degrees from the London University. So long as this is the case, the London University can never be regarded, from a Medical point of view, either as efficient or successful.

Self-complacent and self-admiring as would seem to be the nature as well as the custom of the London University, it can scarcely have the boldness to maintain that the small number who are yearly presented with its Medical degrees at all adequately represents the industry and the ability of the London Medical schools. And yet why should it be that the majority of our clever and hard-working students are unable to obtain the degrees of that University to which they should naturally look to become affiliated?

It would, we imagine, be thought a very singular circumstance if the greater number of the Medical students of Paris graduated at Strasbourg or Montpellier, or those of Berlin or Vienna at any other German University than that in which they received their education. If a University does not supply the needs of the locality in which it is placed, surely it cannot be doing its legitimate work; and if it does not do its legitimate work, it must be, to a certain extent, a failure. And this, we feel compelled to admit, is the position of the London University, especially as concerns its Medical degrees. Let us briefly consider the causes of this failure, and inquire if their existence is a matter of necessity.

First of all, then, is this very matriculation examination, the fallacies of which have been so ably and effectively shown up by our contemporary the *Saturday Review*. The vast number of subjects, of which a "competent knowledge" is required, may well appal the most serious and earnest student—History, geography, chemistry, natural philosophy, French or German, Latin, Greek, English, mathematics, algebra, Euclid—we say the serious and earnest student, because apart from the circumstance that "fools rush in where angels fear to tread," it is not in the nature of the genuine student to work at a dozen subjects at a time. He knows very well—every one knows—that a "competent knowledge" of any large subject is only to be

obtained by close and somewhat exclusive application. To urge or require such a man to read at more than three or four subjects at a time, is to upset and divert the whole current of his life. It requires him to give up *study* and replace it by *cram*, and that of the most useless kind. If any examination was ever invented in this world to favour cram as opposed to study, it is such an examination as that appointed for matriculation at the London University, and unfortunately this remark applies not to its matriculation examination only.

Has it never occurred to the members of the Senate that the diffusion of the mind over many subjects weakens it, and that its concentration on a few subjects strengthens it? This is a statement which we should imagine would generally be admitted as an axiom. Yet the diffusion plan is in great favour with them, and the concentrating method entirely ignored. Excellency and commanding ability in one or two subjects, no matter how comprehensive each subject may be, finds no recognition. There is no place whatever therein for them; but to a smattering of many things, or, at the best, to one mediocre dead level of general information, it gives its warmest welcome.

After matriculation the aspirants for Medical degrees have to face the preliminary scientific examination, and here, again, a man must be nothing less than encyclopædic in order to pass safely through this ordeal. Chemistry again, natural philosophy, mechanical philosophy, practical chemistry, zoology, and botany—all these have to be known "competently." No matter how excellent a zoologist or a botanist a man may be, unless he is also something of a practical chemist and a competent physicist, he has no hope of passing this examination. On the other hand, a man may be an excellent chemist and an accomplished physicist, but if he knows nothing of botany his case is hopeless. But a student with a "little knowledge" of all these subjects (and we know well *how* little of true knowledge he *may* have—we mean knowledge that will bear the test of time), such an amount as can be readily supplied by skilful cramming, will undoubtedly be successful.

The London University makes no allowance for likes or dislikes, for special aptitude or special inaptitude; but the human mind is to be coerced into one uniform routine system of general information.

We have less to complain of in the first M.B. examination, except that in the scheme for the honour examination that plan is adopted which is of all others best calculated to keep the student who possesses an extensive knowledge of any one subject from receiving just recognition and reward. By the regulation which only permits those who pass in the first division to compete for honours, it must happen that a man may know physiology as well as his examiners, and yet, because he has not reached a certain standard in materiâ medica and organic chemistry (though, be it remembered, he must have shown a "competent knowledge" of those subjects, or he could not have passed), he is excluded from competing for the only reward which the University gives to such excellence.

It is not, then, to be wondered at that, last year, when the honours lists were published, not a single name was to be found in the physiology list. Is not this a state of things to be regretted? Is there not one man out of the picked men of the London schools who once in a year can take honours in such a subject as physiology, a subject which forms the basis of all sound Medical knowledge? Is not that examining system very seriously at fault which does not elicit such special talents and reward them? Men have a "diversity of gifts"—some have a natural taste for anatomy, and find the greatest difficulty in the world in getting up the barest minimum of chemistry; others seem to be born chemists or physiologists, and find themselves utterly incapable of remembering regional anatomy. Indeed, it has always seemed to us that that is a very priggish kind of mind to which all knowledge comes alike.

As we advance to the final examinations for Medical degrees we have still less to complain of, although the same remark which we have made as to the honour examination at the first M.B. applies with nearly equal force to the honour examination at the second M.B. Surely a man may deserve honours in pathology without being necessarily a first-rate practical accoucheur or an expert toxicologist, and *vice versâ*.

But there are other circumstances besides the character of the examinations which interfere with the efficiency of the London University as a place for graduating in Medicine. The most important of these is the number of the examinations and the order in which the different examinations must be taken. Nothing can exceed the stringency of the regulations of the London University on this latter head, and the curriculum they enforce is a most embarrassing one to many. Candidates are not permitted to proceed to examinations when they are ready for them, but they *must* wait a certain period between each and all of them, and no consideration whatever is granted to the exigency of circumstances. Let us take a single case. A Medical student comes from Australia, let us say, to the London Medical schools; he hears of the London University degree and wishes to take it, but the time at his disposal is limited: he learns that there are five or six examinations to pass, which he is willing and ready to submit to; but then he is told that that is only a small part of the regulations. He is informed that, after passing the first, he will have to wait a year before he can present himself for the second, another year before he can go up for the third, and another *two* years before he can proceed to the fourth, and, after all this waiting—unless he can remain another two or three years—he will have to depart with the admonition "that Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine."

And these are the regulations and restrictions that are in force in the university which was to open its doors most widely to all comers!

One other circumstance has doubtless had its influence in deterring men from attempting to graduate at the London University: it is the tendency to perpetual alterations, modifications of, or additions to existing regulations. One cannot be sure from year to year what will be the precise conditions required in the next year for any particular examination.

In bringing our remarks on this subject to a close, we desire cordially to admit that the Senate of the London University have done a very great deal, through the force of example, to improve the examinations of many of our examining bodies, and to make these tests more genuine and real than they were some few years ago; but we cannot rest content while we see the direct influence on Medical education of our metropolitan University so limited as it is at present. We should wish to see the possession of a Medical degree from the London University the rule rather than the exception; but such a consummation is not likely to be favoured by its present regulations, nor by the spirit in which those regulations are enforced.

RANKE'S PHYSIOLOGY OF MAN.(a)

Dr. Ranke, of Munich, who has been long favourably known for his investigations into several of the most difficult departments of physiology, has now presented us with an admirable text-book on this favourite subject. He has succeeded in giving us, in a moderate-sized volume of 800 pages, an excellent treatise, which differs from most other works of the kind in having an essentially practical bearing and character, and fully bears out the statement contained in his title-page that it is written "with reference to the preservation of health and the practical requirements of the Physician." It is composed of five parts, which are respectively devoted to (1) the physiology of the animal cell; (2) the physiology of nutrition; (3) the physiology of the blood, and of the excretions which it gives off; (4) the

(a) *Grundzüge der Physiologie des Menschen mit Rückstand auf die Gesundheitspflege und das praktische Bedürfniss des Arztes.* Bearbeitet von Dr. Johannes Ranke. 1868. Leipzig: Engelmann. London: Williams and Norgate.

physiology of the generation of force in the organism generally; and (5) the physiology of sensation.

The physiology of the animal cell is very fully discussed by our author. Beginning with the form of cells, their mode of formation, and their metamorphoses into tissues, he proceeds to the chemistry and physics of cells. The great distinction of function between vegetable and animal cells — namely, the deoxidising action of the former, and the oxidising action of the latter—is very clearly laid down. By the chemical force of a cell, with the co-operation of solar light and warmth, oxalic acid may be formed by the abstraction of two equivalents of oxygen from four equivalents of the carbonic acid which exists as a small but constant ingredient of our atmosphere. The process is illustrated by the formula—

$$\underset{\text{Carb. acid.}}{4(CO_2)} - O_2 = \underset{\text{Anh. ox. acid.}}{C_4O_6}.$$

In reality, of course, it is a hydrated oxalic acid that is produced, but, for the simplicity of the formula, we disregard the water. Similarly, from two equivalents of oxalic acid and four of water, we may, by the similar abstraction of oxygen, obtain anhydrous malic acid, according to the formula—

$$\underset{\text{Anh. ox. acid.}}{2(C_4O_6)} + 4HO - O_8 = \underset{\text{Anh. malic acid.}}{C_8H_4O_8}.$$

And many other examples might be given. (In these formulæ O=8 and C=6). For examples of the oxidising action of animal cells we may refer to our author's remarks in p. 53 on the derivation of the animal pigments occurring in the muscles, in the healthy urine, in hair, the eyes, the lungs, etc., from the normal blood-pigment; and to his observations on the differences in the chemical processes which go on in different sets of cells. That there are such differences in a function, we learn from the chemistry of the tissues. Every cell contains products of decomposition and oxidation, which all present one common character, since they form series which descend lower and lower from highly complex matter to the final products of oxidation, each anatomically different group of cells always, however, retaining its original and specific stamp. Although each special group of cells exhibits vital processes based on oxidation or combustion, these processes are modified according to the special functions to be performed in each part of the animal economy. The oxidation which takes place on exercising the muscles must, for example, be a different process, and must give rise to different products from what occurs in the oxidation of hepatic or gastric cells, the products of decomposition in the latter cases being employed in the digestive process.

There is no more instructive and suggestive chapter in the whole book than that which treats of the "Physics of the Cell," and we cordially recommend it to our readers as containing much matter which they will not readily find elsewhere.

In the second book, which treats of the "Physiology of Nutrition," we meet with abundant evidence of the practical character of the volume. Thus, when considering water as an article of food, the author includes references to the various impurities liable to be met with, especially in crowded districts, and the endemic diseases to which these impurities may give rise, and gives the results of Radlkofer's microscopic investigations regarding the Flora and Fauna of waters contaminated with decaying organic matter. The methods of purifying water for drinking purposes are then discussed, and the section concludes with a notice of the important labours of Pettenkofer, Griesinger, and Wunderlich, in regard to the influence of surface and subsoil water and of the nature of the soil on the origin and propagation of cholera, typhoid fever, etc.

The same practical character of the book is shown in the author's remarks on the dietaries adapted for troops, families, and invalids. At the conclusion of his sketch of intestinal digestion, Dr. Ranke gives a short, yet sound and practical, section on the "Disinfection of the Intestinal Discharges" as a means of checking the spread of cholera and typhoid fever. In cholera, and in the diarrhœa which usually precedes it, the discharges are *often* alkaline at the period of leaving the bowel, and *always* become strongly alkaline after a day or two. Pettenkofer and his adherents maintain that, if we can chemically prevent the discharges from becoming alkaline, we render them innocuous, but if they become or are allowed to remain decidedly ammoniacal, they are then the means by which the disease is propagated. Amongst the metallic salts used as fæcal disinfectants, our author mentions sulphate of iron, subchloride of manganese, and sulphate and chloride of zinc, and gives the preference to sulphate of iron, of which 25 grammes (or $6\frac{1}{2}$ drachms) are sufficient to apply to the excretions of one person daily to keep them in an acid state. Strong but impure carbolic acid used to the extent of a drachm daily will suffice to retain the acidity of the excretions of a patient, but is unable to acidulate discharges that are already alkaline. If both sulphate of iron and carbolic acid are used, as is recommended by Professor Parkes (see his *Sanitary Report for* 1865, *Army Medical Department*), half the quantity of each must be employed, the iron being dissolved in a good deal of water. As a gaseous disinfectant, Dr. Ranke and Professor Parkes agree in giving the preference to sulphurous acid gas, obtained by the combustion of sulphur.

In his remarks on the movements of the intestinal canal, Dr. Ranke points out that they are influenced by the presence of carbonic acid. It follows (he observes) from the experiments of Krause and O. Nasse that certain chemical changes in the blood, and consequently in the fluids permeating the tissues of the nerves of the muscles, or of the muscles themselves, must be regarded as the cause of the intestinal movements. A slight accumulation of carbonic acid in the blood acts as an excitant, while a larger accumulation has a paralysing effect. If, by compressing the windpipe of a living animal, we partially suffocate it, its peristaltic movements will be found to be augmented if its abdomen be laid open, while they disappear if respiration is again permitted to go on. And a similar effect is observed on compressing the arch of the aorta, or the portal vein, by free venesection, and by causes which depress the animal heat. These experiments illustrate the actual results which occur in the healthy body, the peristaltic action of the intestines being more active during the process of digestion, when, as is well known, there is an excess of carbonic acid in the blood. Dr. Ranke considers that the effect of a cold abdominal compress in exciting the bowels to action may be in part referred to this cause, since the primary shock which directly follows its application interferes with normal respiration. He concludes by noticing the powerful action of tobacco (in consequence of its alkaloid, nicotine) in exciting the peristaltic movements, and the similar, but less marked, action of coffee, which is due to the presence of its empyreumatic oils, and not of its caffein.

Passing on to the third part of the volume, we find in the section on the "Chemical Constituents of the Blood" a complete sketch of the most recent views on this subject. The hæmatocrystallin, hæmatoglobulin, or hæmoglobin of different chemists is first noticed as the most important constituent of the red corpuscles. It is, as probably most of our readers know, a red crystalline pigment, which, under certain chemical influences, is readily decomposed into an albuminate, globulin, and a red crystallisable ferruginous colouring matter, hæmatin. The methods of obtaining these crystals, and the forms in which the latter occur, are then described. From whatever animal they are obtained, they dissolve readily in water, and they possess the optical property known as dichroism, appearing red in reflected and green in transmitted light. In the presence of oxygen this property disappears; hence it is absent in the cells of arterial blood. In addition to their hæmatocrystallin the red corpuscles contain not only water and certain gases, but fats which seem to coincide with the brain-fats—namely, protagon and cholesterin. The ash yielded by the incineration of the corpuscles closely resembles that yielded by the muscles, and contains a vast preponderance of potassium and phosphoric-acid compounds. In his remarks on the constituents of the

liquor sanguinis, he adopts the view propounded a few years ago by A. Schmidt regarding fibrin and its coagulation—namely, that the substance we commonly term fibrin results from the chemical action of a *fibrino-plastic* substance, which occurs both in the red and colourless cells, on a *fibrogenous* substance existing in the circulating blood.

The section on the "Gases of the Blood" is based not only on the well-known researches of Magnus, L. Meyer, and Bernard, but also on the recent labours of Setschenow, Sczelkow, Schöffer, and Preyer in the Ludwig Laboratory and of Pflüger. Dr. Ranke attaches the most importance to the experiments of Pflüger, who, by means of the air-pump, extracted from 100 volumes of the arterial blood of a dog 39·5 volumes of gases at 0° C. and the ordinary pressure, consisting of carbonic acid 29·0, oxygen 7·9, and nitrogen 2·6 volumes. This experimentalist finds that no addition of a stronger acid is necessary to expel the carbonic acid, and that when all the gas is removed a new acid is formed in or from the blood-corpuscles by a process of oxidation. Pflüger considers that he has fully proved that a formation of this acid is always going on in normal circulating blood. Ranke's assumption that the blood becomes acid during the increased metamorphosis of tissue which occurs in tetanus thus ceases to be a mere hypothesis. In connexion with the development of acids in the blood, we may add that formic and butyric acids have been found amongst the products of disintegration of hæmoglobin.

In the concluding section of this chapter, which treats briefly of the detection of blood-spots, Dr. Ranke refers to an observation made by Gwosdew with which we were previously unacquainted—namely, that a mixture of ether and amylic alcohol takes up the blood-cells without essentially altering their form. By means of this mixture we can also ascertain whether the blood causing the spots is fresh or putrid, since in the latter case the microscopic examination of the fluid reveals only the presence of minute granules instead of cells.

The influence of the nerves of the heart on the rhythmical action of that organ is more fully discussed than in any of our English works on physiology. According to Bezold,(b) whose "Investigations regarding the Innervation of the Heart" were published in 1863, and of which a good abstract is given in the sixth edition of Carpenter's "Principles of Human Physiology," p. 219, the movements of the heart are influenced by three systems of nerves, one of which—the pneumogastric nerve—is inhibitory. Since the publication of Bezold's researches, C. Ludwig and E. Czow have described a branch of the last-named nerve which commonly arises from the superior laryngeal, and which they regard as a depressing or inhibitory nerve (*Hemmungsnerv*). Irritation of the central end of this branch induces a diminution of the pressure of the blood-column by occasioning a dilatation of the vessels, or, in their own words, a lessening or checking of the tone of the nerves which supply the vessels. The division of these nerves produces no effect, neither does irritation at their peripheral ends. These nerves probably act as regulators of the heart's action. When the heart is over-filled, these nerves diminish the opposition which is presented to the discharge of blood from its cavities.

The chapter on "Respiration" contains various physiological facts which have not as yet made their way into the English text-books, and which we should have noticed if our space had permitted. It includes an excellent section on ventilation. Passing over about 100 pages, we come to the chapter on the "Production of Animal Heat," which contains a considerable quantity of original matter and two excellent sections "on clothing" and "on heating dwelling-houses," on both of which subjects Pettenkofer has thrown considerable light by his ingenious experiments. According to this authority, the summer clothing for a man should weigh from five to six pounds, and that for a woman from six to six pounds and a half; while the winter clothing of both sexes, when the temperature is a little above the freezing point, should weigh from twelve to fourteen pounds.

The third part of the volume treats of animal electricity, and may be regarded as a complete essay on that difficult but important subject. It consists of three chapters—the first on the muscular and nervous currents, in which are discussed the history of animal electricity, Du Bois Reymond's discoveries in this department, the muscular current and its laws, the nervous current, Du Bois Reymond's theory of the development of animal electricity, and the chemical theories on this subject; the second on the electrical current in its actions on the vital properties of the tissues; and the third on medico-electrical apparatus and experiments, in which he considers the various ways of applying continuous and intermittent currents, the best form of medico-electrical machines, the various forms of electrodes for physiological experiments and therapeutic applications, etc. This chapter contains a most remarkable figure (p. 625), more closely resembling a constellation on a celestial globe or star-map than anything else. It represents a nude figure dotted all over with spots, from each of which (140 in number) a line emerges, terminating with a figure. This spotted figure represents the results of an enormous number of experiments performed by Ziemssen, who, acting upon the principle that the best method of causing the muscles to contract is through the influence of the nerves, found that these spots, to which the term *motor points* was given by Remak, are the subcutaneous points at which the nerves enter the muscles. These experiments are, however, only an extension of those of Duchenne, who had previously ascertained that there are definite points on the surface of the skin which, when irritated by the application of the electrode, occasion the most decided and well-marked contractions. Ziemssen's figure is accompanied by an explanatory title indicating the significance of each figure. Thus, for example, No. 1 indicates the point where the facial nerve emerges through the stylomastoid foramen, No. 50 the motor point for the M. extensor digiti minimi proprius, No. 118 the motor point for the M. tibialis anticus, etc. This figure, thus mapped out, will be of great assistance to all future experimentalists in this department.

The concluding portion of the work embraces the consideration of the physiology of sensation (with special chapters on the different senses) and the physiology of the central nervous system, including the sympathetic system. Like the earlier part of the volume, it is written with great care, and includes all the latest discoveries. Numerous and excellent as the physiological treatises of the present day are, we shall be only doing a simple act of justice in expressing our decided opinion that, for its size (less than 800 octavo pages), Ranke's "Elements of Human Physiology" is the best that has yet appeared.

(b) We regret to announce the too early death of this eminent Physician, which occurred months ago.

THE WEEK.

TOPICS OF THE DAY.

The difficulties arising from the present state of the law on the subject of dying declarations have received another illustration in the case of a man named Jenkins, who was tried at Bristol, on April 5th, for the murder, by drowning, of Fanny Reeves, a woman with whom he had cohabited. The only evidence against Jenkins was a "dying declaration," made before a magistrate by Reeves on Saturday evening, October 17. She died on Sunday at eleven o'clock. Evidence was given that

"On Saturday evening a minister came and prayed with her, and she appeared to have given up all hope. A magistrate then attempted to take down her dying declaration. She was very weak, and breathed with considerable difficulty. Her mind was remarkably clear. An oath was administered to her, and she then made a statement, which the magistrate's clerk took down in writing. She said from the shortness of her breath she thought she was likely to die, and she thought she should not recover, and she had the fear of death before her. She had no hope at present of her recovery."

In the statement, as signed by the deceased, the words "at present" are written between the lines. On examination, the magistrates' clerk said that he had originally written the statement, "I have no hope of my recovery;" but that on reading the clause to the woman, she said, "No hope at present of my recovery." He had therefore interlined the sentence. The statement as a dying deposition was objected to by the defence on the ground that the introduction of the words "at present" proved that every hope was not excluded. The judge (Mr. Justice Byles), however, decided to admit the statement, because the entire case depended upon its admissibility, but reserved the point in favour of the prisoner for the consideration of the Court above. Meanwhile the man is found guilty and sentenced to death. Now, we cannot help observing that in the case of the woman Barrett tried at Leeds, on which we commented last week, the whole proof equally depended on the admissibility of a dying declaration, and that to non-legal minds there appears to be at least no more reason for rejecting the statement in the one case than in the other. The Medical Profession know well that there are some persons who, even *in articulo mortis*, can scarcely be said to have given up all hope of recovery, however they may be assured, and even acknowledge, that death is impending. No doubt the whole subject is surrounded with difficulties. But we believe that in many instances the condition of mind in a dying person which the law requires to make a declaration valid is simply not to be obtained. Meanwhile the public have a right to expect that the law, whatever it be, shall be expounded in the same way and equally enforced in all cases.

We are glad to see that, on the occasion of her Majesty's visit to St. Bartholomew's Hospital on Tuesday last, Mr. Paget was sufficiently recovered from his recent illness to be present. The Profession will be glad to know that his health is sufficiently restored to allow him to resume his Professional duties.

The Lord Chancellor has refused to comply with the request of the Committee of St. Luke's Hospital to institute an inquiry into the condition and management of the charity, and a like petition from Dr. Ellis, the late Medical officer, has been refused by the Commissioners in Lunacy on the ground that "no facts have yet been brought to their notice which would justify that wide inquiry." The *Times* newspaper has therefore felt itself moved to institute an inquiry, the results of which were chronicled in last Friday's issue. The first complaint brought by the Times Commissioners against the management of the Hospital is that the resident Medical officer is not a superintendent; that his power is not much greater than that of the steward and matron; and that, in the exercise of his Professional duties, he is liable to interference from the visiting Physicians and Surgeon, who are held to be his superiors. This, it is urged, is in direct contravention to the recommendations of the visiting Commissioners in Lunacy, who maintain the principle that every asylum should be under a responsible Medical superintendent. The other complaints may be resolved into a want of paint and whitewash, airiness and comfort in the sleeping cells; the high cost of the establishment, averaging for the board and lodging of each patient £80 per annum; a want of fresh vegetables and fruits in the diet of the patients, and a defective supply of hot water for washing purposes. The Hospital, moreover, is in a bad way pecuniarily. Last year the Committee sold out £3000 to pay tradesmen's bills, and in eighteen years they have sunk £23,000 of capital. The *Times*, however, states emphatically that "whatever cleanliness can be attained by the nurses is there." The whole blame of the defects is thrown upon the shoulders of the Committee. We think that the first ground of complaint—that of the subordinate condition of the resident Medical officer—is the valid one. The others are, partly at least, accounted for by an old-fashioned building in the centre of London, and a decreasing exchequer.

Dr. Buchanan and Mr. John Netten Radcliffe have received permanent appointments as Inspectors under the Medical Department of the Privy Council. Both these gentlemen have undoubtedly earned these appointments by services rendered to the cause of public health, and the announcement of their promotion has been received with general satisfaction. The Medical Officership of Health for St. George's and St. Giles's district, vacant by the resignation of Dr. Buchanan, has been conferred on Dr. George Ross, of Hart-street, Bloomsbury. Dr. Ross came late into the field as a candidate, but his parochial influence insured him a pretty certain victory.

Some doubt has been thrown on the verdict in the Norwich murder case by an anonymous letter addressed from Brighton, purporting to have been written by Sheward's wife, to the clerk of the Norwich magistrates, in which she states that she left Sheward to live with another man, who is since dead, and gives reasons for still preserving her *incognito*. Under any circumstances the police ought not to rest until they have traced the letter and discovered the *soi-disant* Mrs. Sheward.

A movement has been commenced in Dublin, under the auspices of the Presidents of the Colleges of Physicians and Surgeons, to raise a fund for the family of the late Dr. Collis. We trust that the appeal which is to be made to the Medical Profession will meet with a hearty response throughout the United Kingdom. But we are glad to learn that the movement is not to be confined to Dr. Collis's own Profession. The public, and especially the public of his own city, were, indeed, the true gainers by his career. His life was devoted and sacrificed to the advancement of Medical knowledge, but was too short to allow him to reap any adequate personal reward, or to provide for those whom he has left.

Most of our readers are aware that Dr. Weir Mitchell, the American physiologist, announced some months ago that pigeons appear to be insusceptible of the action of opium. He administered twenty grains to a pigeon in one day without the slightest effect resulting. At the meeting of the Medical Society of London on Monday, Dr. Richardson exhibited a pigeon on which a similar experiment had been tried, but had been carried to a much greater length. This bird, which appeared to be in perfect health, had first been treated by the subcutaneous injection of morphia, two grains being injected at once. Twenty-one grains of opium were then administered to it on three successive days. The dose was then increased to thirty grains, which quantity was also taken daily for three days. Finally, for five days, the same pigeon took sixty grains of solid opium daily, and, at the end of the time, remained in apparently perfect health. After the injection of morphia, Dr. Richardson noticed that the pigeon vomited slightly; but he thinks this was rather due to the operation than to the physiological action of the alkaloid.

In his Tuesday's lecture, Dr. Richardson performed a somewhat remarkable experiment in confirmation of an observation originally made by John Hunter. Hunter observed that if fresh muscle be frozen, in the act of thawing muscular contraction will take place. Dr. Richardson has devised an experiment by which the fact may be audibly and visibly demonstrated. If a freshly denuded muscle be first frozen with ether spray and then immersed in a freezing mixture, it may afterwards be gradually thawed by being held horizontally by a piece of cord over water at 120°. If one end of the cord be made fast in the vessel holding the water and the other end be fastened to the trigger of a pistol, and the temperature of the muscle be then suddenly raised by placing a spirit lamp under the vessel containing the water, and heating it to 125°, the muscle contracts sufficiently quickly and forcibly to fire off the pistol.

HOMŒOPATHIC POLICY.

We regret to state that we have fallen under the ban of the editor of the *Monthly Homœopathic Review*. In the recent number is an article headed "Allopathic Policy," from which,

in order that the editor of that journal may have a somewhat increased audience for his complaints, we extract the following :—

"The following incidents are fair specimens of the policy pursued by some allopaths when they encounter homœopathy :—

"'The publisher of Dr. R. Hughes's 'Manual of Therapeutics' recently sent to the proprietor of the *Medical Times and Gazette* an order to advertise the work in that periodical. Within a week he received a note from the proprietor, saying, 'I am directed by the editor to inform you that he cannot insert the enclosed advertisement in the *Medical Times and Gazette*.'

"The book itself is noticed as follows :—'Some time ago Mr. Hughes published a work on Pharmaco-dynamics ; he now publishes another on Practical Therapeutics. They both serve to represent the absurdities of homœopathy.' If this were true—if the editor really believed that Dr. Hughes's book served to represent the absurdities of homœopathy—why did he not accept the advertisement, and get paid so much per line for doing that which he so frequently labours to do—and that at so much cost of character, without obtaining any *quid pro quo* whatever ?

"It was this periodical, we believe, that warned a correspondent against inquiring into homœopathy, lest he should come to believe in it. To prevent a Medical man from studying homœopathy is more practicable than to convince him that it is not true after he has put it to the clinical test. In order, therefore, to hinder his readers knowing where to find the means of submitting it to this test, the editor of this periodical prohibits the announcement of its publication in his advertising columns, and then grossly misrepresents it in his critical notices !"

We never attempt to defend ourselves against attacks which carry in themselves their own utter discomfiture. But we may be allowed to add a word to what the gentlemanly writer above quoted says. As has been said, some time ago Mr. Hughes published a work on what he was pleased to call "pharmaco-dynamics," which was received by us in due course, and was advertised also, until we ascertained that the book only dealt with the subject from a homœopathic standpoint ; we then warned our readers as to the nature of the book, and as the advertisement contained no intimation of its true character, it ceased to appear in our columns. When the second appeared in like guise we were in no such difficulty ; it also had assumed an outward expression of innocence, but its character was known, and we knew how to act. That we are not afraid of giving the fullest publicity to the existence of such a work, the quotation above made is the surest index ; but to mislead our readers is another thing, which, whatever may be the practice of the editor of the *Homœopathic Review*, we are not accustomed to do.

THE RECENT EPIDEMIC OF SMALL-POX.

The annual report of the Small-pox and Vaccination Hospital, always a document of interest as affording one of the best indices of the prevalence or absence of at least one form of disease in the metropolis, is this year unusually so, as the history of the recent epidemic now reported as passed over is therein given. In the course of the year 1868, 1026 patients have been admitted. Of these, 113, or 11 per cent., have died—not, however, all of small-pox. Of the 1026, 989 were labouring under small-pox ; the rest under disorders simulating the former. Of these 989, 185 occurred in unvaccinated persons ; 802, or 81 per cent., in those who had been vaccinated. One case occurred after casual, and another after inoculated small-pox. The epidemic, which has now prevailed more than five years, has ceased as suddenly as it originated. In May, 1868, the admissions into Hospital were 141 ; in June they fell to 81 ; in July, to 67 ; and in August, to 41, the last number being considerably smaller than in any month since November, 1862. As illustrating the rise of the epidemic, in July, 1862, the admissions were 18 ; in August, 22 ; in September, 34 ; in October, 35 ; in November, 70 ; and in December, 137. The rate remained high (above 100 every month) all 1863 ; it sank somewhat in 1864 to rise again in the beginning of 1865, sinking in the latter portion of that year only to become greater than ever in 1866, during which year, in March, April, May, and June, the epidemic was at its height, about 200 cases being admitted each month. The report goes on to say :—

"The epidemic of small-pox, which commenced in the autumn of 1862, would seem to have begun in the eastern parts of the metropolis—in Whitechapel, St. George's-in-the-East, Ratcliff, etc. ; but it soon spread, and, by the beginning of 1863, was, with perhaps one or two exceptions, nearly equally prevalent in all parts of London. It reached a high degree of intensity by May and June, 1863, soon after which it began to decline, and continued doing so until the middle of 1864, at which time (although still very largely in excess of what is observed in non-epidemic periods) the monthly admissions into the Hospital had fallen to less than a half of what they had been in the corresponding months of 1863. In the winter of 1864-5, the epidemic evinced increased activity, and the lowest monthly admissions in 1865—namely, 75 in December, were but a trifle less than the highest monthly admissions in 1864, namely, 83 in January and April. The disease became more and more prevalent in 1866. In that year 2069 patients were admitted in the Hospital, a very much larger number than had ever been received within the same period, and exceeding by more than 25 per cent. those admitted in 1863—the year of largest admissions in the whole history of the Hospital prior to 1866. The epidemic continued in full activity during the whole of 1867, and up to May, 1868, after which it very rapidly declined, and ceased in July, or the beginning of August, 1868. The admissions into the Small-pox Hospital in August, 1868, were more than 20 per cent. less than they had been in any month since the commencement of the epidemic.

"In the five years and nine months from November, 1862, to July, 1868, both included, during which the epidemic continued, 8376 patients were admitted into the Small-pox Hospital. They were distributed as follows :—

1862	November and December. .	207
1863	. . . . .	1,537
1864	. . . . .	836
1865	. . . . .	1,249
1866	. . . . .	2,069
1867	. . . . .	1,626
1868	January to July . . .	852
		8,376

"The disease at the commencement of the epidemic was severe, and the mortality proportionately high, but it became gradually milder and more benignant and consequently less fatal. The general mortality diminished from 17 per cent. in 1863 to 11 per cent. in 1868 ; the mortality in unvaccinated subjects from 48 per cent. in 1863 to 34 per cent. in 1868 ; and that in vaccinated subjects from 9·9 per cent. in 1863 to 5·6 per cent. in 1868.

"The progressive diminution in the severity and mortality of the disease will be better shown by the following table. As a standard for comparison we may take the mortality in 1861, a year wholly uninfluenced by epidemic causes. In that year we had no deaths from superadded disease. The general mortality was 10·7 per cent. ; the mortality in the unvaccinated 33·9 per cent. ; and in the vaccinated 5 per cent.

	1863.	1864.	1865.	1866.	1867.	1868.
General mortality	17·0	12·9	13·0	13·0	12·66	11·0
Mortality in the unvaccinated ...	48·0	36·0	38·0	35·7	36·8	34·0
After deducting superadded disease	47·0	35·0	...	...	...	...
Mortality in the vaccinated	12·0	8·7	7·4	7·3	8·29	6·2
After deducting superadded disease	9·9	7·9	7·2	6·7	7·46	5·6

"The opinion which, early in the course of the late epidemic, the officers expressed on vaccination, neither requires, they say, qualification, nor admits of limitation. They repeat : 'Although it has not entirely fulfilled the sanguine anticipations of its earlier advocates, it is the greatest boon which was ever conferred by man upon his species. Properly performed, with good active lymph, and with not less than four punctures producing vesicles, and these running the course so minutely and graphically described by Jenner, and leaving not less than four typical cicatrices, vaccination robs the most fatal and acute disease known in this country of its malignity, and reduces the mortality of small-pox from 35 per cent., or even a higher rate, to less than 1 per cent.'"

DISCRETION OF THE PRACTITIONER.

An inquest was held last week at Kirton, in which the chief point of interest was whether Mr. Gain, assistant to Mr.

Whitington, of Tuxford, exercised a sound discretion in amputating under the circumstances detailed in his evidence. A farmer had got his foot smashed in a threshing-machine.

"William Gain said: When I arrived at Kirton at one o'clock I found deceased lying on some chairs. The foot and lower half of right leg were much crushed. There were several rugs and strings under him saturated with blood, and he was pallid, as though he had bled much. I asked him where he would prefer the amputation, and he said for as much to remain on as possible. When he was removed upstairs, with his body on the bed and his foot in a chair, I applied a tourniquet. I arranged the bandages and instruments, and administered chloroform. I completed the operation, and while bandaging, a woman called my attention to deceased, and on going to his head, I found the pulse very weak, and the breathing very slow. A woman gave him some brandy by my directions, which he swallowed, and a little sal volatile afterwards. He never spoke after, but died ten minutes after the last brandy was administered. In my opinion the cause of death was loss of blood and shock to the nervous system. I do not think the chloroform had anything to do with it. I have been in the Profession nearly fourteen years, but my name is not in the Medical Register. I have administered chloroform some dozens of times—always the same way. I have done so several times when about professionally to undertake an operation. I dared not wait for assistance on account of the bleeding that had taken place. I thought that, provided the operation took place promptly, the patient had a fair chance of recovering. I considered that every minute's delay was dangerous, highly so. I dared not risk a delay of two hours. I considered the question of an operation without chloroform, but in the then state of the patient deemed it expedient to use it. Mr. Whitington was from home, I believe at Dunham, seven miles distant. Tuxford is three miles from Kirton. The messenger told me the nature of the case. I have not singly before amputated a leg. I gave him under a drachm of chloroform. He was about two minutes before becoming insensible. He was only partially under influence when I was taking up the vessels. I do not think he inhaled more than a drachm, or very little more.

"Edward Jacob Ashbury, Physician and Surgeon, Retford, said: In this case no doubt primary amputation was necessary. I have seen the limb and the amputated part, and I have heard the evidence. I think, under the circumstances, a Medical man might fairly exercise his discretion whether he would attempt what was done singlehanded or whether he would wait two hours for assistance. I do not consider there has been want of skill, but there may have been want of judgment, though I cannot positively say that. I should have waited for assistance if I positively dared have done so. I think the cause of death was shock. I think if I had been singlehanded I should not have given chloroform, but I do not say that it was wrong. It was a point on which the operator must exercise his own judgment.

"After the Coroner had summed up and explained the law on the subject, the jury returned a verdict 'That deceased died from natural causes, but the jury wish that Mr. Gain had attempted to obtain Professional assistance at the operation.'"

Now, we think the case fairly and honestly stated by Mr. Gain, and we endorse the opinions expressed by Dr. Ashbury, who gave his evidence in a manner which entitles him to commendation. If Mr. Gain was in a difficult position and acted promptly—if he had waited for "Professional assistance," and the man had died meanwhile—the jury would have blamed him for waiting.

THE DRY EARTH SYSTEM FOR WOUNDS.

THE "dry earth system" has achieved a new triumph in America. It was introduced by Dr. Hewson into the Pennsylvania Hospital in Philadelphia, and met with such favour that it is to be forthwith substituted for waterclosets in that institution. But more than this, the dry sifted earth has been used as an application to offensive wounds with magical effect. There was a case of compound fracture so offensive that it defied the effects of ventilation and the usual disinfectants. The wound was covered with dry earth, the odour was absorbed, and with the abatement of this came a speedy improvement in the character of the wound. Encouraged by this result, Dr. Hewson has applied it with marked success in the treatment of every other disease attended with profuse and offensive suppuration—ulcers of the leg, contused and sloughing wounds, gunshot wounds, severe burns, cancer. In all these it is said to have succeeded beyond expectation, and it is now proposed to apply it to small-pox, the most offensive and virulent of all maladies. It must be remarked that, although the particular form of application is new, the principle is an old one. There are three modes of dealing with offensive suppurating wounds, such as burns. One, by covering them with some powder which shall absorb all moisture and so prevent decomposition and smell—and we need only refer to the flour, charcoal, magnesia, chalk, and other substances which have been employed, and of which charcoal is the most effective; time must show whether earth will displace it. Secondly, there is irrigation—the keeping the wound in a perpetual stream of warm water, which constantly washes away all impurities. Thirdly, the use of antiseptics and deodorants, of which the chloride of soda, creosote, carbolic acid, chloride of zinc, and glycerine with bismuth, are the best of their respective sorts. It must be observed, however, that the dry system has many advantages over the wet; it is, on the whole, less troublesome, and we are quite sure there are many wounds and local diseases which are aggravated by the incessant use of wet applications. The old poultice is a mischievous thing if used beyond the short stage of acute pain and tension which usher in suppuration, and the favourite "water-dressing" applied to wounds attended with no heat or increased action, is too sedative and enfeebling.

SANITARY STATE OF BATH.

THERE is still something to be done before our finest cities and most flourishing health resorts can be considered perfect. This is evident from the very able report on the sanitary condition of Bath, by Dr. Barter, the Medical Officer of Health, which has just reached us. First as to the water:—

"It is to be feared," he says, "that, from various causes, the water flowing from many of the springs is not so pure as it should be for drinking. During the last twenty years numerous villas have been built upon the Lansdown Hill, two large colleges have been erected, and upon the top of Lansdown a cemetery was laid out in 1848, and since that date a large number of interments have taken place therein. It was a particularly unfortunate site to have chosen for a burial ground, bearing in mind the character of the soil, the percolation of the water, and the number of springs arising from the hill. The villas and colleges drain into dead wells; and, lest any misapprehension should arise as to the nature of the latter, I may state that a dead well is a cavity made in a porous stratum to save the trouble of emptying, the contents percolating through the absorbent ground; whereas a cesspool is a regularly constructed watertight receptacle, whence the liquid and solid soil can be removed when the chamber is full. The condition of the springs in this locality is, I fear, not very satisfactory.(a)" Not only is the quality of some of the water suspicious, but the quantity is inadequate:—

"The present water supply for Bath is quite inadequate, and this is especially observable after a drought, such as occurred in 1864 and 1868. During the summer months of 1868 one of the Bathcaston reservoirs was empty, and the second large one contained but a small reserve of water for the number of houses to be supplied by the company. At the end of September the large reservoirs were quite empty.

"In some parts of Bath the water supply is very indifferent; the large tract of ground in the parish of Bathwick called the Villa Fields, and upon which nearly seventy cottages are built, depends for its water upon wells and a small reservoir, the latter being quite inadequate for the wants of the inhabitants. The majority of the wells contain hard water, and many of them are polluted by sewage. The dead well system prevails most extensively in this district, there being no sewers, and some of the cottagers drink the river water."

(a) At the meeting of the British Association at Bath, in 1864, Mr. Field drew attention to the manner of draining the Lansdown villas, and the effect it was likely to have on the springs in that locality. (Brit. Association Report, 1864, p. 129, *Bath Chronicle* edit.

Yet, as Dr. Barter shows, there is plenty of good water to be had, whereas some of the present supply contains from 40 to 45 grains per gallon of solid impurity, of which 3 to 5 grains are organic. The hardness of much of it is of course extreme. If Bath drinks some of its own sewage, it is assailed through the nose equally:—

"The Avon receives the sewage of seven towns before reaching Bath, whose aggregate population amounted in 1861 to 43,810 souls, besides several villages. All the Bath sewers open directly or indirectly into the river; consequently the greater part of the sewage of the city finds its way into it, making a common sewer of what might and should be a clear stream of water."

Some parts of the city lie below the water level, and are flooded at times with the contaminated river water. Neither is Bath free from the vice of false charity, if we are to accept Dr. Barter's statements that it is visited by 11,503 vagrants per annum. These dirty squalid creatures sometimes bring typhus with them, of which the master and mistress of the Refuge died in 1864; for so enamoured are the Bathonians of vagrants that a committee of gentlemen have established a Refuge for them, and afford hospitality to 4203 per annum. Medical relief to the poor seems to be abundant, and, although the population is decreasing, its health is of good order. We learn nothing from Dr. Barter of the celebrated hot springs; but on all other points his work is a valuable history of the sanitary state of one of the finest and most agreeable of our English cities. We shall be glad to learn from his next report that his suggestions for the removal of nuisances have been attended to.

THE NAVAL MEDICAL SERVICE.

(*From a Correspondent.*)

THERE are said to be great changes about to be effected in the Naval Medical Service, which will be announced before the new Director-General, Dr. Armstrong, takes office on the 15th inst. After service of thirty-eight years, Dr. Bryson retires into private life, having completed a five years' term of office. This rule of retirement from all staff appointments at the expiration of five years is a means of revivifying a stagnant department, and gives hopes to the younger officers of reaching in turn the highest positions. In dismissing Dr. Bryson on that account, the stamp has been placed on the principle. We sincerely trust that Dr. Bryson is soon to receive the honour of knighthood for his long services, and we hope that his successor, finding the rough path paved for him, will strive with still greater success in advancing the interests of his brother officers and of the naval service generally in doing so. Whatever may be the changes in contemplation, there is the most urgent need of the stimulus of promotion. The Navy List shows a state of things most discouraging at present. Past Assistant-Surgeons of eleven years' service, Staff Surgeons of thirty years' service, and Deputy Inspectors-General of ten years' service as such head their respective lists. With this state of things we are sorry to hear rumours of reduction of the higher grades rather than of promotion of juniors into them. In the army the proportion of inspectorial appointments stands at about 1 to 25 of the entire staff of officers, while in the navy the proportion is less than 1 to 30. Any further reduction would only depress the service below its present low condition. Attempts to bring down a public service in which the Medical staff has a fixed moderate income to the same standard that operates well enough in civil Hospitals and in civil life, where there is always the prospect of an income limited only by capacity to work, must, we think, end in failure. If this be the intention, we can scarcely congratulate the newly appointed Director-General, even though the changes be effected before he enters on his superintendence of an impoverished Medical department. Dr. Armstrong will find a mere foundation of scarcely more men than are in actual service, and, in the event of war, will be called on to provide a large supply of officers to meet the increased wants; and it will be well if, through his unquestionable influence, the department be renovated so that it will be equal to the occasion. On the expiration of the term of five years, which must be approved on all hands as a stimulus to the younger officers, he, like Dr. Bryson, will in turn retire, and we think that his apparent task to renew the department will take all that time. He is fortunate in being preferred to the able officers senior to him on the list, more especially to one who has obtained such honours as Sir David Deas, who, we feel sure, will not falter in accepting, with his ordinary good feeling, the appointment of a junior to an office of which the body of our Profession looked to him as the rightful incumbent.

FROM ABROAD.—MAISONS DE SECOURS AT MADRID—PARACENTESIS THORACIS—NON-ABSORPTION BY THE URINARY BLADDER.

A CORRESPONDENT in the *Union Médicale* of March 23 furnishes an account of a useful institution which he observed while at Madrid. Walking behind a lady who fell down and broke her thigh, he was at some loss how best to assist her, when almost immediately two porters, with a distinctive costume, made their appearance, and transported her on an ambulance couch to an apartment supplied with every desirable convenience. Inquiring into the matter, he found that in every municipal district of Madrid there is established what is termed a *maison de secours* (or whatever the Spanish equivalent may be), the object of which is to furnish immediate aid in the case of accidents, wounds, sudden illness, labours, abortions, falls, etc., conveying the person afterwards either to his own home or to the Hospital. Moreover, in sudden emergency attendance is given *à domicile*, and daily consultations are furnished to the poor. These *maisons* also serve as depots for all objects intended for the assistance of the poor, and also as places of meeting for those who are administering Medical and charitable relief. The idea originated with a Medical Practitioner, Dr. Santiago Ortega, and it was so warmly taken up by the Madrid municipality that it has led to a most complete and useful organisation. The *maisons* have, in fact, now become the centres for the administration of public charity as well as succour for urgent cases of every description. They are well supplied with ambulances, Surgical instruments and apparatus, and contain pharmacies and special libraries; while there are *employés* whose business it is to collect all the statistical facts in relation to the diseases, accidents, and epidemics coming under their cognisance. Here is evidently something worthy of further inquiry.

Since Trousseau brought the subject of paracentesis thoracis for recent effusions into the pleura under the notice of the Académie de Médecine, it has excited much discussion in France. The propriety of the practice has been admitted; but considerable difference of opinion prevails as to the limits within which it is admissible. Professor Dupré, of Montpellier, one of the earliest advocates of thoracentesis, in a memoir read at the Academy last week, furnishes the results of his observations of 76 cases in which this operation has been performed with marked success. Of these, in 47 the operation was performed during the second week, with 46 recoveries and 1 death; in 19 during the first month, with 15 recoveries and 4 deaths; and in 8 during the third month, with 5 recoveries and 3 deaths. In one case it was performed during the fifth month, and in one during the seventeenth, both recovering—total 68 recoveries and 8 deaths. But, to obtain results such as these, the cases must be rigidly selected. Thus M. Dupré considers paracentesis as inapplicable to effusion accompanying true pleurisy, which will be spontaneously absorbed, as also to the form dependent upon organic lesions or some general affection of the system, the danger from such lesions and the certainty of the reproduction of the dropsy forbidding it. He confines its application to what he terms "rheumatic or seroplastic effusions." The symptoms are those of pleurodynia, or rheumatism of the pectoral muscles; and during the existence of

the pain, or oftener when this begins to abate, exhalation takes place into the pleura, in an obscure manner at first, of fluid, which soon amounts to a considerable effusion. It may take place without pain, dyspnœa, cough, or fever, while sleep and appetite are still maintained. Nevertheless, a livid pallor of the lips, an abnormal effort at contraction on the part of certain muscles of the face and neck, the sudden interruption of the respiratory movements in the middle of their evolution, unilateral decubitus, and irregularity and dicrotism of the pulse, give rise to suspicion of the existence of the effusion even before physical signs have absolutely demonstrated it. This form of effusion has been alluded to by several authors, and M. Pidoux has well described it under the designation of "latent pleurisy." For the relief of such effusion Medical treatment acts very slowly, is uncertain, and sometimes powerless, while in the mean time irremediable lesions and serious, or even fatal, accidents may be produced. These may be obviated by prompt paracentesis, which adds nothing to the danger of the case. The following are Professor Dupré's conclusions:—1. Idiopathic pleural effusions exist, of which apyrexia, latency, and persistence are the usual characters. 2. They are to be distinguished from inflammatory and dropsical accumulations by all the clinical circumstances indicative of their rheumatic character. 3. The presence and prolonged continuance of plastic serosity in the pleura is dangerous, so that it should be evacuated as soon as possible. 4. Neither the immediate nor remote effects of thoracentesis are attended with any danger. 5. The operation should be immediately performed when the effusion is more than a fortnight old, especially when it is situated on the left side or occupies the whole of the pleural cavity. 6. When the effusion takes place under the eyes of the observer, recourse must not be had to the operation until after the tenth day, and when the pleural cavity is at least two-thirds filled.

M. E. Ségalas, in a communication to the Académie des Sciences, observes that his father, during his experiments on absorption in 1824, had found that the mucous membrane of the bladder absorbed the alcoholic extract of nux vomica. Repeating his father's experiments in 1862, he also found that rabbits rapidly died into whose bladder a solution of sulphate of strychnine had been injected. In 1867, however, M. Demarquay, in his work on the absorption of medicinal agents by man, established the fact that the bladder in man had slight absorbing power—so that, in sixteen experiments made on men suffering from affections of the urinary passages, it was found that in eight no absorption took place, and in the eight others it took place only to a very slight extent, and that at various periods. M. Susini also lately, in allusion to the negative results following M. Claude Bernard's experiments on the bladder of the dog with curare, also came to the conclusion, corroborated by experiments made on himself, that the vesical epithelium is impermeable to certain substances during life. In this contradictory state of the question, M. Ségalas induced M. Demarquay to repeat his experiments with him. Fifty centigrammes of iodide of potassium dissolved in sixty grammes of water were injected into the bladders of ten healthy men; and in none of these instances, which were most carefully observed, could this substance be detected in the saliva; although, had it been administered by the rectum, it would have been easily eliminated by the saliva and urine.

PARLIAMENTARY.—VALUATION OF PROPERTY (METROPOLIS) BILL—WISLEY COMMON—PHARMACY ACT AMENDMENT BILL.

On Thursday, April 1, Mr. Goschen moved the second reading of the Valuation of Property (Metropolis) Bill. Mr. Henley opposed the Bill. Mr. W. H. Smith and Mr. Locke assented to the second reading on the understanding that they were committed to nothing beyond the approval of a common basis of rating. Mr. Goschen assented, and the Bill was then read a second time.

On Friday,

Mr. Knatchbull-Hugessen moved for a Select Committee to consider the proposed enclosure of Wisley Common.

After some discussion, the motion was carried by a majority of 21.

On Monday, April 5,

In reply to Mr. W. E. Forster,

Lord R. Montagu said he would postpone the second reading of the Pharmacy Act (1868) Amendment Bill for a week.

INDIAN MEDICAL SERVICE.

(*From a Special Correspondent.*)

The Medical students of Great Britain and Ireland should know of the drawbacks in the Indian Medical service before deciding upon entering it. Thank God, Sir John Lawrence, at any rate, has gone. He, who thought more of the budget than of making a large number of English gentlemen happy in their exile, has given up the reins to a kindly Irish nobleman, who has shown himself already to be a liberal and kind-hearted administrator. He is not too careful to consider what this or that will cost when the concession of a great public benefit is under discussion. A heavy incubus has been removed by the departure of the wise (in his generation) steward who was always endeavouring (with his Punjab plan of governing the country by "officiating" men) to show how cheaply India could be ruled. This was the one great blot in Sir John's administration. Liberal to a fault in his private charities, he was niggardly in the extreme when dealing with imperial questions. To the Medical service he was professedly a friend, but in truth an enemy. Being a homœopath, he naturally had no sympathy with the orthodox Profession. It is very remarkable that, whilst Lord Dalhousie, at the commencement of the decade which has just closed, did his utmost, almost as his crowning act, to raise the character and increase the prizes of the Indian Medical service, Sir John Lawrence, at the close of the same period, leaves it in a state of disorganisation and disgust. It is too long a story to tell how the good old service has been made, by a series of misfortunes, to totter to its fall. Financially, it is, with certain exceptions, an attractive service still, but its *prestige* is gone, its members have now no status. The orders of the Secretary of State for India are, moreover, illiberally interpreted where the "Doctors" are concerned. In paragraph 27 of the Secretary's letter, dated November 7, 1864, it is distinctly laid down "that in future all employment on the part of Medical officers of the Indian Service involving the receipt of special staff salary, shall be considered as staff employment, *the salaries being in all cases consolidated*;" and yet, although any military officer drawing such a salary is considered to be holding a staff appointment, the Medical officer in charge of a native regiment, whose salary is also consolidated, is deprived of this boon. The Pay Examiner, whose functions are to interpret rules, takes the first of these views—viz., that the Medical charge of a native corps is staff; but the Government (the question was settled in Sir John Lawrence's time) takes the other. Again, under the new regulations a Medical officer is not entitled to draw £700 a year after thirty-five years of service; but £550 after thirty years, besides £250 a year as an extra pension, if he should have the good fortune to be promoted to the grade of Deputy-Inspector-General, and if he should be able to live five years in the grade. Here there are two very difficult if's. In the first place, Medical officers are being "passed over" much more frequently than in former days, a higher standard of excellence being required. Very few therefore, comparatively, are promoted; and, in the next place, those who are promoted are no longer young men, and they have gone through some five-and-twenty years, at least, of tropical service. To take away from such tried servants of Government the possibility of realising the pension of £700 a year, which they might have secured with the help of a couple of years' leave, and to offer to them in its place a possible substitute, the right to which they forfeit if they are absent more than six months, is a decided injustice and a very great hardship. Men cling to the hope that they may live to cluteh the phantom, and die in the attempt. To the petition submitted (alas! through Sir John Lawrence, and therefore now recommended by him) to the Secretary of State for India, praying that £50 a year might be given for each year of service in the grade of Deputy Inspector-General, instead of £250 at the end of five years, the Duke of Argyll has returned an unfavourable reply. It is a short-sighted as well as an illiberal policy too. Instead of there being comparatively young men in the administrative grades, there will be worthy elderly gentlemen more fitted to

enjoy the *otium cum dignitate* of "club life" in London than to travel over large tracts of country, and infuse energy and zeal into the younger members of the service.

What Lord Mayo may do for the Indian Medical service is yet in the "womb of time." Great things are expected of him, but meanwhile, things being in so unsatisfactory a state, you may use your influence in earnestly urging the younger members of the Profession at home to pause, unless the *res angusta domi* is very pressing, before entering a service which is not so perfect as has been represented. "*Tout ce qui brille n'est pas d'or.*" No—there are a few troublesome thorns, as the adventurer may find to his cost.

REVIEWS.

The Polar World; a Popular Description of Man and Nature in the Arctic and Antarctic Regions of the Globe. By Dr. G. Hartwig. With Three Maps, Eight Chromoxylographic Plates, and numerous Woodcuts. London: Longmans. 1869. Pp. 548.

This is so excellent a book that we do not hesitate to point out its one defect, and that is the want of references to the original authors from whom the almost inexhaustible fund of information it contains has been derived. Had it given this, it would have been a most invaluable cyclopædia of Polar and Arctic literature, history, travel, ethnography, and geography. As it is, nevertheless, it is, like the author's works on the Sea and on the Tropical World, an admirable work for young people, and a valuable book of reference to the advanced student, and well adapted to supplant the mass of sickly, sentimental, sensational, and enervating publications which are spawned forth as "gift books" for the young.

It begins with the general description of the Arctic lands and seas, their Flora and Fauna; then devotes four chapters to Iceland, its geography and natural history, its population, and its civil and political history; in the same way it takes the Westmann Islands, Norway, Spitzbergen, Nova Zembla, Siberia, and Taimurland, the most northern and inhospitable part of the continent of the old world; Kamschatka, the Aleuti Islands, the Hudson's Bay Territories, Newfoundland, and Greenland; then the Antarctic regions, with hunger-stricken Patagonia, and Tierra del Fuego, with all their terrible desolation. Of Medical jottings there are plenty—as, for example, a notice of the rinderpest, which sweeps off whole herds of reindeer, showing that flat, thickly peopled, and hot countries have no monopoly of plague; also of the use of blood as the best remedy for scurvy. What would the Talmudists say to this?

An Introduction to Scientific Chemistry; designed for the Use of Schools and Candidates for University Matriculation Examinations. By F. S. Barff, M.A., Ch. Coll. Camb., Assistant to Dr. Williamson, Univ. Coll. Lond. London: Groombridge and Sons.

With the number of elementary books on chemistry that are already in the hands of students, it would appear somewhat rash to attempt to add to the list, yet the attempt has been made by Mr. Barff, Assistant to Professor Williamson, University College, who has succeeded in the by no means easy task of preparing a book on a scientific subject in a thoroughly elementary manner. It requires that a man should be well skilled in his subject if he essay to write for a beginner, and the volume before us shows its author to be a complete master of his science.

The object which "An Introduction to Scientific Chemistry" has in view is one that will especially recommend it to Medical students, inasmuch as it proposes to give the requisite amount of knowledge for candidates for the matriculation examination at the London University, and this in a manner that shall actually give the student some sound scientific information, and not a mere "cram" for "pass;" and, further, it serves as an introduction to "Chemistry for Students" by Professor Williamson, which is itself the text-book used for the more advanced examinations.

The author, recognising the disadvantage of any one attempting to teach himself chemistry—or indeed, we may add, any science—by mere reading without assistance, wishes his work to be regarded as an aid to the oral lessons of a teacher to his class.

In the treatment of his subject Mr. Barff has adopted the somewhat novel plan of omitting the use of symbols in the first part, and then repeating in Part II. the decompositions mentioned in Part I., with their respective symbols and formulæ. This plan has the obvious advantage of preventing the student cramming up the decompositions by the formulæ alone, which he too often repeats by rote ignorant of their meaning, by making him learn their exact nature first, and afterwards reducing it to a chemical mode of expression. It is, we believe, the only book which systematically preserves the new nomenclature throughout; we have the expression "hydric sulphate" used always, and not alternating with "sulphuric acid" or "oil of vitriol" on the same page.

Each chapter is provided with some questions and examples, with their answers, to be worked out; and the book concludes with a selection from the papers of the recent matriculation examinations at the London University and a chapter of advice to candidates for examination well worthy of perusal, and likely to prove most valuable to those who have not been trained by experience in the art of detecting at a glance the real meaning of questions often far too involved and complicated for beginners. The publishers deserve the highest praise for the "get-up" of the book at a price which makes it the cheapest work of the kind obtainable.

FOREIGN CORRESPONDENCE.

FRANCE.

LETTERS ON THE SOUTH OF FRANCE. No. III.

Cannes, April 5.

Before bringing forward some scientific remarks about the South, I will relate a few more anecdotes. An earnest and conscientious lady told me the following:—Landlords of the South are not particularly fond of their guests dying in their houses. Now, an invalid getting worse and worse, her landlord begged the doctor to deliver him under some good pretext from this unpleasant patient. The pretext was soon found—the patient ought to be near the sea. She was removed, and died soon afterwards in a house which did not suit her at all. Did the doctor really think the neighbourhood so good for dying poitrinaires? I hope so, not for his skill, but for his honour. I give this anecdote under reserve. One cannot be too scrupulous in judging the motives of people. Were I sure of a doctor having had motives, I should name him. Whatever be the case, where there is smoke there is fire, and I feel quite justified in alluding to the possibility of such cases. One must not forget that, without being really bad, every man is liable to have his opinions unconsciously influenced by his interest.

Frankness, it seems, is not the chief virtue of the French. Even French literature is imbued with—I will not express myself strongly—the custom *de faire des phrases*. To say the truth is almost a crime. In French literature, besides, there is much which reminds us of the case of M. Pouchet. Everything almost goes by *faveur* and *esprit de clique*. It is not so much truth that is sought as decorations and titles. I quote the words of a Frenchman himself—M. Lasègue, Professeur à la Faculté de Médecine etc. à Paris:—

"Un éditeur me disait un jour: La critique scientifique est bien près de mourir si elle n'est déjà morte; on ne rend compte que des livres de ses protecteurs ou de ses amis, et la bibliographie est devenue affaire de complaisance, de dévouement ou de calcul. Les seuls livres dont on s'abstienne de rendre compte sont ceux pour lesquels on garde sauve la liberté de son jugement."

A striking example of literary misdemeanour I found in the last number of the *Revue des deux Mondes*. Père Gratry had written to the *rédaction* a letter in which he thanked it for having given him access to this paper. Under this thanksgiving the *rédaction* inserted a note in which it declared—

"M. Gratry n'a pas de quoi nous remercier. Nous avons accueilli sa lettre: 1° pour montrer une fois de plus à nos lecteurs que la Revue n'est pas fermée à l'apologie si elle s'ouvre plus souvent à la critique, nous ne dirons pas du christianisme certes, mais de l'interprétation de l'Église; 2° pour répondre à ce reproche assez singulier que la Revue n'admet pas facilement ces travaux des Romains catholiques."

This note is very interesting. In the first place let me ask if the *rédaction* of any journal, by accepting a Catholic article in order to prove its impartiality, will convince any reader that it is generally impartial. Further, I should like to know if it ought to be guided in its decisions by considerations of that kind. I should have thought it the duty of the editorial

department to accept articles if they are good, and to reject them if they are not good. It ought, in my opinion, never to accept an article which it does not consider good, in order to prove, in the most flimsy way, its impartiality. That the *rédaction* is not impartial is proved in another way by our very quotation. Why does it admit criticisms of Catholicism and not of other forms of Christianity? Is the art of criticism nothing but an anti-clerical instrument? And here we ask, Is the *rédaction* sincere? Does it never open its columns to a criticism of any other form of Christianity? Those who have read M. Vacherot's last article may judge for themselves.

Corpseophobia—*sit venia verbo*—is very great in this country. Last year an invalid, being dissatisfied with his dwelling, took a carriage and started for an hotel, but on the road he died. His mother, who was with him, appealed to several houses to have the corpse brought in. Nobody consented. Heartless race!

And now I will tell something which happened to myself, and is interesting, concerning homœopathy. I had in a few French writings brought forward some arguments against homœopathy, and spoken of the system in a rather merry way. Some days afterwards I was surprised by a letter from a homœopathic doctor of Cannes. He reproached me with having spoken lightly of things of which I knew nothing, and invited me kindly to visit him and look at some of his books. He was sure, he said, that in this case my appreciation would become quite altered. He himself had also started by doubting, etc. The tone of the letter was by no means that of a charlatan, and I was informed by others that the writer was really sincere and earnest in his homœopathic belief. I therefore went to him, and read a book which he strongly recommended—viz., "Comment on devient Homéopathe, par le Docteur Terti." This book is very attractive indeed, and if the cases told in it are true, homœopathy deserves full attention. However, the man of science does not make up his mind by books; he asks for facts. I therefore begged the homœopathist to prescribe some remedies for myself. "If I observe the slightest good from them," I said, "I will believe in homœopathy, and if I see no good from them I will say that I am incompetent to judge." I took for some weeks several homœopathic remedies, as sulphur, arsenic, coffee, etc., but without the slightest effect, even palliative. I then gave up the experiment.

It is difficult to decide *à priori* that there are no remedies which act in homœopathic doses, and it may be true that sometimes an illness is cured by a remedy which causes in normal health a similar disease; but what I know is that from allopathic treatment I have seen good results, and from homœopathic treatment I have seen none. Some time afterwards I was told that the homœopath boasted of having entirely converted me to his system; and he did not seem very easy when I asked him if it was true.

To my mind there is much truth in these words of M. Teste: —"Mais ces lois de la nature qu'on admire d'autant plus qu'on les approfondit davantage, qui a la certitude de les connaître assez pour affirmer *à priori* que tel fait nouveau qu'on signale leur est contradictoire? Ignorer et apprendre, apprendre encore et toujours, n'est-ce pas le lot de l'humanité? N'oublions pas d'ailleurs que dans les conquêtes de l'esprit humain la constatation des faits a toujours et nécessairement précédé les lois qui les régissent." And Professor Fechner, the great German mathematician and naturalist, wrote to me one day: "It is by no means impossible that increasing the distances between the atoms of a medicament enables them to act more freely on the organism. But," he added, "it is very improbable that this should be the case."

Are Mountain Climates good for Sufferers from Lung Diseases?

In my capacity of director of a large Hospital—I mean my own "material enveloppe"—I have had an opportunity of making some useful observations concerning phthisis. Among these is one which I beg you to publish, especially on the approach of summer. Many doctors, especially in the South, have the custom of sending their *poitrinaires* in the summer up to the mountains. Now, if this can ever be good, I am sure it is in cases where the infiltration of the lungs is not considerable. If, on the contrary, the capacity of the lungs is considerably diminished, I believe this method to be absolutely inadmissible, and for this reason—if the breathing surface of the lungs is smaller, one ought, to obtain the same result, to introduce the oxygen not in a rarified, but decidedly in a condensed form; for in that case it stands to reason that more oxygen ought to reach the same surface than in the normal state.

This more or less *a priori* reasoning is not without the support of facts. Last year I went, with another patient suffering from considerable condensation of the lungs, from Nice to St. Dalmas, 2000 feet above sea level. From the moment we came to this height, we felt very weak and depressed, and in a few weeks our state was such that we were obliged to leave the place altogether. We passed the mountain Col de Tende, and as soon as we reached Turin, which lies in the plain, we felt as it were newly born. Now, I do not know how to explain these facts unless it be by the rarefaction of the air "on the heights." And I am sure that, if Medical men look attentively at this point, they will discover many instances of the kind. Meanwhile I feel justified in laying down this rule, that the greater the infiltration of a patient's lungs the more he should avoid "the heights," and seek regions where the barometer stands high, provided only that he do not locate himself in a damp atmosphere.

I therefore believe those summer stations in the South—St. Dalmas de Tende, Chartreuse de Pezio, St. Martin Lantosque, and also the Swiss mountains—to be pernicious to a considerable number of patients. The advantages of the *séjour* on the sea coast are perhaps due partly to the low situation of such places. And to *poitrinaires* of mountainous countries I would advise going into the valleys.

To conclude, I take the liberty of recommending directors of Hospitals to make observations concerning the connexion between the variations of the barometer and those of the general feelings of phthisics.

Postscript.—My countryman, Professor Moleschott, of Turin, who is a great man, recommends his *poitrinaires* to take every morning, before breakfast, the yolks of two eggs beaten, with sugar, and a spoonful of lime-water. This produces "phosphas calcis in statu nascente." If there is great anæmia he orders the same quantity of eggs, with a spoonful of a solution (1 per cent.) of chloride of iron. In hæmorrhage he orders inhalations of the same solution pulverised. As a stomachic: Entalter cacao of Jordan and Co., Dresden. For diarrhœa: Extrait alcoolique de noix vomique, 25 centigrammes; extr. de colombo, poudre de gentiane, āā 3 grammes. Pour faire 60 pilules; 5 pilules matin ou soir et davantage jusqu'à 5 pilules 3—4 fois par jour.

GENERAL CORRESPONDENCE.

A ROYAL ACADEMY OF MEDICINE OF LONDON.

LETTER FROM DR. FREDERIC BATEMAN.

[To the Editor of the Medical Times and Gazette.]

SIR,—I have watched with some anxiety and, I may say, apprehension the progress of the negotiations that have been lately going on in reference to the establishment of an Academy of Medicine in London, and I desire to express my firm conviction that an Academy founded on the basis proposed by the Committee of the Medico-Chirurgical Society will not answer the end its promoters have in view.

Let me not be misunderstood. I am decidedly in favour of an Academy of Medicine which shall fitly represent British Medicine at home and abroad; but this object cannot be attained by a mere amalgamation of our existing societies. The essential feature of an Academy should be its eclecticism: it must be a limited and select body. Our present societies do an incalculable amount of good, and our best men take a part in their proceedings; but they have not the prestige of an Academy, as everybody knows that any respectable member of the Profession may be admitted on the nomination of two or more members and the payment of an annual subscription. It seems to me that an Academy should not in any way interfere with the working of these most useful societies, but should be quite independent of them. There is a saying, "*Fas est ab hoste doceri.*" The French are not our enemies; but they are, and ought to be, our rivals in all that tends to the advancement of science and the amelioration of the human race. Now, as the Academy of Medicine of Paris is the acknowledged representative body of French Medicine, we cannot do better than study its constitution.

The principal feature in the French Academy is that it is a limited body, consisting of 100 members, divided into eleven sections, representing the various branches of Medical science. Whenever a vacancy occurs, the claims of different candidates are referred to a select committee, and the person most likely to do honour to the section is elected, the name, however, being first submitted to the Emperor for his approbation, thus acknowledging the connexion between the Academy and the State. In consequence of the number of members being

limited, a seat in the Academy is much coveted, as conferring both Professional rank and social status.

We have nothing of this kind in this country, and an amalgamation of our existing societies will not produce it. Although much good may result from a consolidation of the interests of some of our societies, and thus diminishing their number, it seems to me that an Academy should be quite independent of them. I would suggest therefore—

1. That we should retain our existing societies, or at all events some of them, as arenas for general and indiscriminate Medical work.

2. That an Academy of Medicine should be established, the essential feature of which should be that of a limited body, which should represent both at home and abroad the honour and dignity of British Medicine.

3. That it must, in some way, be connected with the State, and be entitled to the appellation of Royal Academy of Medicine. A society thus constituted would contribute very much to the honour and dignity of our Profession, and admission into its ranks would be sought by the best men in every department; it would become the arena where the great scientific questions of the day could be discussed, and where the Government could refer questions of sanitary police with the assurance that the decision would be invested with all the authority of a select and picked body. Nothing short of this will place our Academy on a par with similar institutions on the Continent, and if a scheme of this kind cannot be carried out, I, for one, would say let us maintain the *status quo*, and not damage the usefulness of existing societies by taking what must prove a retrograde step. I am, &c.

Norwich, April 3. FREDERIC BATEMAN, M.D.

"ON HYPERTROPHY OF ONE EXTREMITY."

LETTER FROM DR. W. H. DAY.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your impression of the 27th ult., to which I have just had my attention directed, Mr. Maunder has made some apposite remarks on my "case of enlargement of the right lower extremity," which I lately read before the Clinical Society of London. Whatever emanates from so sound and thoughtful a Surgeon as Mr. Maunder is entitled to every respect and consideration, and it is therefore with much deference that I venture to differ from him in his proposal to diminish the arterial supply of blood to the limb as a probable means of arresting the hypertrophy. I do not suppose for a moment that "the lymphatics of a limb or of the penis can secrete a fluid having the characters of chyle" without a direct communication with the lacteals. I fully believe that such a communication exists in this case. Chemically and microscopically, the distinctions between true chyle and lymph are unmistakable, and they ought not to be confounded together. The large amount of fatty matter and fibrine distinguishes the former from the latter secretion. The fluid in the case in question is generally of a milky whiteness; it contains numerous chyle corpuscles, and an abundance of fibrine. In all respects it looks like a clot of blood, minus the red corpuscles. I have known it to resemble lymph when the patient has fasted three or four hours; on one occasion I described it like the lymph from a well-formed vaccine vesicle, and I can give no better description. Now and then a few blood corpuscles have been demonstrated, and I believe the fluid has been noticed of a faint pinkish character, but I cannot speak positively on the latter point; still, these circumstances taken together would tend to prove that the chyle finds its way into the dilated lymphatics near the thoracic duct, where the chyle corpuscles first begin to be developed into blood corpuscles, and that by some unexplained or retrograde movement the fluid finally escapes from the body through the varicose lymphatic on the penis. In short, instead of the valvular apparatus being perfect and aiding with other forces to propel the lymph towards the thoracic duct and heart, as in health, the lymphatic vessels have lost their power of contractility, and are therefore always in a state of passive dilatation. This seems to be the most reasonable hypothesis that can be offered. If the hypertrophy were due to enlarged vessels or excessive arterial supply, of which there is no direct proof, the limb surely ought not to have so sensibly diminished since the discharge of fluid has commenced. The size of the limb bears a very close relation to the amount of loss. On the 1st and 2nd inst., the discharge, having been in abeyance for fourteen days, returned with greater activity than I have known it to do for some months past. The flow was copious and uninterrupted for nearly forty-eight hours, but the patient's general health having lately improved, he did not exhibit signs of exhaustion till near the period when the discharge subsided. Now what is the condition of the limb since this recent drain of fluid? It has undergone a remarkable diminution in size. The ankle and knee-joint now present the natural configuration of these articulations; the malleoli and patella stand out prominently as in health, and the soft tissues are flaccid and shrunken, proving, I think beyond doubt, that the hypertrophy is owing mainly, if not entirely, to distension of the lymphatics with nutrient fluid. If no recurrence of the discharge takes place during the next week or ten days, we shall have the subcutaneous lymphatics of the foot, scrotum, and penis again distended. The extreme distension of these vessels has given rise to two separate attacks of angeioleucitis. I should fear that the source of mischief is deeply seated in the abdomen, above the bifurcation of the abdominal aorta into the two common iliacs, where no Surgical interference could avail. Again, we are not positive that there may not be some affection of the glands through which the absorbent vessels pass, although at present there is nothing to lead us to such a conclusion. If there ever was a period when this heroic remedy of ligature might have been proposed with any prospect of success, it was prior to the escape of fluid and before the lymphatic character of the disease became manifest. No doubt ligature, if successful, would lessen the size of the limb; but, supposing the patient survived this formidable operation, it is hardly likely that it could alter the condition of the lymphatic vessels, and control the escape of the chylous fluid, which is what we have to contend with now. If the general health can stand against these repeated losses, the limb need give no further trouble, and there is just the chance, from what we know of these remarkable affections, that the dilated lymphatics may slowly waste and cease to run. It seems to me that the question of ligature cannot be entertained. Even in cases of true elephantiasis where ligature has been practised, I cannot ascertain that the results are at all encouraging. In some of the curable cases recorded, the disease has returned as vigorously as ever after the lapse of two or three years. Apologising for the length of this letter, which only the rarity and importance of the subject could justify,

I am, &c. W. H. DAY, M.D.

10, Manchester-square, April 4.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, MARCH 16, 1869.

R. QUAIN, M.D., F.R.S., President, in the Chair.

MR. MYERS exhibited two soldiers suffering from aortic disease, which, as neither had been affected with rheumatism or similar complaint, he attributed to the tight tunic worn by the soldier. The subject of accoutrements had hitherto been chiefly studied, but the question of clothing was at least as important. Diseases of the circulatory organs were more common than among sailors or civilians, chiefly, he believed, on that account. In the Austrian army the tunic was looser; it had no hook at the neck, but a button which pressed on the sternum instead of the throat. The new tunic was improved, but still retained the hook. Another still looser was intended for summer wear. It was like a Norfolk jacket.

Dr. MURCHISON asked if the pressure on the aorta was able by itself, there being no antecedent disease of the vessel, to cause this incompetence.

The PRESIDENT inquired as to the amount of brain disease in the army, which one would have expected to be considerable, the venous congestion consequent on the tightness of the neck being taken into consideration.

Mr. ROBINSON said there were other diseases, as of the lung, consequent on the tight tunic, but the change in the collar proposed would give great relief.

Mr. MYERS thought the aortic disease was entirely due to pressure. The aorta became enlarged, and regurgitation followed. He had not observed the amount of brain mischief.

Dr. GREENHOW reported on Dr. Powell's and Dr. Langdon Down's cases of Addison's disease. Each presented the ordinary appearances seen in the supra-renal capsules in this disorder.

Dr. Powell reported on Dr. Green's specimen of cavernous lung. Some of the cavities were undoubtedly from the breaking up of lung tissue.

The Committee on Morbid Growths reported on Mr. Jessop's specimen, on Mr. Arnett's, which was declared not truly cancerous, and on Mr. Robinson's specimen of syphiloma of the brain, in which a mass was found to surround the root of the fifth nerve.

Dr. Moxon exhibited a specimen of a Kidney with Obstruction of all its Veins by ante-mortem Clot. Both kidneys were in the same state. The symptoms of the patient from whose body these came were remarkable. He had a high temperature, prostration, feeble heart, and large spleen, as well as delirium. The fever was continued; but it had never the characteristic eruption of typhus in a satisfactory form, and its course, as measured by the thermometer, was irregular. His urine was remarkable because of the large quantity of albumen it contained, and he was seized with attacks of convulsions which recurred, and at last proved fatal. Inspection of the body showed the following unusual group of changes:—There was acute meningitis, with subarachnoid lymph over the upper half of the brain. A sloughy cavity existed in the lower lobe of the left lung. The spleen was large, and had in it many embolic patches. The left femoral vein was occupied by a pale adherent thrombus, and as a consequence of this the left leg was very œdematous. But the state of the kidneys was most remarkable. They were very large, weighing twenty-nine ounces together, forming unusually fine examples of the large white kidney with lardaceous vessels. Every vein was full of pale firm clot, in parts adherent to the vessels, which were distended by them. The clots extended as far as the smallest branches could be opened, and the microscope showed the capillaries to be occupied by rows of lymphoid corpuscles. Clots have been found in the sinuses of the dura mater in fevers, and they are known in fevers to be not very infrequent in the veins of the thigh, especially, as Dr. Murchison has pointed out, in those of the left thigh. The present case offers an example of similar clots in the renal veins, and it is interesting to observe that the clot formed in the veins of kidneys which were evidently the subjects of old disease when the fever attacked the man, so that the fever and the renal disease together caused the coagulation to affect especially the renal veins.

Mr. Pick exhibited a somewhat similar specimen occurring in a woman aged 42. The history was imperfect, but she had been very intemperate. She had been ill six weeks. Her left leg was much swollen and œdematous. She was talkative and noisy. Her breath was fœtid, and her urine was intensely albuminous. She died three days after admission, when both lungs were found to be gangrenous in parts, and to contain abscesses in others. The left kidney was larger than the right; its surface was buff; its veins all blocked with decolorised clots extending into all the ramifications of the vein. The right kidney was healthy.

Dr. Moxon next exhibited a specimen of extreme Lardaceous Change fixing on a patch of a lardaceous Liver, and giving that patch a yellow, cheesy, opaque appearance precisely like that of syphilitic deposit, for which it was taken before the microscope was used. Though the change was so very extreme, yet there was no free lardaceous matter, which Dr. Moxon has never seen.

Dr. Dickinson exhibited a specimen of Lardaceous Kidney removed from a young married woman aged 25. When seen, she looked as if in advanced phthisis. She was prostrate, and suffered much from cough and expectoration. Soon after she died. She had been delivered some six months before, and had suffered much after her delivery from a pelvic abscess. She, however, got pretty well, when she caught cold, which led to her death. Her lung was hepatised and grey, her kidneys large and lardaceous. The ovary contained many abscesses opening into the vagina. They wanted a good name for this form of disease; a committee should be appointed to settle it.

Dr. Legg said the word "albuminoid" had been introduced by Sir W. Jenner, he believing that the change was the same as that seen in rickets. The term "albuminoid" was better than "amyloid," the substance being protein.

Dr. Moxon would have been happy to have adopted the Secretary's term, as there was extreme change in the liver. But there was no trace of suppuration, although he had searched with great care. He would define lardaceous disease as that form where it was coarse and the tissue had a bacon-like feel; amyloid where the arteries were affected. He only used this term to indicate a similitude in reaction.

Dr. Wilson Fox used the term "albuminoid." He was indifferent as to name, but the substance was certainly protein. There were many forms of the disease; two might be seen in the spleen. Opaque and granular tracts were often seen passing into fatty. The reactions were not certain in some cases. He thought there were at least four varieties of this form of change.

Dr. Bristowe would recall a paper by Dr. Montgomery in which he showed that such structures contained a deal of cholestearine.

Dr. Marcet said cholestearine was a normal constituent of many tissues, especially that of the spleen.

The President would ask for a report on the whole subject.

Mr. Maunder felt quite anxious about this disease, for how many Surgeons allowed their patients to have a suppurating sore for years without dying of this disease; yet, if what was now said was true, they were causing their patients to run a fearful risk.

A committee, consisting of Drs. Wilks, Bristowe, Wilson Fox, Andrew, Dickinson, and Marcet, was appointed to inquire into the matter and report.

Dr. Green exhibited a Tumour of the Tibia removed from a man aged 26. Four years ago he fell, and injured his leg. Two years after, he had pain in the spot, which was worse at night, and a swelling formed and increased. Some time after he fell, and felt something snap in his limb. Amputation had to be performed. The tumour was a slowly growing fibro-cellular sarcoma.

Mr. Wagstaffe exhibited a specimen of Ossifying Scirrhus of the Rectum unconnected with any disease in the bones. The growth had given rise to total obstruction of the bowel, which lasted for three or four weeks, at the end of which time a communication was established between the sigmoid flexure and the rectum below the obstruction. The patient lived two months after this. The peculiar interest in the specimen was the fact of ossification occurring in parts of the growth, and not in the deeper portions, but in a large nodule which projected into the cavity of the rectum. That this bone was the result of ossification of the scirrhus was evident from the mode in which it could be traced under the microscope, the lacunæ replacing the nuclei, and the rest of the bone taking the place of the intervening matrix.

It was referred to the Committee on Morbid Growths.

Mr. Wagstaffe also showed part of an Ovarian Tumour, whose lining membrane was mapped out into a number of colourless circles and brown intervening areas. The colourless circles showed vessels ramifying irregularly in their centres, but these were obscured towards the margins, where the lining membrane became opaque, white, and gradually merged into the dusky-brown areas. The colourless centres were covered by a thin layer of regular polygonal epithelium, and the dark patches showed degeneration and a quantity of granular pigment. Mr. Wagstaffe was inclined to think that there had been at some time a number of endogenous cysts, and these had fused into one another, and that the colourless circles remained as the bases of attachment, while the dusky areas represented the degenerated intervening walls. A recent multilocular cyst was exhibited, showing the mode of communication between contiguous cysts, in explanation of this view.

Mr. Arnott showed a specimen of Spindle-celled Sarcoma, removed from a soldier, aged 50, who had suffered from constitutional syphilis. A tumour formed in his calf, and was very painful, but his health was pretty good until two years ago, when a lump appeared in his belly. After this there was dry gangrene of the foot, but he died of peritonitis. The right half of the abdomen was filled with a large mass, generally soft, and containing some cysts filled with a grumous fluid. The mass was made up of spindle-shaped cells in regular order. The tumour in the leg was of connective tissue. There was syphilitic deposit in the liver and kidneys. The aorta contained bony plates and loose fringes, one of which broken off blocked up the posterior tibial artery.

Dr. Greenhow exhibited the lung of a miner who had died of Coal-miner's Phthisis. He had long been ill with what was called bronchitic asthma; latterly he had spat much black material. The upper portion of the right lung was solid, containing a cavity with a separated portion of lung tissue. The rest was spongy, but non-elastic. The left contained solid portions in the centre. The microscope showed mostly pigment. No natural structure was seen in these masses. There were many fibrous bands stretching through the lung. The pigment was due to soot, not to coal, and was darker in miners than in others. There is generally a specially dark layer below the pleura.

Dr. Wilson Fox showed a Tuberculous Guinea Pig, the offspring of inoculated parents. He had extreme difficulty in following out this experiment so as to exclude all chances of error. His experiments mostly failed, partly because, in these

animals, tubercle would seem to pursue an acute course. Some aborted, some died soon after impregnation. Finally, from one in whom the tubercle ran a slower course he obtained two litters, some of which died soon, but three survived. This was one of these, and died when six months old. It showed tubercular nodules in many parts of the body, but we could not lay very great stress on a single instance. Still, this was the only instance in which he had found turbercle without inoculating, and it had died spontaneously, apparently from the tubercle.

Dr. Edwards Crisp said hereditary tubercle was not uncommon in animals, but that all animals confined, as in the Zoological Gardens, were liable to its inroads, which rendered the present case doubtful.

CLINICAL SOCIETY.

Friday, March 12, 1869.

Mr. Paget, President, in the Chair.

Dr. Day communicated a case of Eulargement of the Right Lower Limb, with Distension of the Subcutaneous Lymphatics of the Penis and Scrotum, and occasional discharge of Chylous fluid, in a child aged 7 years. The enlargement was first observed when the patient was 2½ years old, and was considered to be due rather to infiltration of the subcutaneous cellular tissue than to hypertrophy. In 1866 the case was seen by Mr. Paget, who pronounced that the condition of the limb was not œdema, but overgrowth, and believed that it was due to obstruction of the femoral vein, there being at that time no indication of disease of the lymphatics. Towards the end of the same year, the prepuce became enlarged and indurated, and in 1868 a vesicle not surrounded with redness appeared at the edge of the frænum. Other similar vesicles soon after presented themselves on the scrotum and on various parts of the affected limb; not long after the vesicle first formed began to discharge. Since this period the discharge has recurred at intervals in increasing quantities, the patient's health being generally good, with the exception that each discharge is preceded by oppression and followed by more or less exhaustion.

The case had been referred at the last meeting to a Committee, who reported that they had directed their attention in the first place to the nature of the enlargement of the right lower limb. From comparative measurement they had concluded that the bones and muscles participated no less than the skin and cellular tissue in the overgrowth. They were further of opinion, from the examination of the patient, that the hypertrophy was intimately connected with the distended state of the lymphatics. In confirmation of this view, they referred to four previously recorded cases in which lymphorrhagia with dilated lymphatics was associated with hypertrophy of the affected part, as well as to the researches of Virchow as to true hypertrophy of the tongue, which show that in that disease the muscular overgrowth is also of lymphatic origin.

A discussion followed in which Dr. Cholmeley and Mr. Barwell expressed the opinion that the enlargement of the limb was due to excessive arterial supply, and that accordingly the proper treatment would be to apply continuous pressure to the femoral artery.

Dr. Broadbent, on the other hand, agreed with Dr. Day in believing that the overgrowth was to be attributed to the detention in the affected parts of lymph, which, in common with most physiologists, he regarded not as an excretion, but as a nutritive liquid.

The President, after expressing his general concurrence with Dr. Broadbent, briefly related a case in which it was clear that hypertrophy of the muscles of a limb had resulted from obstruction of a vein receiving its tributaries from them. He referred in illustration to the fact in comparative anatomy that those muscles which required to contract strongly for short periods—as, *e.g.*, the muscles of flight in birds—are always richly supplied with veins, the plexiform arrangement of which seems adapted to secure the sufficient detention of blood in the muscular tissue. It was the consideration of this fact that had led him, when first asked to see the case at a period when there was no indication of disease of the lymphatics, to infer that the hypertrophy might be due to venous obstruction. He thought that although there was no donbt that the disease had its origin in the condition of the lymphatics, yet there was much obscurity both as to the nature of the change they had undergone, and as to the reason why the liquid was chylous.

Mr. Barwell reported a case of Pyæmia with Pneumothorax, seen by himself and Sir Thomas Watson. A gentleman aged 35, after pain in the axilla, suffered from a small abscess in the armpit. A sudden change in his temper and manner caused fear of mental derangement. Pneumothorax succeeded. Besides the original abscess pus collected in the knee and elsewhere. Coma supervened, and he died after fifty-five days. The pyæmia here arose from a slight cause. The sudden change of the patient's tone and manner is not an isolated or unusual coincidence. Mr. Barwell had seen it in many cases, so that after an injury or Surgical operation a change in the patient's manner to sullen moroseness and mental depression was in his belief the first sign of pyæmia—at least its occurrence was of great import.

After the narration of a case of Typhoid Fever by Dr. Julius Pollock.

Dr. Langdon Down related his case illustrative of the beneficial employment of "Pancreatine" in the treatment of fatty alvine evacuations.

After some observations by Drs. Baumler, Broadbent, and Church,

Mr. Gascoyen related a fatal case in which, as in Dr. Down's patient, diarrhœa adiposa was complicated with diabetes. On dissection it was found that there was complete atrophy of the pancreas.

After a few remarks by the President relating to cases previously recorded, the Society adjourned.

NEW BOOKS, WITH SHORT CRITIQUES.

Does Education lessen Crime?

*** Under this title Mr. W. H. Grosser has issued a small pamphlet of eighteen pages, in which he reviews the whole question with much ability and candour. He remarks that a foreigner would be astonished naturally to hear men of great ability and experience in the House of Lords take totally different views of this matter. Whilst some asserted that education would not diminish crime, though it might vary its character, some were of the opposite opinion. Mr. Grosser says that the difference may be explained by the fact that, though "education" is a term every one thinks he understands, it is constantly used with the most deceptive ambiguity. In the popular (and even the Parliamentary) sense, it is generally equivalent to "tuition," and then again is made synonymous with "schooling." He shows the fallacy of this assumption, and remarks that "the end of teaching is knowledge, the end of education is character." If the child, then, be perfectly "educated," crime would certainly diminish, but that education, to be quite effective, should be begun at home. He contends that, even without moral culture, intellectual tuition has a natural tendency to diminish crime. He makes some most judicious observations on the deficiency of good "education" as generally pursued in schools. The pamphlet is well-timed, and cannot fail to do good to a good cause.

On the Nature and Treatment of Hereditary Disease, with reference to a Correlation of Morbific Forces. By J. M. Winn, M.D., M.R.C.P., late Resident Physician to Sussex House Lunatic Asylum. London: Hardwicke. Pamphlet.

*** In this little pamphlet Dr. Winn deals with a most important and not very well understood subject, the alternation of different diseases, especially in those who have some hereditary taint. Dr. Winn deals with the subject from the side with which he is doubtless most familiar—viz., the alternation of mental diseases with various other affections, especially those of the skin. Such cases are not rare, and they are perhaps equally common, if not more so, in other departments of Medicine. For this hereditary tendency, Dr. Winn suggests, for want of a better name, the title of morbific force, in opposition to vital force. We cannot express ourselves as highly delighted with the names, but the theory itself is of undoubted importance. The fact that one disease may alternate with and take the place of another is undoubted, and its importance with regard to syphilis and struma, cancer and tubercle, has been frequently insisted on. There can be no donbt, we think, of the propriety of Dr. Winn's suggestion, that people having hereditary taint of whatever kind had better not intermarry. The mere possession of such a taint implies a constitutional weakness, and two weak ones never do manage to reproduce a strong one, whatever may be the value of the saying that union gives strength, and their progeny can hardly fail to show one or other, if not both, or even some new form of constiutional weakness. The cases given by Dr. Winn are not numerous, simply because they could be so easily multiplied; they are sufficient, however, to illustrate his point.

Via Medica. The Laws and Customs of the Medical Profession in relation especially to Principals and Assistants. By J. Baxter Langley, M.R.C.S., etc. Third Edition. London: Hardwicke. Pp. 136.

*** "Never prophesy if you don't know" is a very safe rule. We, however, saw enough in this little volume when it appeared to justify a prediction of success, which has been amply confirmed. This edition has been carefully revised, especially in all legal matters, and has now proved itself of known utility.

Causeries Scientifiques. Par Henri de Parville.

Scientific Chats on the Discoveries and Inventions of 1868. Eighth Year. By Henry de Parville. Second Edition. Paris: Rothschild. Pp. 388.

*** M. de Parville has collected into a small, compact, and very readable volume most if not all, of the scientific achievements. As the style is easy and pleasing, the book would serve well as an introduction to French as well as to science.

The Sanitary Record, with which is incorporated "The Public Health." Nos. 1 and 2.

*** Much improved since its enlargement, and contains several original articles of interest.

The Popular Science Review. Edited by Henry Lawson, M.D. April, 1869. London: Hardwicke.

*** The original articles are of unusual interest. Mr. Mivart describes the Anatomy of the Cuttle-fish, Mr. Forbes the nature of the Interior of the Earth, Mr. Brudenell Carter on the Use and Choice of Spectacles, Mr. Proctor the Use of the Spectroscope in Astronomical Observations, and Dr. Masters the Structure of the Passion Flower. An enormous amount of information on all the newest scientific facts and opinions is contained in the latter part of the *Review*.

The House I live in: a Popular Illustration of the Structure and Functions of the Human Body. Edited by T. C. Girtin, Surgeon. New edition. London: Longmans. Pp. 181.

*** This work is founded on the American one by a Dr. Alcott, published many years ago. It is intended to illustrate religious doctrines, and is illustrated by certain engravings, about which we shall not say anything.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their Primary Examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 6th inst., and, when eligible, will be admitted to the Pass Examination:—

Bailey, Thomas, of the Birmingham School.
Browne, H. W. L., of the Birmingham School.
Edgington, R. W., of the Birmingham School.
Elkington, E. A., of the Birmingham School.
Fleming, D. G., of the Toronto and St. Thomas's Hospitals.
Harvey, Christopher, of the Westminster Hospital.
Hughes, A. H., of the Toronto and St. Thomas's Hospitals.
Johnson, W. M., of Cambridge and King's College.
Kay, Hildreth, of the London Hospital.
Kay, W. T., of Newcastle.
Langridge, G. T., of St. Bartholomew's Hospital.
Lorraine, W. J., of the Leeds School.
Lowther, Richard, of Edinburgh.
Lucas, T. P., of the Westminster Hospital.
Miall, L. C., of the Leeds School.
Newman, A. S., of the Birmingham School.
Oates, J. P., of the Birmingham School.
Osborn, Samuel, of St. Thomas's Hospital.
Powell, L. L., of University College.
Scully, John, of the Middlesex Hospital.
Shaw, J. L., of Guy's Hospital.
Slater, J. S., of St. Thomas's Hospital.
Smith, J. P., of the Birmingham School.
Smith, W. R., of St. Bartholomew's Hospital.
Southee, H. E., of Guy's Hospital.
Soutter, M. C., of King's College.
Tothill, T. H. F., of St. Bartholomew's Hospital.
Tunley, John, of the Birmingham School.
Vickers, C. W., of the London Hospital.
Walsham, W. J., of St. Bartholomew's Hospital.
Wayman, C. P. S., of St. Bartholomew's Hospital.
Yeates, W. M., of the Birmingham School.

The following passed on the 7th inst.:—

Deeping, G. D., Guy's Hospital.
Doran, A. H. G., St. Bartholomew's Hospital.
Douglas, W. T. P., Cambridge and Guy's Hospitals.
Drake, Cecil, Charing-cross Hospital.
Duke, D. W., Guy's Hospital.
Dustan, Henry, University College.
Edis, J. B., London Hospital.
Edmonds, F. H., University College.
Floyer, B. B., Middlesex Hospital.
James, J. B., Middlesex Hospital.
Latimer, H. A., Guy's Hospital.
Leigh, J. T., Charing-cross Hospital.
Marshall, John, Guy's Hospital.
Mayo, A. C., King's College.
Millson, George, St. Mary's Hospital.
Moore, E. W., St. Mary's Hospital.
Moore, A. J., London Hospital.
Morris, J. E., St. Thomas's Hospital.
Moseley, W. A., St. Bartholomew's Hospital.
Newington, F. E., Guy's Hospital.
Newman, A. K., Guy's Hospital.
Newton, C. J., St. Bartholomew's Hospital.
Nicholls, H. H. J., Guy's Hospital.
Noakes, S. S., Charing-cross Hospital.
Paramore, Richard, Guy's Hospital.
Parrott, E. J., St. Mary's Hospital.
Parsons, J. F., St. Mary's Hospital.
Perkins, Whitford, Guy's Hospital.
Phillips, G. A., St. Bartholomew's Hospital.
Pike, W. R., St. Thomas's Hospital.
Risdon, G. O., St. George's Hospital.
Roose, E. C. R., Guy's Hospital.
Wilmot, R. E., King's College.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, April 1, 1869:—

Daldy, Frederick Samuel, 41, Finsbury-square.
Etheredge, George Ernest Frederick, St. Bartholomew's Hospital.
Farnfield, Walter Edmund, 8, Lambeth-terrace, S.E.
Griffin, Innes, Banbury, Oxon.
Hopkins, John, Llantrissant, Glamorganshire.
Jones, Watkin Williams, Dolgian, Cardiganshire.
Lacey, Thomas Warner, Cotes, Loughborough.
Marsh, Walter Alfred, 23, New Kent-road, S.E.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Shipston-on-Stour Union.—Mr. Hornidlow has resigned the Halford District; area 12,199; population 2810; salary £47 per annum.

Weobley Union.—Mr. Charles Neate has resigned the Weobley District; area 18,774; population 3579; salary £75 per annum. Also the Workhouse; salary £10 per annum.

Whitby Union.—The Egton District is vacant; area 37,120; population 3519; salary £25 per annum.

APPOINTMENTS.

Ashton-under-Lyne Union.—Edward T. O'Brien, L.K. and Q.C.P.I., M.R.C.S. Ire., to the Second District.

Auckland Union.—Donald Clark, M.R.C.S. Edin., L.R.C.P. Edin., to the Whitworth District.

Bangor and Beaumaris Union. David W. Williams, M.D. St. And., M.R.C.S.E., to the Anglesey District.

Catherington Union.—Richard Wellings, M.R.C.S.E., L.S.A., to the Catherington District.

Clifton Union.—James McBride, M.R.C.S.E., L.R.C.P. Edin., to the Third District.

Loddon and Clavering Union.—Robert J. Metcalfe, M.D. Edin., M.R.C.S.E., to the First District.

South Molton Union.—James Ford, M.D. St. And., M.R.C.S.E., L.S.A., to the Seventh and Eighth Districts.

Stepney Union.—Nathaniel H. Jarvis, M.R.C.S.E., L.S.A., to the Second District.

Woburn Union.—Thomas H. Barnes, M.R.C.S.E., M.D. St. And., L.S.A., to the Toddington District.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CUMMING, JAMES, B.M. and C.M. (Edinburgh University)—Assistant Extra Physician to the Royal Sick Children's Hospital, Edinburgh.

GALTON, J. C., M.A. (Oxon.), F.L.S., M.R.C.S.—Lecturer on Comparative Anatomy at Charing-cross Hospital.

ROSS, Dr.—Medical Officer of Health to the St. Giles's District.

WOLFE, J. R., M.D., F.R.C.S.E.—Lecturer in the newly-established chair of Ophthalmic Medicine and Surgery in Anderson's University, Glasgow.

NAVAL AND MILITARY APPOINTMENTS.

15TH FOOT.—Staff Surgeon Henry Joseph Rose to be Surgeon, *vice* Surgeon-Major Henry Higgins Jones, who exchanges.

81ST FOOT.—Staff Surgeon John Wood to be Surgeon, *vice* William Marshall Webb, appointed to the Staff.

MEDICAL DEPARTMENT.—Surgeon-Major Henry Higgins Jones, M.D., from the 15th Foot, to be Staff Surgeon-Major, *vice* Staff Surgeon Henry Joseph Rose, who exchanges—Surgeon William Marshall Webb, from the 81st Foot, to be Staff Surgeon, *vice* John Wood, appointed to the 81st Foot—Assistant-Surgeon Lauger Carey, M.D., from the Royal Artillery, to be Staff Assistant-Surgeon, *vice* Charles John Kirwan, placed upon half-pay.

BIRTHS.

LEADAM.—On March 29, at Iver, the wife of W. Ward Leadam, M.D., of a son.

KEARNEY.—On March 31, at 32, York-street, Portman-square, the wife of Surgeon J. Kearney, H.M.'s Bombay Medical Establishment, prematurely, of a son, who survived only a few hours.

M'COY.—On February 19, at Madeira, the wife of R. W. M'Coy, F.R.C.S., etc., Colonial Surgeon, Sierra Leone, of a daughter.

MARTIN.—On April 2, at Cambridge-house, Portsmouth, the wife of J. H. Martin, M.D., of a daughter.

PRICE.—On March 31, at Kettering, the wife of J. Lowe Price, Surgeon, of a son.

ROSE.—On April 3, at Hampstead, the wife of Henry Cooper Rose, M.D., of a daughter.

TAYLOR.—On March 29, at Freshwater, Isle of Wight, the wife of Herbert Taylor, M.D., of a son.

MARRIAGES.

BERNARD—PARKER.—On March 31, at the Parish Church, High Wycombe, George Peterson Bernard, L.R.C.P. Edin., of Hemel Hempstead, to Anna Maria, second daughter of John Parker, Esq., solicitor, of High Wycombe, Bucks.

BRAITHWAITE—WARD.—On April 3, at the Church of St. John the Evangelist, Blackheath, Robert Braithwaite, M.D., F.L.S., of the Ferns, Clapham-rise, to Charlotte Elizabeth, second daughter of the late Nathaniel Bagshaw Ward, F.R.S., F.L.S. No cards.

MURRAY—CLIFTON.—On March 1, at St. Peter's Church, Henry B. Murray, youngest son of the late Rev. James G. Murray, D.D., of Bermuda, to Louisa, youngest daughter of the late Hon. Howard M. Clifton, M.D.

DEATHS.

COX, NATHANIEL MIERS, M.R.C.S. London, at Valparaiso, having resided in Chili fifty-five years, on February 6, in his 85th year.

EARLE, JAMES NEALE, M.R.C.S., on February 16, at sea, between Calcutta and Madras.

HALL, JAMES, M.D., Surgeon R.N., at Gladstone-house, Southsea, on March 30, aged 84.

LLEWELLYN, ALBINA, widow of the late Thos. Llewellyn, M.R.C.S., at 29, Clifton-gardens, Maida-hill West, on April 4, aged 52.

PEARCE, JOHN WORTHAM, M.R.C.S., at Peterborough, on April 5.

PEREGRINE, FRANK FORD, the second and much-loved son of Dr. Peregrine, at 3, Half-moon-street, Piccadilly, on April 3, in his 19th year.

RANSFORD, JOHN, Surgeon-Major Bengal Army, at Bournemouth, Hants, on March 27, aged 68.

SCOTT, JOHN, Esq., late of West Maitland, last surviving son of the late James Scott, M.D., of Haslar, Deputy Inspector-General of Hospitals and Fleets, at Newtown, Sydney, N. S. Wales, on January 8, in his 49th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BRADFORD INFIRMARY AND DISPENSARY.—Two Physicians; must be graduates in Medicine of one of the Universities of the United Kingdom, or Fellows or Members of one of the Colleges of Physicians, and be registered under the Medical Act. Diplomas and testimonials to Mr. Chas. Woodcock, Secretary, Sun-bridge, Bradford, on or before April 15. Election on May 5.

CHARING-CROSS HOSPITAL.—Chair of Botany. Applications and testimonials to the Secretary at the Hospital on or before the 16th inst.

CONVICT SERVICE.—Compounder of Medicines. Candidates must be thoroughly competent to perform the duties of a dispenser of medicines, and be between 24 and 40 years of age. Applications, with certificates of qualifications, to the Directors of Convict Prisons, 45, Parliament-street, Westminster, where further information may be obtained.

EASTEEN DISPENSARY, BATH.—Resident Medical Officer; must be duly registered, and have both Medical and Surgical qualifications. Applications and testimonials to Mr. Edmund Smith, Hon. Sec., on or before April 14. Approved candidates will receive notice of the day of election.

GENERAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN IN MANCHESTER.—Assistant Medical Officer; must have both Medical and Surgical qualifications, and be unmarried. Applications and testimonials to Dr. Borchardt, Manchester, on or before April 13.

GENERAL INFIRMARY, LEEDS.—Four Assistant Resident Medical officers; must possess at least one qualification. Applications and testimonials to C. Bradley, Esq., at the Institution, on or before April 12; election on April 17.

LINCOLN GENERAL DISPENSARY.—House-Surgeon and Apothecary; must be M.R.C.S.E., and either L.S.A. or L.R.C.P.L., and be unmarried. Applications and testimonials to James Ward, Esq., Lincoln, on or before April 13. The election will take place on the same day.

LIVERPOOL DISPENSARIES.—Three Assistant House-Surgeons; must be duly registered. Applications and testimonials to the Secretary on or before the 28th inst. Candidates will be required to attend before the Medical Board at the Dispensaries' Office, Leith Offices, Moorfields, on the 29th inst. at 2 o'clock p.m.

MEATH HOSPITAL AND COUNTY OF DUBLIN INFIRMARY.—Surgeon. Applications and testimonials to the Secretary at the Institution.

MIDHURST UNION.—Medical Officer for the Fernhurst District. Candidates must be legally qualified and registered under the Medical Act, 1858. Applications and testimonials to Mr. Edwin Albery, Midhurst, on or before April 20. Election the same day.

NOTTINGHAM COUNTY AND BOROUGH LUNATIC ASYLUM.—Assistant Medical officer; must be duly qualified and registered under the Medical Act. Candidates must be unmarried. Applications and testimonials to the Chairman of the Committee of Visitors, under cover to Mr. K. Sanby, on or before April 12. Election on April 15.

POPLAR UNION.—Medical Officer for the Middle District. Candidates must possess the qualifications required by the Poor-law Board. Residence within the district will be required. Applications and testimonials to Mr. James Ripley Collins, Clerk, on or before the 15th inst. Candidates must attend at the Board-room, High-street, Poplar, on the 16th inst., at 3 p.m.

RETFORD GENERAL DISPENSARY.—House-Surgeon and Apothecary; must have both Medical and Surgical qualifications. Applications and testimonials to the Dispensary Committee on or before May 8. The duties will commence on July 1.

ROTHERHAM UNION.—Medical Officer for the Wentworth District. Candidates must be legally qualified. Applications and testimonials to J. Barras, Esq., Rotherham Union Offices, on or before April 10. Election on April 12.

ROYAL ALBERT HOSPITAL, DEVONPORT.—Assistant House-Surgeon; must be M.R.C.S. Lond., Edin., or Dublin, and be unmarried. Applications and testimonials to the Secretary on or before the 19th inst.

ROYAL HANTS COUNTY HOSPITAL, WINCHESTER.—Dispenser and Clerk. Applications and testimonials to W. A. Richards, Esq., Secretary, on or before April 16.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY—Physician; must be F. or M.R.C.P. Lond. Candidates to attend with diplomas and testimonials at the Institution, No. 60, King-street, Regent-street, at 4 o'clock p.m. on April 22.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY—Accoucheur; must be F. or M.R.C.P. Lond., or F. or M.R.C.S. Eng., and not practising pharmacy. Candidates to attend with diplomas and testimonials at the Institution, 60, King-street, Regent-street, at 4 o'clock p.m. on April 22.

SEVENOAKS UNION.—Medical Officer for the Fifth District of the Union, comprising the parishes of Leigh, Penshurst, and Chiddingstone. Candidates must be registered under the Medical Act, 1858, and possess the qualifications prescribed by the orders of the Poor-law Board. Applications and testimonials to G. F. Carnell, Esq., Sevenoaks, on or before the 13th inst. Election on the 14th inst.

SUNDERLAND INFIRMARY.—House-Surgeon; must possess both Medical and Surgical qualifications, and be registered. Testimonials and diplomas to the Secretary, on or before May 1. Election on May 10.

WINDSOR ROYAL INFIRMARY.—Dispenser; must be unmarried. Applications and testimonials to Mr. G. Cartland on or before the 21st inst.

AT a levée held on Saturday, April 3, at St. James's Palace, by his Royal Highness Prince Arthur, on behalf of her Majesty, the following presentations were made:—Mr. William Adams, by Sir H. Lytton Bulwer, M.P., K.C.B.; Dr. W. Brewer, M.P., by Lord Foley; Mr. Skey, on nomination as Companion of the Bath, by Viscount Torrington; Dr. Swettenham, Deputy Inspector-General of Hospitals, by the Adjutant-General. The following gentlemen attended the levée:—Sir Charles Hood; Drs. G. Butler, Combe, Wickham Legg, and Arthur Priest; and Mr. Hilton.

COLLEGIATE EXAMINATIONS. — At the Primary Examinations in Anatomy and Physiology at the Royal College of Surgeons, which were brought to a close on Thursday last, it is stated that only twelve candidates failed to acquit themselves to the satisfaction of the Court of Examiners out of the 108 who offered themselves.

DR. JAMES ALDERSON, F.R.S., has been re-elected President of the Royal College of Physicians for the ensuing year.

THE LATE DR. OSBORN, F.R.C.S. — A testimonial, elegantly engrossed and framed, has just been presented to his widow by the Brixton Medical Society, testifying in high terms the great esteem and gratitude of the members for the valuable services rendered by Dr. Osborne as honorary secretary for the last twenty years.

THE VACCINATION ACT.—Mr. J. A. H. Toulson, of Kirkstall-road, Leeds, chemist, has been fined 20s. and costs for refusing to have his infant, now nine months old, vaccinated. The amount (£1 8s. 6d.) was paid by Dr. J. P. Payne, on behalf of the Leeds Branch of the London Anti-Compulsory Vaccination League.

TESTIMONIAL TO PROFESSOR PRITCHARD.—The students of the Royal Veterinary College who form the private class of William Pritchard, Esq., Lecturer on Descriptive Anatomy, have presented him with a testimonial, expressive of their appreciation of his labours on their behalf. The testimonial consists of a handsome silver claret jug and inkstand, accompanied by an address.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The usual monthly meeting will be held on Saturday, the 17th inst., at 7.30 p.m., at the Scottish Corporation Hall, Crane-court, Fleet-street, when a paper will be read by Dr. Letheby, "On the Methods of estimating Nitrogenous Matters in Potable Waters; and on the Value of the Expression 'previous sewage contamination,' as used by the Registrar-General in his Monthly Reports of the Metropolitan Waters."

THE Middlesex Hospital Home for Nursing will be opened on May 3, by her Royal Highness, Princess Teck. The building is now nearly completed, and will form an important addition to this admirable institution. The Hospital festival will be held after the ceremony, Lord Enfield, M.P., in the chair.

MEDICAL BENEVOLENT FUND.—The sum of £140 was granted by the Committee at their meeting on the last Tuesday in March; this was among sixteen applicants, and included £25 promised conditionally at previous meetings. Legacies of £100 duty free from the late Jos. Hodgson, F.R.S., and £500 11s. 11d. duty free from the late Miss Terrett were reported; these, in accordance with the laws, are added to the annuity fund, and are invested in Government securities. Cases of temporary distress receive relief from the donation and subscription fund; to these the hon. secretary reported a further contribution from Dr. Burrows, F.R.S., of £10 10s., and from Miss Abernethy of £5 5s.

A SOCIETY has just been formed in Liverpool called the Liverpool Anthropological Society, and having for its object the acquisition and promotion of a better knowledge of the true science of man—spiritual, mental, and physical. The following are the office-bearers:—*President:* C. Piazzi Smyth, Esq., F.R.S., Astronomer Royal for Scotland. *Vice-Presidents:* William Osburn, Esq., F.R.S., Bernard Davis, Esq., F.R.S., Sir Duncan Gibb, Bart., M.D., Thomas Inman, Esq., M.D., Rev. George Bartle, D.D., Rev. Joseph Taylor Goodsir, M.A. *Council:* Rev. David Hirsch, M.A., Rev. Charles Voysey, M.A., Dr. Podmore Jones, Dr. Hitchman, Mr. Frederick J. Jeffery, Mr. Thomas Ellison, Dr. Slack, Rev. James Turnbull, M.A., Dr. Harris, Mr. Robert Wood, Mr. George Shaw, Mr. Richard Williams, Mr. James Plastow. *Hon. Sec.:* John Fraser.

THE April number of the *Pharmaceutical Journal* contains a paper by Mr. J. Collins "On the Lign Aloe Wood of Mexico," about the existence of which there has been a good deal of doubt. This wood contains an enormous amount of an

essential oil, which smells like that of lemon. The wood itself consists of two parts, a central dark portion and a cortical lighter one. A specimen may be seen in the museum of the Pharmaceutical Society. The oil was first offered for sale in London in 1867, and was then generally assumed to be an artificial product; its source and character have now, however, been set at rest.

THE LONDON HOSPITALS.—Professor Gritti, of the Milan Hospital, relating his tour of inspection of the Paris, London, Belgian, and German Hospitals, observes that nowhere did he see so many operations as in London, and nowhere else did he find that the Surgical patients outnumbered the Medical, the reverse being indeed the case in all Continental Hospitals. This he attributes to our having so many more Surgical cases owing to our crowded streets and the manufactures carried on in London. He comments also upon the manner in which our Hospitals are crowded in with houses, and the absence or scarcity of vegetation surrounding them.

ACADÉMIE DE MÉDECINE.—At its last meeting the Academy filled up the place in the section of Surgical Pathology left vacant by the death of Velpeau. The committee presented as its list of candidates MM. Verneuil, Dolbeau, Giraldès, Perrin, Desormeaux, and Lefort; and to this the Academy added the names of MM. Voillemier and Trélat. At the first balloting M. Verneuil obtained the votes of thirty-two of the seventy-three Academicians who were present; but as thirty-seven votes were wanted to constitute a majority, a second balloting took place, when M. Verneuil obtained fifty-two votes.

AT the late annual meeting of the Prudential Assurance Company it was stated that the new premium income of the year ending December 31, 1868, amounted to £87,748, the corresponding amount for 1867 being £54,819. The total premium income at the close of the year amounted to £220,978. After making allowance for all policies lapsed or surrendered, the assurance fund amounted to £241,301, against £172,959 at the close of 1867, being an increase of £68,341. The directors drew especial attention to the circumstance that sixteen years since they inaugurated a plan of weekly audit of accounts, and that they are enabled to control the operations of the Company in the most efficient manner.

THE Commissioner of Metropolitan Police has issued the following "Police Order," and sent it round to the various Hospitals, Infirmaries, and Dispensaries:—"Metropolitan Police Office, Tuesday, 30th March, 1869.—Police applying as Out-Patients of Hospitals.—The Commissioner having had his attention called to the fact that constables sometimes apply as out-patients at Hospitals when suffering under venereal disease, and on other occasions, without the knowledge or recommendation of the Chief or Divisional Surgeons, wishes it to be understood that such practice is not countenanced by him. All police-constables applying either as in or out-patients at any Hospital with the sanction of the Commissioner, will in future bring a recommendation either from the Chief Surgeon of the Police or from their own Divisional Surgeon.—(Signed) E. Y. W. HENDERSON."

THE LATE DR. COLLIS.—At a meeting of the Governors of the Meath Hospital, Dublin, held on Monday, it was resolved, "That it having been stated that the family of Dr. Collis were in circumstances calling for liberal aid, and believing it to be a case pre-eminently calling for public testimony to a worthy man who sacrificed his life in the interest of the poor, we commence a subscription for his wife and family." Mr. Stokes said he thought it would be desirable that the Medical Profession should initiate the subscription, but that its completion was a matter for the public, whose servant the late much-lamented Dr. Collis was. Messrs. A. McComas, F. M. Scott, C. Leslie, F. Stokes, J. Sibthorpe, and T. Drury then commenced a subscription list with £10 each, and Sir John Barrington and Messrs. E. Walpole and A. Andrews with £5 each.

THE Registrar-General for Ireland reports on the whole favourably on the health of Ireland during the first quarter of this year. Notwithstanding the very tempestuous and rainy weather, scarlet fever of a malignant type was common throughout the country, and in some districts typhus fever was epidemic; in many instances the district registrars refer this to the horrid sanitary state of their neighbourhood. At Galway things are better, and the registrar reports most favourably on the sanitary arrangements—especially the waterworks—of that town. The registrar of one district remarks that the causes of death assigned in the certificates afford no precise information. The most prominent symptoms, as convulsions, shortness of breath, decline, etc., are given, and any attempt to push inquiry is resented as inquisitorial and unfeeling. The registrar of Castle Martyn makes the following observations:—"I cannot forbear mentioning the case of a child who died of jaundice, as it shows the savage ignorance which still exists in the country. The child was dying when I was asked to visit him, and by the advice of an old woman had been taking porter and an infusion of barberry, and, as a stimulant, sheep's manure. Qualified Medical men are powerless when opposed by old women."

RULES FOR ADMISSION TO THE HOTEL-DIEU HOSPITAL AT PARIS IN THE YEAR 1535.—Before any patient was admitted he or she had to confess to the priest, after which the sister on duty would assign him his bed, his clothes to be taken care of and returned when he was cured. Therefore the patients had to undergo a religious rite, but they were not registered. Not even a register of the deaths was kept until 1559. In 1594 a rule was made that no patient should be accommodated unless he had been visited previously by a Surgeon of the Hotel-Dieu, or sent by his order.

FUNERAL OF DR. MAURICE COLLIS.—The funeral of this lamented gentleman took place on the 31st ult., at Mount Jerome Cemetery. It was attended by a vast number of the members of his own Profession, as well as by many of the most eminent persons in Dublin of other professions and callings. A very eloquent address was delivered over the remains by the Rev. Achilles Daunt. He alluded impressively to the lesson which the premature decease of the lamented gentleman, whose mortal remains lay before them, taught them of the uncertainty of man's life. He was struck down in the full vigour of manhood, at a time when a long career of usefulness seemed to be opening before him—when he seemed advancing rapidly towards the highest honours that his profession could bestow. The study of a life such as his could not fail to stimulate them all to higher purposes and more exalted aims. He was one who, by integrity of motive, consistency of life, gentleness, and benevolence of disposition, gained for himself the affection and the respect of many; and his death would cause deep-felt regret by a large circle indeed. It was said by a great writer, "Live, live, so as to be missed when you die." It ought to be the object of us all so to pass through this life that there should be grief amongst many when we shall walk with them no more. There were many, he was sure, amongst those who cherished a grateful recollection of relief afforded in the hours of suffering by him who was now for ever removed from amongst them. There were many to mourn over the grave of him, who owed much to a benevolence as unostentatious as it was active. He had known the deceased for thirteen years, and during that time he had more than once derived assistance from his counsel, encouragement from his kindly sympathy. It was a happy consideration that death should have come to their friend on Easter morning, when men celebrate the resurrection of Him who brought life into the world. May that morning have been to the deceased the beginning of a life of eternal happiness!

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN MARCH, 1869.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	21·63	0·086	0·195	0·002	14·0	3·8
West Middlesex	20·90	0·114	0·262	0·002	13·9	3·4
Southwark & Vauxhall	23·27	0·187	0·240	0·002	15·9	4·7
Chelsea	21·47	0·196	0·238	0·004	14·6	3·9
Lambeth	21·33	0·186	0·368	0·006	14·0	3·9
Other Companies.						
Kent	28·63	0·058	0·270	0·001	20·4	6·3
New River	20·23	0·061	0·188	0·002	14·0	3·2
East London	24·13	0·068	0·270	0·002	16·0	4·1

All the samples were bright when drawn from the mains, excepting those of the Lambeth and the Chelsea Companies.

The average daily quantity of water supplied to the metropolis in the month of February last was, according to the returns of the Water Companies to the Association of Medical Officers of Health, 92,323,860 gallons, and the number of houses supplied was 461,561. This is at the daily rate of 29·1 gallons per head of the population.

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

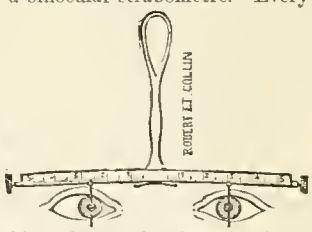
THE METROPOLITAN SICK POOR.—A return has been made to the House of Commons with reference to the arrangements which have been made for providing Asylums, Infirmaries, and Dispensaries under the Metropolitan Poor Act, 1867. It appears that two *Asylums for Imbeciles* are to be provided, each to be capable of accommodating 1500 patients—one at Leavesden, near Watford, the other at Caterham, Surrey. The cost of the site for the Leavesden Asylum is £7600; estimated cost of the building, £110,000; of furnishing, bedding, and clothing, £18,000; total, £135,600. The cost of the site for the Caterham Asylum is £6000; the estimated cost of the building, £111,000; of furnishing, etc., £18,000; total, £135,000. *Infirmaries for Fever and Small-pox Patients:* Sites have been purchased at Stockwell, Homerton, and Hampstead. The Stockwell Infirmary is to be capable of receiving 162 fever and 102 small-pox patients. The cost of the site is £15,500; estimated cost of the building, £56,600; of fittings, furniture, bedding, and clothing, £22,700, including 10 per cent. for contingencies; total, £94,800. The Homerton Infirmary is to be capable of receiving 182 fever and 102 small-pox patients. The cost of the site is £12,500; estimated cost of building, £44,000, to which may fairly be added as much as at the Stockwell Infirmary for fittings, etc. (it will probably be more, as 20 more patients are to be provided for)—viz., £22,700; total, £79,200. Both plans are, however, still under consideration. A site has been obtained at Hampstead for £16,000, but the erection of the building is to be deferred until it has been ascertained how far the other infirmaries will meet the requirements of the district. *Infirmaries for the Sick, other than Fever and Small-Pox Patients:* Six districts have been formed, and sites obtained in four of them at a cost altogether of £35,570; nothing appears to have been decided about the buildings. *Dispensaries* have been established in the following unions and parishes—viz., St. George-in-the-East; St. George, Hanover-square; St. Mary, Islington; St. Margaret and St. John, Westminster; Mile-end Old-town; St. Mary, Newington; St. Olave; St Pancras (not yet in operation), Poplar, St. Saviour, Stepney, and Whitechapel, and dispensaries will be soon completed in Paddington and Lambeth.

STATISTICS OF FEVER.—Dr. Murchison's report of the cases of fever treated in the London Fever Hospital during the year 1868 shows an excess of 856 patients over the number admitted in the previous year, and an excess of 47 over the largest number admitted in any previous year of the Hospital's history. This great increase in the number of persons who have sought relief is partly due to an extension of the means of the institution to meet the requirements of the public, partly to the parochial authorities having been roused to a sense of the danger of treating cases of contagious fever in the wards of workhouse infirmaries, and partly to an increased prevalence of fever. Of the 3657 patients admitted last year, 1971 were suffering from typhus. 461 cases of enteric fever were admitted during the year. The excessive prevalence of this form of fever is in a great measure to be ascribed to an exaggeration of the climatic conditions that habitually favour its development; the month of September was that in which the largest number of cases was admitted, and more than half the admissions occurred in the three months of August, September, and October; indeed, the tropical summer of 1868 will long continue to be remembered Scarlet fever was very prevalent in 1868; the largest number of patients affected with this epidemic ever admitted to the Hospital occurred in 1864 (284 cases), but last year 399 patients were received. Including the numbers remaining in the institution at the commencement of the year, it appears that of 3858 cases under treatment, 3015 were discharged as recovered, 543 died, 42 were relieved, and 258 remained in hospital. The mortality among the total number of patients, after deducting moribund cases, etc., was 13·66 per cent. The influence of age on the mortality is most remarkable; thus, of 151 cases of typhus between the ages of 5 and 10, only one was fatal, whereas of 151 cases over 50 years of age, 82, or considerably more than one-half, were fatal. No less than 665 cases of other diseases—of which 138 proved fatal—were recorded last year, showing the multifarious nature of the "other diseases" sent to the Fever Hospital, the patient in every instance having been certified to be suffering from contagious fever, but upon further development of the disease this proved not to be the case. The large number of contagious cases admitted in 1868 was, of course, not treated with immunity to the attendants; 25 nurses, 3 scrubbers, and 2 laundrymaids contracted typhus, so that out of about 130 engaged in the management of the institution, 30 caught the fever; only 2, however, died. The localities from which those affected with typhus were mainly brought were the poorest and most densely crowded of the eastern, central, and southern districts of London.

NEW INVENTIONS.

DR. GALEZOWSKI'S BINOCULAR STRABOMETRE.

M. BECLARD presented to the Academy of Medicine of Paris on the 23rd ult. a very ingenious and simple little instrument invented by Dr. Galezowski—a binocular strabomètre. Every Surgeon knows how important it is, in the operation of strabismus, to measure with exactitude the degree of deviation as well as the precise result obtained by tenotomy. With the strabomètre of Dr. Laurence, which has to be moved from one eye to the other in order to compare the degree of deviation, this is often very difficult. The binocular strabomètre of Galezowski does not present the same inconvenience; the two needles, which slide in the sulcus of a screw, are easily placed opposite to the centre of each cornea; and by the divisions which are marked upon the horizontal bar, we immediately note the deviation. The instrument is composed of a horizontal branch, upon which slide two needles destined to indicate the degrees, and which place themselves opposite to the centre of each corresponding cornea. This transverse bar is held on a level with the eyelids, the handle of the instrument upwards, and the fork of the bar against the root of the nose. On turning the little buttons attached to the extremities of the bar, the needles move from right to left and left to right, until each one is found to be opposite the centre of the pupil, as is shown upon the accompanying figure. The graduation of the transverse bar gives us the degree of deviation with the greatest precision. The handle of the instrument might be omitted, which would leave a mere horizontal bar, thus reducing it to the greatest degree of simplicity.



NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Allbutt.—Many thanks.

Dr. Roberts.—The time will suit very well.

Alpha.—John Hunter's menagerie was at Earl's-court, Brompton; his residence in Leicester-square.

A. N.—The case was published in Liston's "Operative Surgery." The proceeding was quite successful.

R.—Abernethy never held a court appointment. Sir Astley Cooper was Sergeant-Surgeon to King George IV.

An Intending Candidate is referred to a letter on Indian Medical service in this day's issue.

Army Surgeon.—The late Mr. Guthrie was at the battle of Waterloo. A portrait of him (a good likeness) is to be found in one of the pictures of that great struggle—we think Jones's.

A Young Practitioner cannot recover any charges unless he is on the General Register. His certificate is useless and valueless, so long as he is unregistered, for all legal purposes.

The Registrar of the Medical Society of London must be asleep. The announcement that the Society would not meet on Monday last did not reach us until our last week's number had gone to press.

A Member and F.R.C.S.—The exact date of the commencement of the lectures by Professor Clark will be duly announced.

Competitor.—The prize is a *triennial* one of fifty guineas. Write to the Secretary. No award is expected for the prize mentioned.

An Old Subscriber.—Mr. Dalrymple is a member of the present Parliament. You will find a short notice of the death of Mr. John Dalrymple in vol. xxv. of the *Medical Times and Gazette*, p. 471. You will find an abstract of the gentleman's paper in the last number of Ranking's "Abstract."

CARBOLIC ACID AND HOSPITAL MORTALITY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In my letter of last Saturday week, in answer to your correspondent who inquired as to the effects of carbolic acid on Hospital mortality, I inadvertently omitted to state, in speaking of compound fractures, that I referred to those of the upper and lower extremities only. Any of the others are without value for purposes of statistical comparison.

I am, &c. M D.

Professional Ethics.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Will you be so good as to favour me with your opinion on two questions of Professional ethics, touching the taking of fees from the relatives of our brethren?

1. A. is a consulting Practitioner in a city. B. is a country Practitioner residing ten miles off. B.'s father, who lives near him, is ill, and B. wishes a consultation on his case with A. A. accordingly meets B. for that purpose at the house of the father, going by road. Is A. entitled to the usual fee given by an ordinary patient, or to any portion of it, or should he decline a fee *in toto*?

2. C. is a consulting Practitioner, as in the former case. D. is a retired Indian Practitioner, residing twenty miles off, near a railway station of easy access. D. sends for C. on the occurrence of any serious illness in his family. How should C. act as to fees?

In each case ample means are supposed to exist.

March 31. I am, &c. X. Y. Z.

*** Both cases, we think, should be determined by the consideration of whether or not the patients be dependent on the Medical men, B. and D. Mere relationship to a Medical man does not confer the privilege of obtaining Medical journeys and advice gratis. But if the patient be dependent for support on a Medical man, then the consulting Practitioner should either not take a fee, for it would come indirectly from his brother Practitioner's pocket, or be content with a small honorarium to cover expenses. In any case, however, in which a consulting Practitioner is expected to attend and to take no fee, the thing should be clearly explained beforehand, so that he may have the option of refusing a long and fatiguing journey without recompense—a thing which it may be the duty of a consulting Practitioner to decline.

COMMUNICATIONS have been received from—

Mr. W. H. Davis; Mr. A. L. Fox; Dr. Letheby; Dr. James Cumming; Dr. Frederic Bateman; Dr. J. Burton; Dr. Day; Dr. Wolfe; Dr. F. J. Brown; Dr. Charles Kidd; Dr. Huxley; Mr. C. J. Fox; Dr. Felce; A Close Observer; Mr. W. W. Corban; Mr. B. Wills Richardson; Dr. Mackey; Mr. F. Reynolds; Dr. Ross; Mr. J. B. Curgenven; Mr. J. C. Galton; Dr. J. N. Vines; Mr. Frederick Jeeves—Mr. C. F. Maunoir; Mr. J. Chatto; Mr. J. Hutchinson; Mr. T. M. Stone; Dr. Wilks; Mr. C. Godson.

BOOKS RECEIVED—

Untersuchungen über Psychologie, von Dr. F. A. v. Hertzen—Elliott's Druggists' Price Book—Sanitary Record, No. 2—Pharmaceutical Journal, No. 118—Haughton's Laws of Vital Force—Quarterly Journal of Microscopical Science, April—British and Foreign Medico-Chirurgical Review, April—"Does Education Lessen Crime?" By W. H. Groser, B.Sc., F.G.S.—A Pastoral for the Times, by a Cambridge Undergraduate—Human Nature, No. 25—Monthly Microscopical Journal, April—Small-pox and Vaccination Hospital Report—Philadelphia Medical and Surgical Reporter—Westminster Review, No. 70—Gamgee's Researches on the Blood—Glamorgan County Lunatic Asylum Report—Barter's Report on the Sanitary Condition of Bath.

NEWSPAPERS RECEIVED—

Medical Mirror.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 3, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1861.)	Births Registered during the week ending April 3.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending April 3.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3170754	40·7	2319	1462	1670	52·7	29·3	39·0	0·24	24
Bristol (City)	169423	36·1	123	76	*93	51·1	30·2	38·4	0·48	48
Birmingham (Boro')	360846	46·1	244	175	141	48·0	32·1	37·9	0·81	82
Liverpool (Boro')	509052	99·7	382	295	336	53·0	32·3	39·4	0·49	49
Manchester (City)	370892	82·7	304	210	*226	52·0	32·0	39·5	0·56	57
Salford (Borough)	119350	23·1	85	60	69	51·5	30·2	39·1	0·65	66
Sheffield (Borough)	239752	10·5	179	126	152	48·2	32·0	37·5	0·50	51
Bradford (Borough)	138522	21·0	78	71	78	51·0	32·1	39·8	0·71	72
Leeds (Borough)	253110	11·7	292	129	130	52·0	35·0	39·8	0·68	69
Hull (Borough)	126682	35·6	90	59	66	48·0	28·0	36·9	0·43	43
Newstl-on-Tyne, do.	130503	24·5	138	69	81	51·0	31·0	38·9	0·51	52
Edinburgh (City)	178002	40·2	†130	86	†119	...	...	...	...	...
Glasgow (City)	458937	90·6	†372	268	†401	...	...	...	...	...
Dublin (City and some suburbs)	320762	32·9	187	158	234	54·4	32·3	42·4	0·24	24
Total of 14 large Towns	6546587	35·5	4923	3244	3796	54·4	28·0	39·1	0·53	54
					Week ending Mar. 27.	Week ending Mar. 27.				
Vienna (City)	(1863) 560000	...	...	...	269	...	...	39·7	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·574 in. The barometrical reading decreased from 29·77 in. on Thursday, April 1, to 29·21 in. by the end of the week.

The general direction of the wind was N.E. and S.W.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

† The returns from Edinburgh and Glasgow had not been received up to the time for going to press; averages, therefore, of the returns for recent weeks have been substituted for the correct numbers in order to obtain totals for the fourteen large towns.

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 3, 1869.

BIRTHS.

Births of Boys, 1132; Girls, 1187; Total, 2319.
Average of 10 corresponding weeks, 1858-67, 2127·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	838	832	1670
Average of the ten years 1858-67	757·0	725·3	1482·3
Average corrected to increased population	...	...	1630
Deaths of people above 90	...	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	...	5	7	2	11	6	1	...
North	618210	2	5	5	2	15	21	...	...
Central	378058	...	5	6	...	13	6	6	...
East	571158	...	5	21	1	15	14	6	...
South	773175	2	11	5	1	19	10	6	...
Total	2803989	4	31	44	6	73	57	19	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·574 in.
Mean temperature	39·0
Highest point of thermometer	52·7
Lowest point of thermometer	29·3
Mean dew-point temperature	34·3
General direction of wind	N.E. & S.W.
Whole amount of rain in the week	0·24

APPOINTMENTS FOR THE WEEK.

April 10. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Royal Institution, 3 p.m. Mr. A. Geikie, "On the Origin of Land Surfaces."

12. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London. 8 p.m.: Casual Communications. 8½ p.m.: Dr. Morell Mackenzie, "On Syphilitic Diseases of the Throat."

13. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Ethnological Society, 8½ p.m. Opening Address by Prof. Huxley, F.R.S. Mr. William Blackmore, "Notes on some of the principal Tribes of the Indians of the United States, with a brief Account of the late Indian War." A. W. Bell, M.D., "On the Aztec Tribes of New Mexico and Arizona." Mr. Morton C. Fisher, "The Arapahoes, Kiowas, and Comanches." Mr. E. T. Stevens, "Some Characteristics of the Stone Implements and Objects found in the Mounds of Ohio." A Series of Photographs of Views in the Indian Country, with Portraits of many of the principal Chiefs, will be exhibited.

Royal Medical and Chirurgical Society (Ballot, 8 p.m.), 8½ p.m. Dr. Barnes, "On the Operations for Relief of Chronic Inversion of the Uterus." Dr. Kelly, "On the Spontaneous Cure of Hydatid Cysts."

Royal Institution, 3 p.m. Prof. Grant, "Stellar Astronomy."

14. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Epidemiological Society, 8 p.m. Dr. E. D. Dickson, of Constantinople, "On Cholera in Persia, 1866, '67, and '68." Dr. Milroy, "On the Analogy between Epiphytics and Epidemics."

Hunterian Society (Meeting of Council, 7½ p.m.), 8 p.m. Dr. Beigel will read a Paper "On Chorea," and will show a "Case of Ruptured Vocal Cords by the Laryngoscope."

15. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Harveian Society, 8 p.m. Mr. Gascoyen, "On Varicocele."

Royal Institution, 3 p.m. Prof. Tyndall, "On Light."

16. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Royal Institution, 8 p.m. Mr. Carruthers, "Cryptogamic Forests of the Coal Period."

ORIGINAL LECTURES.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, Physician to King's College Hospital, and Professor of Physiology and of Morbid Anatomy in King's College, London.

LECTURE V.

OF NERVE TISSUE — GERMINAL MATTER AND FORMED MATERIAL OF NERVE—NO ENDS TO NERVE FIBRES—ULTIMATE NETWORKS—DIFFERENT KINDS OF NERVE FIBRES — NERVE CENTRES — ACTION OF NERVE FIBRES AND NERVE CELLS.

(*Continued from page* 354.)

THE *angular or caudate nerve cells* are characteristic of the great central nerve organs of vertebrata, the brain and spinal cord, and attain their maximum of development in the highest mammalia and man. If we examine those in the grey matter of the spinal cord, we see lines traversing the cells from each of the many fibres connected with them, and passing to every other fibre. (*Proceedings of the Royal Society*, 1864.) I endeavoured to show that these lines, which were rendered evident by the slow action of acetic acid, indicated the paths taken by the nerve currents which traversed the cell.

FIG. 15.

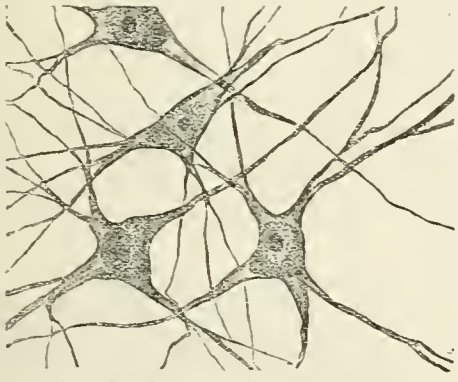


FIG. 15.—Angular and caudate nerve cells from the anterior cornu of the grey matter of the spinal cord. Human. ×130.

Deiters, Boddaert, and other observers have stated that one dark-bordered fibre enters each of these cells. If this be so, we may consider the axis cylinder as splitting up into a number of branches, some of which pass into every one of the other granular "protoplasm" fibres which leave the cell. My own observations lead me to conclude that *all* the fibres are composed of the same material and exhibit the same structure and refractive power, but that one fibre (Deiters's dark-bordered fibre) does not divide until it has passed some distance from the cell, while the others give off branches very close to it (Fig. 15).

Connected with the cells of the grey matter of the brain, particularly of the sheep, is one long fibre which may often be followed for the distance of the tenth or twelfth of an inch without giving off a single fibre (Fig. 16). The other fibres, on the contrary, break up into a great number of branches quite close to the cell. I cannot agree with Deiters and Max Schultze in regarding these fibres as of a totally different nature from the long one. Although in Deiters's figures the long dark-bordered fibre is represented as if it were altogether different in structure from the other fibres of the cell, I do not discover this difference indicated in the beautiful photograph of Boddaert, from which it appears to me all the fibres of the cell possess the same refractive power. This could not be the case if one were "dark-bordered" and all the rest consisted of "protoplasm."(a)

The germinal matter of the nerve cell is embedded in the material which exhibits the lines crossing in all directions, and no doubt this substance is formed from it; but, as far as I have been able to ascertain, no nerve fibre arises from, or is connected with, the nucleus or nucleolus. It appears probable that these cells are the stations at which nerve fibres pursuing many different directions decussate and change their course. It is an interesting circumstance, and strongly corroborative of the truth of the views just advanced, that at the very time I was making out the peculiar anatomical fact recorded in my paper, Professor Alexander Bain, looking at the subject from a totally different side, was led to conclusions concerning the arrangement of the nervous mechanism agreeing in all important particulars with my own, which had been deduced from facts of observation.

FIG. 16.

SURFACE OF BRAIN.

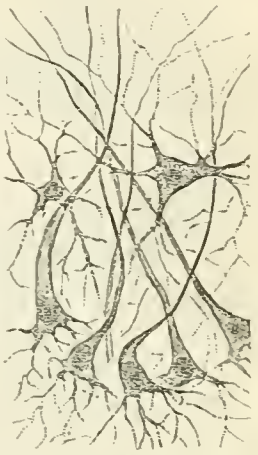


FIG. 16.—Angular caudate nerve cells from the grey matter of the brain, near the surface. Lamb. ×130.

It is possible that the caudate nerve cells may not be *sources* of nerve force. These cells are fewer in number and of small size in the lower vertebrata, particularly batrachia and fishes. In the invertebrata they do not exist at all, and it is very questionable if any cells precisely corresponding to them are to be found in their stead.

Of the Spherical, Oval, and Pyriform Nerve Cells.—The nerve cells belonging to this class have a structure very different from that of the caudate or angular nerve cells. The fibres, instead of radiating from the cells and appearing as if drawn out from them, encircle them, and pursue a very circuitous course. They are curved and coiled, and are of much greater length than is necessary simply to traverse the space through which they may be traced. The matter of which the fibres are composed is continuous with that of the cell, and the facts observed justify the inference that the fibres are continually growing, or, in other words, the matter at the outer part of the cell gradually undergoes conversion into fibre, and this process continues during the life of the cell (Figs. 17, 18). The fibres, even in that part nearest to the cell, contain numerous small masses of germinal matter. In many cases the fibre seems to unwind itself from the outer part of the cell, and in this situation the gradual multiplication of the oval masses of germinal matter which are ultimately seen in the unwound fibre may be demonstrated, and the youngest may be seen growing in the substance of the cell itself, near the surface.

In man and the higher vertebrata these cells are found in all the ganglia of the so-called sympathetic, and in the ganglia on the posterior roots of the nerves, the Gasserian ganglion, etc., which belong to the same class. They are nearly spherical, and are usually represented as spherical cells or globules lying amongst the fibres of the ganglion. Even to this day these cells are stated in many text-books to be invested with a capsule of connective tissue, sometimes as thick as the cell is wide, in which numerous nuclei are represented. These are supposed to have no connexion whatever with the nerve fibres passing near them. Nothing could be more unmeaning or more unintelligible than many of the statements made concerning the structure of the sympathetic ganglion cells. Nevertheless, they are repeated again and again, and the old draw-

(a) This word has been employed most loosely, and matter in different states and exhibiting very different properties has been called "protoplasm." Only recently we have been told of "protoplasm" extending for miles in the depths of the Atlantic, and roast mutton has been called protoplasm (Huxley). The contractile material of muscle, the axis cylinder of nerve, and certain nerve fibres are all considered to be protoplasm. In short, living growing matter has been called protoplasm, the formed matter or tissue of living beings has been called protoplasm, and the lifeless material obtained from roast or boiled meat has been regarded as "protoplasm." Protoplasm may therefore be living and moving or still and non-living; it may exhibit structure or be structureless, may be active or passive, and is supposed to retain its characters not only in the raw but in the cooked state!

ings of thirty years ago are adduced in support of doctrines which are now utterly untenable, and were not justified at the time they were made.

FIG. 17.

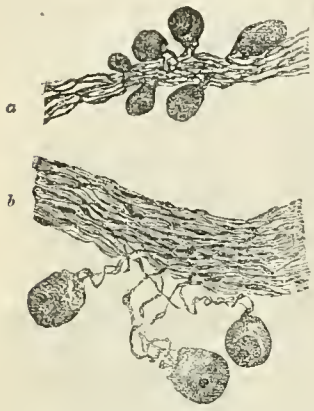


FIG. 17.—Ganglion cells. *a*, from nerve fibres distributed to kidney. Newt. ×130. *b*, from nerves in pelvis. Hyla. ×130.

FIG. 18.

FIG. 18.—Ganglion cells from sympathetic. Ox. ×130.

Some writers still insist upon the existence of apolar and unipolar nerve cells in many parts of the nervous system, although the results of observation positively prove the existence of two fibres in the case of cells which had been previously regarded as unipolar and apolar. From the cells of the sympathetic ganglia of man and vertebrata several fibres proceed, and pass in different directions soon after they leave the cell. Bundles consisting of fibres from many different cells leave the ganglion from different parts of its surface, and pass by circuitous paths towards their destination, each bundle being composed of fibres from many different cells situated in different parts of the ganglion.

Of Ganglion Cells with a Straight and Spiral Fibre.—The structure of the ganglion cells of the ganglia of the frog are remarkable. In the year 1863 I presented a paper to the Royal Society, in which I showed that each cell possessed at least two fibres, and demonstrated the important fact that these fibres pursued *opposite* directions in the nerve trunks into which they passed, one apparently going *towards* an organ, while the other went *away from* it in an opposite direction. One of these fibres formed a beautiful spiral coil round the other. In some cells there was but one spiral turn, but in others as many as eight or ten could be counted, while in some again, which were probably the oldest cells, the spiral turns were still more numerous. The spiral fibre comes from the outer part of the body of the cell, and the straight fibre from its central part, so that the tissue of the first is in structural continuity with that of the last, the body of the cell being composed of matter which may be said to be drawn off in one part to form the spiral, and in another to form the straight, fibre.

Each fibre contained several nuclei, but these were more numerous in the spiral than in the straight fibre, and were closest to one another in that part of the former which was still coiled round the cell, and formed, indeed, part of its substance. Some months after my paper appeared, J. Arnold, of Heidelberg, quite independently, and probably without having heard of my observations, described a spiral fibre in connexion with the ganglion cells of the nerves of the frog's lung, but in the drawings accompanying his memoir (Virchow's *Archiv*, Band xxviii. plate x.) both straight and spiral fibre result from the division of one nerve fibre. In drawings illustrating a paper published in 1865 (Virchow's *Archiv*, Band xxxii.), two years after my memoir was completed, he gives examples in which the two fibres are delineated distinct from one another, and he further states (contrary to my observations) that the straight fibre terminates in the nucleolus, while the spiral fibre is made to commence in a network of fine fibres ramifying over the surface of the cell, which are traced up to the nucleus. These drawings have a somewhat artificial look about them which is not quite satisfactory. Subsequently Courvoisier and many other observers have studied the same subject, differing from me principally as regards the origin of the fibres from the body of the cell, and from one another in several particulars. I have reinvestigated the matter, but have not seen appearances which will justify any modification of the conclusions detailed in my memoir. The original specimen from which the figure—since copied into most of the text-books—was taken, is now under the microscope ($\frac{1}{12}$th objective, magnifying 700 diameters), and the drawing is placed close by, in order that it may be compared with the preparation (Fig. 19.)

New memoirs have more recently appeared in Germany, and some authors have expressed the opinion that my spiral fibre is connective tissue. It is not surprising that they should have looked at my drawings as the inventions of my imagination instead of being copies of what I had actually seen because it is quite certain, from their own representations of the structures seen by them, that they had been studying most

FIG. 19.

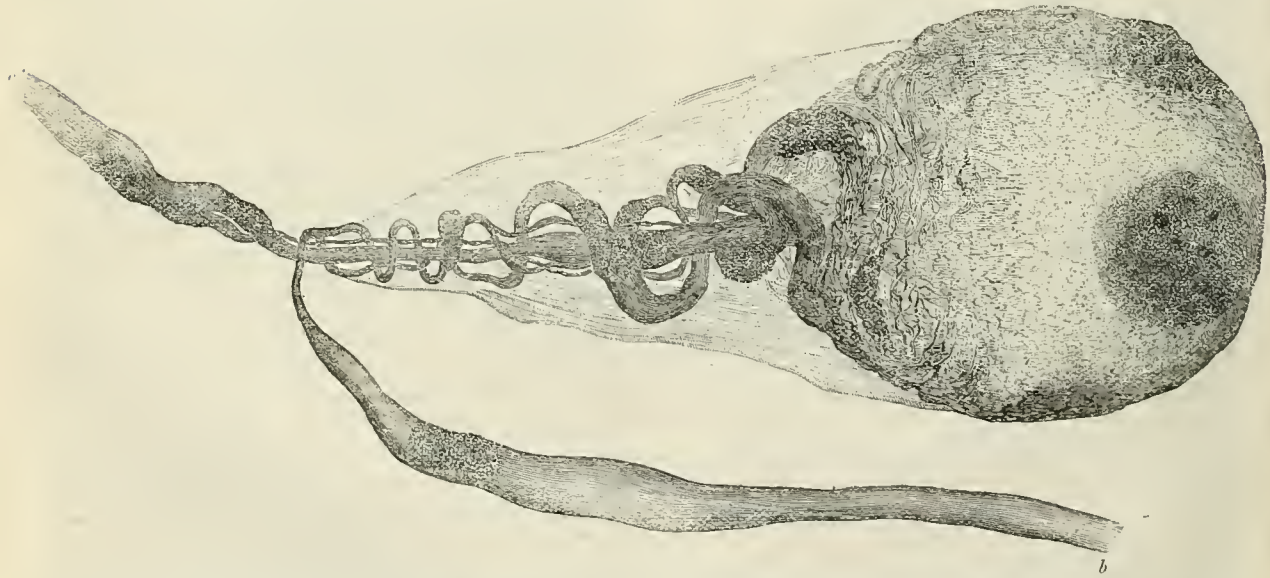


FIG. 19.—Ganglion cell with straight and spiral fibre isolated. From the hyla. The *straight fibre*, *a*, it will be observed, is continued from the central part of the cell, while the *spiral* fibre, *b*, is prolonged from its circumference. The matter of which the body of the cell is composed passes into the fibres. The fibre continuous with the spiral fibre, *b*, is a true dark-bordered nerve fibre, and in many cases the straight fibre has the same character. It will be observed that the fibres prolonged from the cell pass in *opposite directions*. × 1800.

imperfect and unsatisfactory specimens. One might fairly expect that before an author ventured to upset the observations of another, he would take proper steps to obtain good preparations. It is, however, quite unnecessary for me to reply to objectors or to try to convince sceptics, as the actual specimen from which my most complex ganglion cell was copied is under the microscope.

The oval and spherical cells characteristic of the sympathetic, of the ganglia on the posterior roots, etc., are seen at a very early period of development, and the ganglia in which they are found are very large and advanced in development in proportion to other parts of the nervous system. At a time when these cells are well defined and probably active, the *caudate nerve-cells* are but small masses of germinal matter which may be easily passed over. In the lower vertebrata, when fully grown, these cells are many times larger than the caudate cells of the spinal cord, and in the ganglia of most invertebrata we find spherical and oval nerve-cells which, I believe, correspond with those under consideration. The early development of these cells and their large size at a time when the caudate nerve-cells are not to be distinguished, their constant presence, their growth and multiplication in the adult and probably at an advanced age, and their peculiar structure—at least in some animals, their situation as regards the nerves to which they belong, and especially the fact that these are the only cells constituting the nerve-centres upon which the rhythmic contraction of detached portions of the cardiac muscular tissue depends,(b) have led me to look upon these cells as the *sources* of nervous power, while I consider that the caudate nerve-cells are more probably concerned in the distribution and radiation of the nerve-currents.

ORIGINAL COMMUNICATIONS.

CLINICAL SURGERY.

ON THE

IMPACTED FRACTURE OF THE NECK OF THE THIGH-BONE,

MORE PARTICULARLY IN REFERENCE TO ITS DIAGNOSIS.

By THOMAS BRYANT, F.R.C.S.,
Assistant-Surgeon to Guy's Hospital.

THERE are few cases which cause more anxiety to the Practitioner of Surgery than injuries to the hip, and there are none which demand more careful clinical observation and anxious thought; for the difficulties of diagnosis in certain instances are not despicable, nor are the dangers of error insignificant.

To recognise the presence of an ordinary fracture of the neck of the thigh-bone may not be difficult when the solution of continuity between the broken portions is well marked; nor is the diagnosis of the more ordinary forms of dislocation of the head of the femur usually obscure, for these injuries are characterised by definite symptoms which are readily interpreted by the Practitioner of Surgery.

It might also be thought by the uninitiated that it could be no difficult task to make out the fact that a simple contusion of the hip alone exists in any given instance, and that no fracture of the bone complicates the case. Still, experience tells us that the solution of this latter problem is far from simple, and that it is under such circumstances errors of diagnosis and errors of practice are frequently committed. As a proof of this, amongst the cases of fracture I am about to relate several will be detailed which had been diagnosed and treated as cases of contusion.

It will not be doubted, therefore, that, as a question of clinical importance, the diagnosis of the impacted fracture of the neck of the thigh-bone can hardly be placed too highly; for it is not to be disputed that the recovery or lameness of many a patient rests entirely upon a correct appreciation of the value of such a combination of symptoms as usually exists in this variety of fracture, and that, too, in the very critical period of the case; for should an error in diagnosis be made, and the case as one of impacted fracture be overlooked, violent manipulative efforts will probably be made to reduce the supposed dislocation, or to set the supposed fracture, or, what is equally probable, to decide the question between the presence of the two by the detection or non-detection of crepitus, when, as a consequence, the impacted bones will to a certainty be loosened, if not dislocated, and the case changed from being one in which the bones are placed favourably for union and for recovery into another in which a very different condition of circumstances has to be encountered, and a less favourable prognosis given.

To Professor R. W. Smith, of Dublin, the thanks of the Profession are unquestionably due for having given a prominence to this class of cases, and in his valuable work on fractures in the vicinity of joints, published in 1850, will be found nearly all that is known about the subject. Still, the great body of the Profession are not sufficiently alive to the importance of the points involved in its clinical consideration, and by overlooking cases of impacted fracture they occasionally commit errors of diagnosis of grave and serious importance; for the treatment of a case of impacted fracture is not one of difficulty when fairly understood—the main importance rests in its diagnosis.

I propose, therefore, in my present communication to draw the attention of the Profession to this subject in its clinical aspect—to illustrate it by the details of several cases treated during life, and by some few pathological specimens taken from cases the histories of which are tolerably complete.

But first of all it may be well to ask whether the impacted fracture of the neck of the thigh-bone be in reality an accident of rare occurrence; is it so rare as to render it right in practice to regard the existence of such a form of fracture in any case of injury to the hip as an improbability? Would it not be a wiser—nay, safer—practice, to look upon all cases of fracture of the neck of the thigh-bone as more or less complete examples of the impacted fracture, the degrees of solution of continuity in the bone and the mobility of the broken parts varying from the most perfect impaction of the neck of the femur within the shaft to the most complete mobility of the broken bones?

I am disposed to think that such a mode of looking at every case of injury to the neck of the thigh-bone would practically be the safest, and this opinion is supported both by clinical experience and by pathological investigation.

With reference to pathological investigation, I may state that the opportunities I have had of examining morbid preparations enable me cordially to agree with Professor Smith(a) "that all extra-capsular fractures are in the first instance also impacted fractures." I believe, moreover, that many intracapsular fractures and all the mixed forms are primarily of a like kind. I agree also with Professor Smith "that it depends principally upon the violence with which the injury has been inflicted whether the neck of the bone shall remain implanted between the trochanters, or whether these processes shall be so completely separated from the shaft of the femur as to allow of the escape of the cervix from the cavity which it had formed in the reticular tissue of the lower fragment. If the force has not been very great, the neck of the femur remains wedged in between the trochanters, and one or both of these processes are split off from the shaft; but if the fibrous structures around the neck of the bone and trochanters have not been injured, these broken portions of the trochanters are still held firmly in their places, and the impacted cervix does not become loosened; but if the force has been considerable, the impulse prolonged, the bone in a state of senile atrophy, or if, as frequently happens, the patient in endeavouring to rise falls a second time, then, under these circumstances, the trochanters are not only broken from the shaft of the femur, but are so far displaced and separated from the connexion with the soft parts that the cavity or socket, as it were, into which the superior fragment has been received, is destroyed; the impacted cervix thus set free no longer opposes the ascent of the inferior fragment, and the case then presents the characters of the ordinary extra-capsular fracture with great shortening of the limb."(b) In fact, the ordinary fracture of the neck of the thigh-bone is an impacted fracture, the impacted bones being loosened in some cases by a second fall, in others by excess of violence received in the original accident, and in too many instances by the Surgeon in his anxiety to make out the presence of a fracture by the detection of crepitus. Indeed, this looking for crepitus in all cases of fracture is a practice of considerable danger; in fractures of the neck of the thigh-bone it is not only unnecessary, but unjustifiable. It is unnecessary because the diagnosis of the case can be made out without the help of such a symptom; it is unjustifiable because in every case of impacted fracture the attempt to find it is attended with irreparable mischief.

b) See a paper by me in the *Microscopical Journal* for April, 1869.

(a) "Fractures and Dislocations," p. 16. (b) *Ibid.* p. 17.

How, then, it may be asked, is an impacted fracture of the neck of the thigh-bone to be made out? I shall attempt to indicate this by the quotation of the following cases which have been under my care. I shall then give the details of the cases from which the specimens I now illustrate were taken after death, and conclude by a general analysis of the symptoms as a whole in the form of conclusions.

Case 1.—*Impacted Fracture of the Neck of the Femur—Recovery.*

On November 16, 1864, I was requested by Mr. Langmore, late of Finsbury-square, to visit with him a Mr. B., aged 44, of the Kingsland-road, for some injury to his right hip which he had sustained the evening before. The patient was an epileptic and a confirmed spirit drinker, and it was from a fall on to his right hip that the injury had been sustained. Mr. B. was playing at billiards at the time, and fell with his whole weight upon the trochanter; he was a tall and muscular man. He had been unable to stand or raise the limb since the accident. I found him in bed and in some pain. There was external evidence of injury to the right hip, as indicated by a bruise and some swelling; the limb was slightly everted, but not more so than the sound leg, and measured about one inch shorter than the left. On rotating the limb gently as it was resting on the bed, the head of the femur clearly rotated in the acetabulum, and the trochanter also moved with it. Pressure over the trochanter caused severe pain, and the trochanter was clearly nearer to the anterior superior spine of the ilium than on the sound side. No amount of extension caused the slightest elongation of the shortened limb. The man being very muscular and extremely sensitive to pain, a complete examination was a task of difficulty; consequently chloroform was given, and an impacted fracture of the neck of the thigh-bone was made out. For it was tolerably clear that the head of the femur was in the acetabulum and could be rotated in it, the trochanter also moving with it. The trochanter was clearly nearer to the anterior superior spinous process of the crest of the ilium than on the sound side, and nearer also the median line of the body. The limb was about one inch shorter than its fellow, and that shortening was in the thigh. The foot was slightly everted, but to nothing like the extent generally present in the ordinary forms of fracture, and less so than on the sound side. These symptoms were the immediate result of a direct fall upon the trochanter in a sound limb. No crepitus could be felt, nor was it looked for, since such a symptom could only have been produced by a dislocation of the fractured and impacted bone. A long splint was applied and kept on for six weeks, when it was removed, a good limb being the result. It was still, however, about an inch shorter than its fellow. The trochanter also still occupied a position nearer the median line of the body than in the sound limb, and about the neck of the bone there was some thickening. Good movement, however, existed in the joint. Five months subsequently this patient had perfect power in his limb, the shortening being the only point about which complaint was made. This case was complicated with an attack of delirium tremens at first, and subsequently by true gout in the foot of the affected limb. One other point of interest also must be mentioned. During the administration of chloroform for the purpose of making an examination of the thigh, this patient had two severe epileptic fits, and during these fits, in which the whole muscular system of the body was affected, the injured limb remained at rest. The arms and left leg were moved with great power, the muscles of the right leg were also very rigid, but the limb was not raised.

Case 2.—*Impacted Fracture of the Neck of the Thigh-bone—Recovery.*

On the evening of February 25, 1865, I was called down to Enfield by Dr. Benjamin Godfrey, of that town, to see a Mrs. T., aged 51, who had received an injury to her right hip at 5 p.m. It appeared that this lady had gone into her farmyard to see a favourite cow, who greeted her roughly, and butted at her. In attempting to save herself from the attack, she suddenly turned round to the left side, and fell with her whole weight upon the left trochanter. She was unable to move after the accident. When I saw her with Dr Godfrey five hours subsequently I found her in bed; her left leg was lying powerless, and the foot everted. The limb was one inch shorter than the sound one, the shortening clearly existing in the thigh; and extension failed to elongate the limb. The soft parts over the trochanter were bruised and much swollen. It should be stated also that this lady was tolerably stout, and had unusually broad hips. The limb could be rotated gently, and the head of the bone clearly moved in the acetabulum; the trochanter also moved with it. There was some thickening about the neck of the bone, with great tenderness on pressure, and indistinct crepitus was once felt during the examination. Chloroform was given in this case, as in the last, to allow of a complete examination being made, when all doubt as to its nature was cleared up, and an impacted fracture of the neck of the bone was diagnosed. The limb was put up in a long splint, and absolute rest enforced. Everything went on well, and on April 28, two months after the accident, Dr. Godfrey reported that the patient was out of bed and walking the room with help, that the limb was less than one inch shorter than the other, and that every movement existed. At a later date a good and useful limb was reported to exist.

Case 3.—*Impacted Fracture of the Neck of the Thigh-bone—Recovery.*

Mr. Frederick Toulmin, of Upper Clapton, asked me, on October 3, 1865, to see with him a lady, aged 64, who had received that afternoon an injury to her right hip. The accident was produced by a direct fall on to her right trochanter on getting out of an omnibus. I found her in bed with the right limb powerless, and the foot everted. The thigh measured one inch less than the left from the anterior superior spinous process of the crest of the ilium to the patella, and extension failed to elongate the limb. The head of the bone rotated in the acetabulum, and the trochanter moved with it. Some thickening was felt about the neck of the bone, and deep pressure caused pain. No crepitus could be felt. From the nature of the injury and the character of the symptoms there was no difficulty in arriving at the conclusion that an impacted fracture existed. A long splint was consequently applied, and a good recovery ensued. Her injured limb, however, remained about three-quarters of an inch shorter than the sound one.

Case 4.—*Impacted Fracture of the Neck of the Thigh-bone—Recovery with Good Limb.*

Mary C., aged 56, a heavy woman, was admitted into Guy's Hospital on September 21, 1868, under my care, for an injury she had sustained one hour previously to her right hip. That injury was a fall upon the right trochanter. It took place at 7 p.m., and at eight o'clock she was admitted. She was unable to stand or use the limb after the accident. On admission she was seen by the dresser, Mr. Tichurst, who found the right lower extremity shorter than the left, and the foot everted. The limb was useless though movable, but yet no crepitus could be made out. The dresser confessed that he could not make out the case, that it was not one of dislocation, and yet he could not determine it was one of fracture, as no crepitus could be felt. He accordingly fixed the limb on a pillow and left it for my visit the following day. When I saw the case, and learned its history, the suspicion of its true nature was at once raised. The limb was one inch shorter than the left, and the shortening was in the thigh; no moderate extending force could diminish this amount. The head of the bone clearly rotated in the acetabulum, and the trochanter moved with it. This projection of bone was also three-quarters of an inch nearer the anterior superior spinous process of the ilium on the right than on the left side; it was also nearer the median line of the body. Under these circumstances the diagnosis of the impacted fracture was very simple. A long splint was accordingly put on and left for six weeks; at the end of that time it was removed, and good union was secured. There was a good deal of new bone thrown out about the neck of the bone. The patient left the Hospital at the end of two months with a sound limb, but she was afraid to use it freely.

Case 5.—*Impacted Fracture of the Neck of the Thigh-bone, loosened by want of Care—Separation of Parts—Recovery.*

The following case is a good example of the impacted fracture and forcibly illustrates the evils of not preserving absolute quiet in the treatment, for there is no doubt in the case I am about to relate that the impacted fracture was subsequently dislocated from the constant moving of the patient, and that an impacted fracture was turned into the ordinary fracture of the neck of the thigh-bone.

On November 9, 1865, I was requested by a Medical man to visit a lady aged 65, who had sustained some injury to her right hip some twenty-four hours previously by being knocked down by a horse and falling on to her right trochanter. She was unable to move the limb after the accident, and had been in much pain ever since. When I saw her I found her in bed with her left leg lying motionless, and the foot everted. The left thigh measured three-quarters of an inch less than the right, and extension failed to make any difference in its length. The

left trochanter was slightly nearer the anterior superior spinous process of the ilium than the right, and was also nearer the median line of the body. The head of the femur could be rotated in the acetabulum on gentle movement, but the attempt caused severe pain; the trochanter also moved with it. There was some thickening about the neck of the bone, and deep pressure produced pain. Crepitus could be felt on such gentle manipulation as was employed, for I at once recognised the presence of an impacted fracture, and fixed the limb on a long splint. Perfect rest was also advised. The lady was, however, unfortunately daily lifted out of her bed to have it made, and when I saw her again on January 3, 1866, seven weeks after the injury, every symptom then existed of the ordinary fracture of the neck of the thigh-bone. The bones were clearly all loose, and could be moved in any direction. The impacted fracture had been dislocated, and the parts displaced by the movements which had unfortunately been allowed. This lady subsequently got about by the aid of crutches with a useful limb, and is still alive.

Case 6.—*Impacted Fracture of the Neck of the Femur treated as Contusion.*

Ann H., aged 50, a resident of Croydon, came under my care at Guy's Hospital on Nov. 26, 1866, for some affection of the right hip. It appeared that ten weeks previously she had a fall out of a cart upon her trochanter; that she was unable to walk or even stand after the accident, although she had power to rotate the limb slightly. She was taken home and carefully examined by a Medical man, who could not make out the case, the symptoms being neither consistent with a dislocation nor an ordinary fracture; she was consequently treated for a contusion of the hip and left in bed. When she got up after two months she found the limb shorter than the other, and that movement and standing caused her pain. The symptoms continuing, she consulted me. When I saw her ten weeks after the accident the injured thigh was clearly one inch shorter than the other, and the foot was straight. The trochanter was nearer the median line of the body than on the sound side, and there was great thickening about the neck of the bone. The thigh could be rotated and flexed without pain, but the movements were impaired. An impacted fracture had clearly existed in this case, and a good recovery had resulted, much bony material having been thrown out about the neck of the femur, as no splint had been employed.

Case 7.—*Impacted Fracture of the Neck of the Femur treated as Contusion.*

George W., a labourer, aged 40, came under my care at Guy's Hospital on July 11, 1867, for an injury he had sustained to his right hip thirteen weeks previously. It appeared that at that time he had a fall from a height on to his right hip, that he was taken to a metropolitan Hospital and treated for a contused hip. He was kept in bed for five weeks and discharged. He came to me because he found himself still lame. It should be stated that the man assured me he could neither stand nor raise the limb after the accident. When I saw him his right lower extremity, on careful measurement, was three-quarters of an inch shorter than the left, and this shortening was evidently in the thigh; the foot was straight, more so than on the left side; the trochanter was placed nearer the median line of the body than on the left side, and was also nearer the anterior superior spinous process of the ilium. There was also much thickening about the neck of the bone. The head of the femur could be rotated in the acetabulum without difficulty, and imperfect flexion was allowed. It was tolerably clear that the original injury had been an impacted fracture, and that a good recovery had taken place. In this case, as in the last, there was evidently more thickening about the neck of the thigh-bone than usually exists after such an injury; but this fact is probably explicable by the treatment he had received, no splint having been applied, and thus more callus and more bone had been thrown out. I told the man to keep quiet for about another two weeks, and not to rest the weight of his body on the limb. At the end of that time he was much better, and at the expiration of a month he could walk upon the leg. In all other respects he was the same.

(To be continued.)

THE working men of Birmingham have subscribed upwards of £276 to the fund for the extension of the Queen's Hospital of that town.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE HOSPITAL FOR DISEASES OF THE SKIN.

CASES OF SHINGLES APPARENTLY PRODUCED BY ARSENIC.

(Communicated by Mr. HUTCHINSON.)

In a former number of this journal I brought before the Profession some cases which seemed to make the belief probable that a course of arsenic may occasionally cause herpes zoster. The question seems to me one of great interest and importance, and as it can be decided only by clinical evidence, I make no apology for now offering a further series of facts. Most of these are my own; one I have taken from a published report, and one or two have been kindly supplied by friends. Lest the evidence should appear to the reader stronger than it really is, I must state that both at the Hospital for Skin Diseases and in private practice I prescribe arsenic very extensively. It is only in a very small proportion of cases that shingles occurs. Since it is possible that, after all, the occurrence of shingles in patients taking arsenic may be only a coincidence, it is worth while to inquire whether it is frequent in patients under care for other skin diseases, but not taking this remedy. I cannot recollect more than one or two instances of its occurrence under these latter conditions. Had such come under notice during the last two or three years, I should certainly have made note of them, since I have been much interested in the question. Quite recently the following two have occurred, and they are all of which I have notes:—

In November, 1868, a woman, aged 33, was admitted for scabies, and had sulphur prescribed. In the beginning of December she had an attack of shingles. No arsenic had been given.

In December, 1868, a young woman came with herpes frontalis. She said that she had been under treatment at St. Bartholomew's for some weeks before this eruption on account of another (eczema). I made her bring her prescriptions, expecting to find arsenic ordered; but it was not so. She had taken only steel.

I will now relate the cases additional to those in my former report which favour the view as to a connexion between the drug and the eruption. Eight cases were given in my first report.

Case 9.—*Herpes Zoster of Side of Chest after Four Months' Use of Arsenic.*

A healthy young man attended July 28, 1868, for acne on the face. He was ordered three minims of Fowler's solution three times a day. This was continued till the middle of November. At the latter date an eruption of herpes zoster, with the usual symptoms, came out on the left side of the chest, chiefly below the nipple. The arsenic had not seemed to disagree with him in the least in any other respect. He had never had zoster before.

Case 10.—*Severe Shingles during an Arsenical Course.*

The Rev. Mr. B., aged 65, was under my care for eczema in 1861. I gave him arsenic. After he had taken it nearly a month he was laid up by a very severe attack of shingles on one side. The arsenic had not seemed to disagree.

Case 11.—*Papular Shingles during an Arsenical Course.*

Mr. W., aged 40, was under my care for psoriasis of the hands, and took arsenic for six weeks or more. He had, whilst taking it, a unilateral eruption, grouped exactly like herpes, which, however, remained papular and never developed vesicles. It passed away after ten days, just as shingles does.

Case 12.—*Herpes Frontalis after a Two Months' Course of Arsenic.*

Anne R., aged 44, attended April 9, 1867, for psoriasis. She was ordered six minims of arsenic three times a day. This was continued till June 14; the dose was then reduced to three minims. Ten days later an eruption appeared, confined entirely to the right side of the forehead, with several spots on the right eyelid. At the commencement of the attack the patient felt great pain all over the right side of the forehead, which lasted for two days, when a good many spots appeared, and the pain was considerably eased. In addition to the possible effect of the arsenic in producing the attack of herpes, we had her statement that she did not feel so well while taking the medicine,

and on that account the dose had been diminished. The psoriasis was very much improved. This patient had taken six minims for a little more than two months, and three minims for a fortnight.

Case 13.—*Shingles in a Boy who had taken Arsenic.* (*Connexion between the two not certain.*)

In the record of a case of leprosy under his care in St. Bartholomew's Hospital, Mr. Lawrence mentions the two separate facts that he administered arsenic, and that the boy had shingles whilst under care. The case is given in the *Medico-Chirurgical Transactions.*

Case 14.—*Shingles in a Child who was taking Arsenic for Chorea.*

The following note from my friend Dr. Woodman is of especial interest, supplying, as it does, an unexpected fact in confirmation of my view. It supplies a sort of half-answer to the numerous objectors who suggest that they have given arsenic very often, and have never noticed herpes zoster as a consequence:—

"Dear Mr. Hutchinson,—In discussing your cases of herpes zoster during an arsenical course of medication, I remarked to Mr. Tay that I thought the treatment of chorea at the London Hospital ought to be a kind of touchstone, and that I did not recollect a case in point, although I thought perhaps there might be one or two. It so happens that there is now a case in the Children's (Medical) Ward (late "Blizard") at the London Hospital, in the person of a little girl called Elizabeth Fry, admitted for chorea. She took m iij. Fowler's solution for about thirty days. I was not told of the herpes, but discovered it by accident. You have some cases in the ward, and could easily see the scars, prescription-board, etc., when you are there. "Yours truly, "W. B. Woodman."

Case 15.—*Shingles in a Boy who was taking Arsenic for Eczema.*

A healthy boy, aged 8, was admitted January 6, 1869, with eczema on his hand. An ointment containing lead and mercury was ordered, and a mixture containing the liquor arsenicalis in doses of one minim and a half. He attended on the 29th, on February 5, and on February 16. The medicine had been steadily continued. At the latter date he showed a very copious half-zone of herpes on the left side. The arsenic had not perceptibly affected him in any other respect. The eczema was improving.

Case 16.—*Shingles in a Lady who had been taking Arsenic for Eczema.*

On April 4, 1869, I saw, with Dr. Sedgwick Saunders, an old lady who is the subject of most severe eczema. She has often taken arsenic for long periods, and usually with benefit. I was informed that about six months ago she suffered a most severe attack of shingles on the left side. It occurred just after she had left off arsenic—at least such was her belief—but it was impossible to be quite accurate on this point.

TWO CASES SHOWING OTHER FORMS OF HERPES AFTER ARSENIC.

Herpes of the lips and of the prepuce are affections to a considerable extent distinct from shingles. I have not often observed them after arsenic. The following two cases are the only ones illustrating such sequence of which I have notes, and I do not wish to imply that I think they prove anything. I record them merely for future use:—

Herpes Preputialis after Arsenic.—G. M., aged 24, applied, January 22, 1869, for psoriasis vulgaris, to which he had been liable for fourteen years. He was ordered three minims of liquor potassæ arsenitis thrice daily, and an ointment containing creasote. On January 29 (one week later) he attended again. He then had an outbreak of herpes on the prepuce. He had never had it before. In about a fortnight the herpes had quite disappeared, though he had continued the arsenic.

Arsenic administered for Eczema of the Fingers—Herpes Labialis at End of one Week.—A young man attended, October 12, 1868, with eczema of the fingers, and was ordered arsenic. A week later he attended again, and then had herpes of the lips. He said he was not subject to it.

THE HOSPITAL SHIP "DREADNOUGHT."

EXTENSIVE DISEASE OF TARSAL AND METATARSAL BONES OF LEFT FOOT—REMOVAL OF FOOT BY "SYME'S AMPUTATION"—RAPID RECOVERY.

(Under the care of Mr. ROOKE.)

The chief interest of the following case consists in its bearing on the much-disputed question concerning the comparative advantages of the many operations proposed and practised for the removal of diseased tarsal bones, particularly of that of amputation at the ankle, so earnestly recommended by Mr. Syme, and of the modified operation named after Professor Pirogoff, of St. Petersburg. The disease, both in the bones and soft structures, was so extensive in the present case, that Mr. Rooke considered it necessary to sacrifice the bones of the heel, and to have recourse to an operation which, in the Surgical practice of this Hospital, has frequently been applied with the most satisfactory results. The patient, though a bad and scorbutic subject, was rapidly restored to an almost perfect state of health, and the stump from the commencement of cicatrisation was free from tenderness, and could bear the firmest manual pressure. The edges of the wound united quickly, partly by first intention and partly by granulation. The flaps were not approximated by sutures near the outer angle of the wound, and an orifice was allowed to remain at this part in order to prevent an accumulation of purulent fluid. The heel flap was preserved in its continuity, and no openings were made with the knife; these were found to be quite unnecessary in this case, as there was not the slightest tendency to retention or burrowing of fluid.

Thomas McC., aged 42 years, a native of Dundee, was admitted on November 24, 1868, into the Medical ward with scurvy and chronic rheumatism. His last voyage was from Taticorin, in the East Indies; during the whole of the time he suffered from severe pains in the ankle, which were attributed to rheumatism. The suffering was particularly severe in the left ankle.

State on Admission.—The patient appeared to be a prematurely aged man, and was much worn out by rheumatic pains. He also presented well-marked symptoms of scurvy. After a treatment lasting for three weeks on the Medical deck, he was transferred to the care of Mr. Rooke as a case for Surgical attention. The pains in the right ankle had almost entirely ceased; the left foot, on the other hand, was much swollen; the integument was perforated by numerous scorbutic ulcers and sinuses, the subcutaneous soft tissues of the dorsum and sole were softened and saturated with pus, and there was much crepitation on lifting the limb, indicating extensive removal of articular cartilage from the surfaces of the tarsal bones. The patient was in a low state of health, and suffered frequently from rigors. He was also, at times, slightly delirious. The left lower extremity was much reduced in size, and the muscles, particularly those of the calf, were much affected with clonic spasm.

February 9, 1869.—The general health of the patient having been much improved, the foot was removed at the ankle, according to the rules laid down by Mr. Syme. Chloroform was administered. There was much general oozing, but very little arterial hæmorrhage, the only artery which required the ligature being the anterior tibial. The edges of the flaps were kept in contact along the inner three-fourths of the line of incision, but were left separated at the outer angle of the wound, in order to favour a free discharge of blood and pus. State of the Foot: The only sound tarsal joint was that between the os calcis and astragalus. The cartilaginous surfaces of the remaining tarsal joints, and also those of the proximal ends of the metatarsal bones, had entirely disappeared. The bone-tissue was softened and carious, and stained here and there a deep black colour. This condition was found in the os calcis, as well as in the other tarsal bones.

14th.—Has been doing remarkably well since the operation. The patient's general condition is good; he takes a fair diet, sleeps well at night, and no longer complains of pain in the lower extremity. The wound is looking very well, and shows no tendency to sloughing action. There is a free discharge of blood-stained pus from the orifice at outer angle of wound. The skin at the extremity of the stump is pale, relaxed, and free from great pain on pressure. The man is taking twelve ounces of port wine per diem.

20th.—Has progressed uninterruptedly well since last report. The discharge from the wound is healthy, and not excessive, and there has not been the slightest tendency to accumulation and burrowing of pus in the bag formed by the posterior flap. The patient's general condition is very satisfactory.

March 7.—With the exception of a narrow granulating surface on outer side of stump, all the parts at the seat of the operation were healed. There has been very little suppuration, and the discharge has formed on the superficial granulating surfaces to a much greater extent than in the deep-seated parts. The skin over the end of the stump has, since the operation, always remained pale, uninflamed, thick, and normally supple.

It is now capable of bearing very firm compression with the palm of the hand. The man remains in perfect health.

March 31.—The patient for some days past has been classed as well, and is retained now merely for the purpose of having a suitable boot made for the stump. The parts at the seat of operation are now quite healed, and the extremity of the limb is free from tenderness, congestion, and every sign of disease. The patient can bear firm pressure upon the stump, and is able to throw the weight of his body upon the left lower limb resting on the ground.

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Medical Times and Gazette.

SATURDAY, APRIL 17, 1869.

"THE REMEDY WORSE THAN THE DISEASE."

Under the above title a pamphlet intended as a "protest against legislative measures for the regulation (and tending to the encouragement) of prostitution, as exemplified in the provisions and working of the Contagious Diseases Act, 1866," has been published for a "society for the rescue of young women and children." The question is treated in a style of which the following specimens will furnish sufficient illustration:—

We are told that "there never was a time, the committee feel, when *Christian* men"—the italics are not ours—"were required to make a more vigorous stand in defence of the truth of God, and for the inviolability of those moral laws which He, as the righteous Governor of men, has prescribed for their observance and obedience." The experimental application of the Contagious Diseases Act to some garrison and seaport towns originated "*from consideration solely of the health of our soldiers as affected by 'the great sin' and its incident evils.*" [The italics and inverted commas are not ours.] "What should have been the remedy for these evils? Not, certainly, forced Medical intervention with a view alone to the continuance of *the sin*, without its penalties, and to an extension of facilities for the perpetration with impunity of the grossest, vilest vice that Heaven can behold; but rather a remedy in harmony with existing law. Existing law does not regard the trade in this vice as a legal one. It is expressly framed, instead, to suppress it; and to have carried out effectually that law at our garrison and seaport towns would have been the true remedy." The Contagious Diseases Act is "so diabolical" in its tendency and "so utterly godless as to the motives in which it originated," that if it had been of such a character that it could have been decently brought before the nation it could not have failed to rouse at least the Christian portion of our countrymen. We are next favoured with the opinion of "a wretch of a man" who styled himself a gentleman, that if the Rescue Society were to remove girls from the streets our own daughters would not be safe. "So the French say—'Give them a licence; assure them safety and protection in their calling; make them feel that they are doing no wrong; stifle their consciences; and then our daughters will be safe. See to their health, and then our sons will be safe. Put them under Medical surveillance, and then our army will not be invalided.'" In ironical extension of such principles, the committee reply—"Pass an Act to make larceny easy; bring in a measure to set aside marriage law or to facilitate any other crime; and where, then, in the mind of its perpetrator, is the *sin* of its act?" Here we may observe that these severe moralists appear to suffer from a confusion of ideas between the punishment of crime by human ordinances, and sin against Divine laws. It is not in consequence of an Act of Parliament having ordained certain penalties for certain offences that these offences assume the character of sin. Divine laws do not need such sanction to convert into sin all infringements of their ordinances.

We are next asked, "Is the fearful consequence now adverted to—the special and significant attendant of secret sin—God's way, indeed, for inflicting punishment for its practice where man cannot do it? And will the nation fly in the face of God's laws, resolve to set them aside, remove their deterrent powers, and afford the practice of crime greater facilities than it at present owns? Is the social evil not great enough already? Are all to be engulfed in its vortex?"

To this we reply that the mere surface morality, which is only deterred from infringements of the moral law by the dread of physical suffering, is hardly likely to become worse or more unreal than it already is through efforts to reduce to a minimum the effects of a disease which is so capricious in the selection of its victims that its occurrence bears an *accidental* rather than *essential* relation to the sin of which it is by some considered to be the peculiar punishment.

Parliament must be restrained in legislating on such a subject. "If no other means be found to avail, *the women of England must be roused to protest against it.*" That some of them are already "roused" appears to us highly probable from the following proposal, which is distinctly womanish in its tone:—"It is not unreasonable to suggest that the surveillance which is proposed should be exercised upon the other sex. Let *them* suffer the monthly indignity. Let the probationary course indicated be applied to *them*. Let the police authorities have *their* names on the roll, and let *them* be furnished with a certificate of health ere they are set at large. Why is legislation to be all on one side?" Will female "Medical men" aid the work of equalising the sexes in this as in all other respects, or are we indebted to the Rescue Society for having suggested to us the existence of a barrier beyond which even their zeal would fail to carry them?

The clauses of the Contagious Diseases Act are criticised in a style very similar to that of which we have given specimens above, and we are told that if there be any offence crying louder to Heaven for justice and judgment, it passes imagination to conceive it. The success which has been attained in the camps and garrisons in which the Act has been in operation is designated "ignoble and disastrous." The Association for promoting the Extension of the Contagious Diseases Act and the Select Committee of the House of Lords are severely handled for the secresy with which they carried on their proceedings so as not to arouse public attention. The professional attainments and moral characters of the witnesses examined before the Peers Committee have not escaped that form of aspersion by imputation, which is a favourite resource of persons of excitable feelings and weak reasoning faculties.

One special grievance is that the efforts of the committees of the various penitentiaries and houses of London in rescuing fallen women from the streets have not been deemed worthy of notice or remark in the whole of the Minutes of Evidence taken by the Commission. These institutions have declared war

à l'outrance to the Association for the Extension of the Contagious Diseases Act, which, notwithstanding its numerous publications in the Medical and lay journals, we are informed, dreads the light of day, and seeks a congenial darkness for its growth and operations. It is urged that another association be formed whose first and most important duty will be to watch, with a lynx-eyed vigilance, the proceedings of the Association for the Extension of the Contagious Diseases Act, and by public meetings, petitions, and deputations to the Government and members of the Legislature, to oppose all efforts to smuggle the Bill through Parliament. A still louder and more rousing note of alarm is sounded by an announcement, in large capitals, that the matter has become even more serious, that the Government have determined to initiate the disastrous legislation, and that "the nation is to be wronged by the infliction on it of laws of the nature and object of which it is at the present time in most profound ignorance, and on which an expression of its opinion has never been invited."

We need hardly say that the pamphlet now before us is not the source to which we would recommend the nation to apply for information as to the nature and objects of the Society for promoting the Extension of the Contagious Diseases Act.

PROFESSOR LONGMORE ON THE TRANSPORT OF SICK AND WOUNDED TROOPS.

The importance of this subject is not limited to the interests of the sick and wounded. The philanthropy of the Geneva Conference would have failed in gaining the attention of the various Governments which have signified their adherence to its benevolent proposals if there had not been introduced among its first principles the subsequent neutrality of all sick and wounded soldiers who, left on the field by their countrymen, may have been restored to health by the ministrations of the volunteers of the *Société de Secours*. It therefore behoves all Governments to have their arrangements so perfect that the restoration of their soldiers to efficiency shall be to themselves a positive gain, rather than a negative advantage to the enemy, when purchased at the cost of the neutrality of perhaps a large number of men. In such sentiments, and in our insular independence, probably will be found the reason of our own Government not having officially connected itself with the International Conference for the Relief of the Sick and Wounded in War. Having thus practically declined to permit responsibilities peculiarly belonging to themselves to devolve even indirectly upon others, our Government have zealously applied themselves to the study of how to make their arrangements for the transport of sick and wounded soldiers as perfect as possible.

The idea of M. Léon Lefort is that, instead of ingenious improvements of means of transport for the wounded, we should seek to render transportation unnecessary, that it is easier to transport canvas than wounded men, and that it is not worth while to expend so much ingenuity on ambulances, springs, and elastic beds, when it is much easier to carry in any vehicle on wheels a tent that will hold thirty men than to transport thirty men to any distance to a shelter. This may be all very well for a man speaking of his own experience of late European wars, decided in seven days or seven weeks, but we have before us the more extensive probabilities of campaigns in climates other than European, and with enemies who have never heard of the Geneva Convention, and we must be prepared by the best available means to carry our sick and wounded from the field.

For several months past a committee of experienced officers, representing all the branches of the military service concerned in the transport and supply departments, and in the treatment of sick and wounded soldiers, has been sitting at Aldershott and London, to determine upon the best methods of performing such important duties. On this committee the principal Medical officers at Aldershott, Inspector-General Lawson and Professor Longmore, C.B., are the representatives of the Medical Department. Professor Longmore having been officially employed in examining the large collection of conveyances for the sick and wounded in war brought together and deposited in the Paris Exhibition of 1867, and of assisting in practical trials of many of them, has had peculiar opportunities for adding to our knowledge upon this subject, and has, as his contribution to the furtherance of the objects of the committee, compiled a "Treatise on the Transport of Sick and Wounded Troops," now before us. The book is of royal octavo size, containing more than 500 pages, and has been printed and published as a public record at Government expense; it is illustrated by nearly 200 woodcuts, and appears exhaustive of the subject, as (with the single exception, so far as we have been able to see, of velocipedes) it contains a description, more or less detailed, of every mode of conveyance which has ever been or could by any possibility be applied to the transport of sick or wounded soldiers. It is, we believe, the first systematic work published on the subject in any language, and supplies to any one taking a practical interest in the question on which it treats, an account of all that has hitherto been done towards its solution, an explanation of existing arrangements, and such guiding principles as may not only serve the purpose of preventing a repetition of former failures, but also of steering the way to further improvements.

The publication at the merely nominal price of five shillings of a work assuming at once the position which it cannot fail to maintain for a long time to come as the standard authority on the relief and carriage of the victims of war, is perhaps the most important contribution which our Government could have made towards the furtherance of the objects of the International Congress of Aid Societies to Sick and Wounded Soldiers which during the present month holds its annual meeting at Berlin. And we have no doubt that at the approaching Conference, which Professor Longmore is about to attend in an official capacity as the delegate of the British Government, he will receive ample testimony to the value of his labours as the author of the work under notice.

It would be an act of judicious liberality if the Government were to supply a copy of this work to each military Medical officer on full pay; but we fear, from the low price at which it has been published, that such is not the intention. Every army Surgeon who has before him the possibility of being engaged on active service should for his own sake study its contents.

THE WEEK.

TOPICS OF THE DAY.

Mr. Lowe's Budget will probably be well received by members of the Medical Profession. The income-tax, to which we specially object, is to be reduced a penny in the pound. The tax on horses, carriages, and men-servants is reduced, and, in consequence of a lessened duty, public conveyances ought to be better, if not cheaper. The abolition of fire-insurance duties and tea licences also, although they will, perhaps, at first mainly benefit the insurance companies and certain trades, must in time promote the advantage of all classes. The only increased tax is on heraldic bearings, for which Mr. Lowe has at length found a use. Our readers may recollect that, in one of his speeches last year, he singled out heraldry as the only kind of science which was of no earthly use to any one. This, however, was before he was Chancellor of the Exchequer. We do not know whether Mr. Lowe thinks that heraldry is specially affected by our Profession. But on Thursday last week the Doctor's modest crest was evidently uppermost in his mind. He said:—

"A Physician, for instance, may have a seal, for which he would have to pay a duty of only 13s. 2d., but if he has a carriage and drives about to visit his patients he will have to pay a tax of £2 12s. 9d., instead of 13s. 2d. for armorial bearings. That is not a very satisfactory state of things, and I should be glad if I could get rid of the duty altogether, inasmuch as

I do not think it is based on any sound or good principle. But as I cannot get rid of it, the best thing, it appears to me, which I can do is to increase it. I propose to alter the present rates of duty, and to charge the guinea for armorial bearings —that is, for all armorial bearings other than those on carriages; and if a gentleman likes to put his armorial bearings on his carriage, then I propose that he should pay another guinea; so that there will be in fact two taxes of a guinea each, which will bring to the revenue, it is computed, an additional sum of £8000 from this source."

But the general chorus of satisfaction which the Budget at first elicited ought not to make us forget that to those who, like too many professional men, are still struggling up the ladder of fortune, the peremptory demand for a whole year's taxes at once may prove at least a temporary, and in some cases a serious, inconvenience. Mr. Lowe says it is the price we must pay for remissions, but it is by no means an inconsiderable one.

Earl Russell's proposal for the creation of a limited number of life peers did not awaken much opposition in the Lords, and may probably arouse even less in the Commons. We notice, however, that in the classes of persons to whom Earl Russell proposes to give the honour the Medical Profession is conspicuous by its absence. Scotch and Irish peers, used-up members of the House of Commons, successful soldiers and sailors, colonists and puisne judges are of course specially mentioned, but there is no particular reference to Medicine, although Medical men may perhaps slip in amongst the οἱ πολλοί distinguished "in science, literature, or art," with people of the stamp of Newton and Locke, whom Earl Russell so amusingly patronised in his Friday evening's speech, hinting that even the House of Lords might have its influence and character strengthened by such an admixture.

When Mr. Bruce on Tuesday night stated that the present mode of electing county coroners was "cumbrous, expensive, and altogether unsuited to the character of the office," he uttered a truth of which some of our brethren have had sad experience. Whether Medical science or legal learning, or a combination of both, be considered the best credentials for a candidate for the coroner's office to possess, we can conceive of no body less likely to be influenced by them, or less likely to appreciate them, than the rabble of small freeholders who always turn the election—unless, indeed, we descend to a manhood constituency. The contest between Drs. Hardwick and Diplock, and all the litigation and outlay which it has occasioned, afford proof, if any were wanted, that at least the law needs revision. We are not entering into the merits of that particular case, but we only quote it as the most recent and flagrant example of the unfitness of the machinery by which a high judicial and scientific appointment may be even nowadays filled. There was a rumour that Mr. Dilke, the very Liberal member for Chelsea, was prepared to bring in a Bill for vesting the power of choosing the coroner in a still lower and wider class. If the office of coroner required no more skill and knowledge than may pass muster in an M.P., there might be an argument of consistency in favour of such a scheme. But we cannot suppose that a majority even of the present House of Commons would desire to see law officers of the Crown elected by the same constituencies which returned themselves. Mr. Goldney's proposal to vest the appointment of coroner either in the Lord Chancellor or the Home Office is in principle a better proposal than an election by householders or adult males or females. But to give the patronage to the Lord Chancellor would be simply to give lawyers the monopoly of all these offices. To say nothing of the greater fitness of Medical men for coronerships, surely briefless barristers have enough provision already from the public in the shape of colonial judgeships, county-court judgeships, revising barristerships, and other small prizes. It is clear that no Lord Chancellor could be expected to prefer the claims of a Doctor to those of a lawyer. To vest the appointments in the Home Office might, perhaps, obtain a fairer field for Medical claimants. The present is the day of competitive examinations. We know of no office to which with more reason the principle of competitive examination might be applied than that of the coronership. Let all candidates establish their fitness by proving their possession of anatomical and toxicological as well as some legal knowledge, and then let the patronage be vested with the Government. We should have no fear for the interests of our Profession on such terms. We observe that Mr. Cubitt suggests that Mr. Goldney's Bill should be referred to a select committee, as, although he is impressed with the necessity of a reform, he objects to the choice being in the hands of the Executive Government. Probably this would be the wisest course to be taken. The House of Commons has plenty of work before it, and it is not very likely that a satisfactory and well-considered measure could be got through both Houses in the present session.

Nothing seems to check the growth of London pauperism. An exodus on a grand scale seems to be the only remedy, as it is, in fact, *the* remedy which common sense suggests and all history approves for a population that has outgrown the resources of its area. In the first week of the present month, although the winter has pretty well passed, the total number of persons receiving relief in the metropolitan parishes was 147,086 against 145,537 in the same week of last year, and 104,333 in the same week of 1866.

The death from carbolic acid which occurred at the Worcester Infirmary has led, on the motion of Earl Beauchamp, to the appointment of a special committee to inquire into the whole management of the institution. It may be remembered that it was the verdict of a former committee, throwing the whole blame of the accident upon Mr. Harding, the dispenser, which induced his Lordship to interfere in the matter. At a quarterly meeting of the governors held on Saturday, April 10, Dr. Williams—reasonably enough, we think—complained of the following remarks, attributed to Lord Beauchamp, in the *Times* of March 15:—"Lord Beauchamp said there was a want of responsibility; there was no responsibility resting on the Visiting Physicians and Surgeons." In the course of a very long conversation which followed Dr. Williams's speech, Lord Beauchamp denied the accuracy of the *Times* report, but refused to exempt the Medical staff, including the Physicians, from a charge which he brought against the institution as a whole, including everybody connected with it, even the subscribers. The charge was simply that there was a want of responsibility everywhere. This may be true, but his Lordship should remember that the Medical officers are *bonâ fide* responsible for the treatment of their patients, and it is a mere *façon de parler* to put them in the same category with the subscribers who may live in another county. We think his Lordship should have made a fuller retractation. At least the Physicians could not be responsible for the recent death from carbolic acid, nor for the intrigue of the porter with one of the nurses, a subject which the weekly committee has also lately been investigating.

We are very glad to hear that the family of the late Dr. Maurice H. Collis are in a position to decline the testimonial to his memory in the form which it was at first proposed it should take. Such a man, however, deserves to be remembered by his fellow-citizens; and we hear that a testimonial is likely to be raised in the shape of a new wing to the Meath Hospital. For ourselves we should have thought that the foundation of one or more Medical scholarships would have been a more appropriate memorial, especially as there is a Maurice Collis ward in the Meath Hospital already, in memory of the uncle of Dr. Collis.

Dr. Alexander Crum-Brown has been unanimously elected by the Curators of the University of Edinburgh to the Chair of Chemistry lately vacated by Dr. Lyon Playfair. To Dr. Crum-Brown's high attainments and perfect fitness for the post we have already borne our testimony, and the fact that so good a chemist has been chosen must temper the disappointment which such a contest always engenders.

We think that any one who reads Dr. Clifford Allbutt's letter, which appears in our impression of to-day, will agree with all that we have lately urged on the subject of "dying depositions." It is absurd to require from a person dying by violent means such a consistent expression of complete relinquishment of hope as is scarcely ever to be obtained even from those who are *in articulo mortis* from old age or natural disease.

CHANGES IN THE MEDICAL SERVICE OF THE NAVY.

We are enabled on good authority to state that the following changes have been decided on:—Sir D. Deas and Dr. Burn are put on half-pay, and receive (as well as Dr. Stewart, recently put on half-pay from Plymouth) the good service pension; Dr. Salmon is appointed to Haslar; the second Inspector-Generalship at Haslar is not to be filled up; Dr. Anderson and Dr. Smart are promoted to be Inspectors-General; Dr. Domvile is appointed to Chatham, *vice* Dr. Anderson; Dr. Smart remains *pro tem.* at Greenwich. Last week we inserted a statement that the new appointment to the directorship of this department was, like the last, to be for a period of five years. We are now able to assert, on authority, that such is really the case, and we hope thereby to quiet the apprehensions of officers who have protested to us of the injury to the Naval Medical Service that would arise out of the establishment of a new system in this respect. Judging from the acts of the present Board of Admiralty, we feel that the Profession has reason to expect prudence and justice in their dealings with the Profession, and we trust to seeing the promotion of a corresponding number of Staff-Surgeons into the vacancies caused by promotion from the grade of Deputy Inspector-General. Three good service pensions have been established for the highest rank, which will in future render retirement more palatable; and, from this display of good intentions towards our naval Medical brethren, we may infer that proper honorary distinctions will ere long be conferred on those who have deserved so well in the public service as the Director-General and Inspectors-General, who are now going into private life. The rank of K.C.B. would be a fitting reward for Dr. Bryson's long and distinguished services. It is generally hoped that the accession of Dr. Armstrong may mark an era of improvements in the service, especially in the department of special education, which ought to be put on the same footing as in the army.

EXTRAORDINARY CHARGE AGAINST A MEDICAL CORONER.

An inquiry was held last week before George Russell, Esq., County-court Judge of Derby, under the following circumstances:—A woman patient had died in Wye House Lunatic Asylum on whom it was thought desirable to hold an inquest. The coroner and jury, having of course to view the body, went into the room in which it was laid. The coroner, Dr. Bennet, of Buxton, requested Miss Sophia Taylor, the superintendent of the Asylum, to uncover so much of the body as would enable the jury to see it, but not expose any part which would appear to be indelicate. Miss Taylor, it is said, positively refused to do so, and prohibited a female attendant from complying with the orders of the coroner. Subsequently the body was uncovered by a police sergeant in attendance, with the most scrupulous regard to decency. Some marks were found on the arms, and a large bedsore, which was most offensive, was discovered on the back part of the body. The coroner and jury then retired to the County Hall, in which the inquest was to be held, the coroner saying to the policeman "we shall require Miss Taylor's evidence." The sergeant waited for Miss Taylor, and accompanied her to the Hall—not, as he swore, "in custody," but merely as a witness necessary to be present at the inquiry. Miss Taylor, however, chose to consider that she *was* in custody; and though she gave her evidence, and received 2s. for so doing, she instructed her solicitor to bring an action against Dr. Bennet and the police sergeant for giving and removing her "in custody" against her will. Her grounds for the action were that the coroner had threatened her, and that she was really in the custody of the police sergeant. Upon these points the evidence for the defence was a complete refutation. Not only the coroner, the sergeant, the foreman of the jury, but some other jurymen, positively swore that no threats were held out, and that the plaintiff was not in custody. The case is important in many respects, but more especially with regard to the value of the coroner's court as one of strict inquiry into the cause of death. As one of the jury properly remarked, what was the use of their being summoned to view the body without being able to do so? The summing up of the judge really takes the common-sense view of the case, and we republish it. But it may be well to state that the action was originally commenced in the Court of Queen's Bench, and ordered by a judge of that court to be tried at Derby, before the County Court judge, in consequence of the plaintiff failing to give security for costs.

"His Honour then, in summing up the evidence, which he did at considerable length, first explained the nature of the action, and expressed his very decided opinion that, in reference to the first part of the charge, the plaintiff was entirely mistaken in believing that the coroner ordered her to uncover any part of the body which would be considered indecent; and in reference to that part of the evidence there was a total discrepancy between that of the witnesses for the plaintiff and those for the defence. He must say that he thought it would be better far that a thousand indecent investigations should take place rather than that a single death should occur respecting which an inquest should not be held if it was discovered to be desirable. He therefore entirely and thoroughly acquitted the defendant of any indecent attempt, and thought that he did only that which he considered to be his duty. On that charge the plaintiff's evidence had entirely failed. Miss Taylor and Dr. Bennet parted at the door on terms of not the very best nature. Under that state of affairs it had been stated that she thought he had given her in charge as a prisoner to a policeman, and it had been also stated that Dr. Bennet said to the policeman, 'You know what to do,' and by another of the witnesses, 'You wait, and don't come without her.' After hearing the evidence, he found that it was found to corroborate that of Dr. Bennet, and showed clearly that the plaintiff had mistaken courtesy for custody, and he therefore, sitting as a jury, must hold that there was not any *giving* the plaintiff in charge on the part of the coroner, nor was there any *taking* in charge on the part of the policeman. Neither did he think it was at all the intention of Dr. Bennet that she should be taken in charge, or that the words used admitted of any such construction, and therefore, as judge, he must give judgment for the defendant, with costs to follow the event. The judgment of his Honour was evidently approved by the throng of auditors in court.

"We are informed, on reliable authority, that steps will be taken immediately for a new trial before a jury."

If Miss Taylor be well advised, she will not risk a second action.

TYPHOID FEVER IN TRINITY COLLEGE, DUBLIN.

We are happy to be able to state that the epidemic of typhoid fever in Trinity College appears to have entirely subsided, and that the deep and mellow tones of the great bell, which had for many weeks been silent, are again heard throughout the College squares and park. The history of the recent illness may be briefly summed up as follows:—Six cases of enteric typhus occurred between March 7 and 13, one of which, as we have already stated, proved fatal. A case of scarlet fever, and two cases of mild enteric fever, subsequently occurred. It is now considered that the recent outbreak cannot be attributed to the state of the water, first, because the College supply of water has for the last three years and a half been taken from the same pump; secondly, because the water used in the College has, on chemical examination, been found to be better than that in use in the surrounding districts; and thirdly, because some isolated and limited outbreaks of typhoid fever

have occurred within the last few weeks in different parts of Ireland. It is now exactly thirty years since anything like an epidemic before occurred within the precincts of the College—a fact which speaks highly for the sanitary condition of the institution.

DR. STEELE'S STATISTICAL REPORT OF GUY'S HOSPITAL, 1868—MEASURES FOR THE PREVENTION OF PYÆMIA.

THIS report merits every commendation, both for its substance and its style. It is full, fair, short, and clear, and furnishes answers to every question that fairly can be asked concerning the subjects within its scope; but it does not deal with the dietetic or financial departments. During the year, 5297 in-patients and 78,324 out-patients, altogether 83,621, were recorded. Taking the in-patients first—

"The mean residence of each person, amounting to 34·31 days, is a fraction less than it was in 1867, but fully a day more than the average stay during the five years preceding 1867. The mortality among the patients has amounted to 9·72 per cent. of the cases under treatment, and is considerably less than the rate which governed the two preceding years, when it averaged 10·65 and 10·64 for each year respectively, while the total number of deaths that have occurred during the past year, amounting to 466, is less than any similar return since 1861. This decrease in the gross mortality for the year is partly accounted for by the relative diminution in the number of severe accidents brought to the Hospital. . . . Of the 466 deaths enumerated, not less than 80, including 57 male and 23 female, occurred within the period of twenty-four hours after admission. . . . The mean stay, as calculated over all the patients, is found to have amounted in 1868 to 34·31, and in 1867 to 34·93 days, while for a lengthened period antecedent to these years it rarely averaged more than 33 days. This question of mean residence opens up a fruitful source of inquiry. . . . . It is evident that the longer or shorter stay of a patient in Hospital must exercise an important influence on a comparison of the results of treatment in different institutions, and must also tell materially on the average cost of maintenance. It is probably owing to this latter cause that the mean residence of patients in Hospitals supported by voluntary charity is always more limited than in the endowed Hospitals; for while the period in the former rarely averages more than 28 days, in the latter it is never less than 33, and in some years rises as high as 36 days. It is also found from experience that the prolongation of residence is mainly attributable to the admission of patients into the Medical wards suffering from chronic chest affections and nervous diseases requiring protracted rest, and from the admission into the Surgical wards of patients suffering from diseases of the joints requiring similar treatment, and in whom the prospect of benefit is not usually of the most hopeful character."

Great attention has been paid of late years to various minor departments of the Hospital, so as to take away the temptation to erect special Hospitals.

"With the sole exception of separate accommodation for the more contagious forms of eruptive fever, it cannot be said that any single department requiring special organisation has been overlooked on account of the more general objects of the Hospital."

The new Nomenclature has been used in the construction of the tables, and answers well, except for the necessity of registering fatal results arising from two or more concurrent diseases, which no system of registration can be expected to admit of. Dr. Steele discusses the propriety of admitting the various infectious diseases. Small-pox, scarlatina, and measles are always excluded; but ordinary contagious fever is admitted with certain restrictions.

"The experience of the Hospital from year to year shows a variable, though a persistent, tendency in the disease to attack both patients and attendants, and although the number infected in this way does not average more than six or seven annually, it is a matter well worth more serious consideration than it has hitherto received, whether the numerous precautions that are continually being taken to promote the health of the Hospital should not include freedom from the risks which the introduction of infectious diseases among others inevitably entails. Of the four deaths reported from typhus fever, three occurred in patients admitted with other diseases, which in all probability would have proved fatal at a subsequent time had they not been attacked with fever, and the other was that of a nurse who had contracted the disease while attending to her duties. With the exception of occasional deaths from fever, it cannot be said that the mortality or disease among attendants and servants employed in the Hospital is at all severe, or that they suffer in any way besides that already alluded to from their employment. The number so employed amounts to 110, and the rate of illness amongst them seldom exceeds 3 per cent., so that there is little reason to suppose that the employment is unhealthy.

The severe accidents were less numerous than usual, owing probably to the general diminution in building and manufacture in London; of 805 such patients 83 died. The number of severe Surgical operations was 417, with 70 deaths. Dr. Steele grapples boldly and frankly with the subject of erysipelas, hospital gangrene, and pyæmia. Much has been done to suppress them by enlarging the space, improving ventilation, isolating the patients, and the use of disinfectants; yet the tendency to such accidents is inherent in every Hospital where patients occupy beds and breathe the air in one common apartment. To prevent them absolutely it would be necessary to carry out "a process of individual isolation, and the stamping out, so to speak, of every disease which showed the slightest tendency to traumatic or spontaneous infection by providing a separate apartment with separate attendants, utensils, and furniture for each person." As this would be, in fact, to make a Hospital not a Hospital, but a system of private dwellings, the only thing is to make the best of existing means:—

"The average amount of individual accommodation in the Surgical wards has been advanced to 1650 cubic feet, and in the building most recently erected (Hunt's House) nearly 2000 cubic feet of space are allowed for each person, together with a system of ventilation which provides for a perfect change of the atmosphere several times during the day and night, exclusive of the natural ventilation by doors and windows. For many years a ward containing 8 beds has been specially reserved and kept in constant use for the treatment of gangrenous and erysipelatous wounds, and during the past year 54 patients have been received into it, 24 of which were removed temporarily from other parts of the Hospital, *while the remainder were received directly from their own homes.* With respect to the frequent occurrence of pyæmia as a cause of death, especially after operation, the records of the past year do not present such unsatisfactory results as those of the year 1867, although the numbers returned in which this complication existed amounted in all to 23 cases, of which 19 occurred among patients with Surgical disease, 8 of whom were the subjects of operation, and 4 other cases were observed among patients in the Medical wards, *who were admitted with symptoms of the disease.*"

It is but fair to call attention to the words which we have italicised.

"Complete isolation," continues Dr. Steele, "combined with the freest possible ventilation consistent with safety, appears to be the only safeguard against pyæmia; and it is a question well deserving serious consideration whether, in addition to the very limited separate room accommodation for Surgical operations of a capital kind which the Hospital possesses, there might not be constructed a few temporary huts in the Hospital green, perfectly isolated, so as to extend the benefit already vouchsafed to one important class of operations to others of equal severity, and which hitherto have been the chief sufferers from the disease in question."

The indiscriminate rush of out-patients is recognised by Dr. Steele as a growing and irrepressible evil. An average of 250 new cases are presented at Guy's every day except Sunday. 1783 women were attended at their homes by students, and out of the number 8 died, 3 only from truly puerperal causes. 624 operations were performed on the eye. It is a pity that all Hospitals do not publish such statistics.

SOMETHING LIKE A TESTIMONIAL TO DR. ELLIOT.

DR. WILLIAM ELLIOT, who for many years practised at Stratford, has been compelled to retire, and has received a testimonial, the nature of which is best explained by the following letter. We know not whether to envy more the

feelings of gratification which Dr. Elliot must experience at the receipt of a gift so generous and considerate, or of the truly affectionate and warm-hearted donors in carrying out their honourable intentions. The letter well deserves such a permanent record as our columns can afford :—

"*To William Elliot, Esq., M.D.*

"Maryland Point, Stratford, E., March, 1869.

"Dear Sir,—The undersigned desire to express their deep sympathy with you in the impaired health which obliges you to retire from the active duties of your Profession.

"For themselves they must long regret the loss of the kind friend and Physician who has for so many years ministered to their families with unwearied attention and skill in every season of sickness and distress, and, in deference to their own feelings, they cannot allow you to leave the neighbourhood where your best years have been spent without some mark of their love and regard.

"They have therefore subscribed among themselves the sum of £1287 13s. 6d., £1105 of which amount they have invested in the guaranteed 5 per cent. stock (Scrip) of the Great India Peninsular Railway Company.

"This stock they have placed in the hands of your old friends, Antonio Brady, Esq., and Captain Alfred Fell, in trust for the benefit of yourself and Mrs. Elliot during your joint lives, and afterwards to pay the principal to such trustees as your loving daughter Jean may appoint for her sole use and benefit absolutely.

"In presenting the deed securing to you this amount, the undersigned beg to express their earnest hope that it may please God to restore you to better health, and to spare you yet for many years to be, as you have ever been, a blessing to your family and to all around you.

"Moreover, knowing your inability to walk, and that air and exercise are absolutely necessary for you, they have requested your family to choose the easiest and most suitable new carriage they can find, with a safe horse and harness, to replace the basket in which you now drive, as it is too rough a conveyance for an invalid, and this remembrance they beg you to accept together with the accompanying purse, containing the balance of the fund they have had the pleasure of subscribing for this testimonial of their affectionate esteem.

"Antonio Brady, } Trustees."
"Alfred Fell, }

REPORTS OF THE GLAMORGAN AND OF THE CUMBERLAND AND WESTMORELAND LUNATIC ASYLUMS—HARDSHIP OF THE LAW RELATING TO CRIMINAL LUNATICS—DYSENTERY FROM SEWAGE IRRIGATION.

The Glamorgan Asylum at Bridgend seems in so prosperous a state that Dr. Yellowlees has but little to narrate beyond the record of ordinary successful work. Not so Dr. Clouston, whose report contains an account of a most annoying state of things arising from a late alteration in the law relating to criminal lunatics :—

"Two criminal patients were received from Broadmoor State Criminal Lunatic Asylum. Both had been convicts, and had become insane while undergoing their punishment. In consequence of this both had been sent to Broadmoor and kept there till their sentences had expired, at the expense of Government. In the former state of the law they would have been kept there till they recovered or died. By an alteration made last year, they were sent here on the expiration of their sentences, this being the asylum for the district in which they were convicted. The consequence is that we have got one man with all the dangerous tendencies and criminal propensities of a professional burglar, with the experiences of a convict prison and a criminal lunatic asylum, and with the little sense of responsibility and power of self-control he ever had taken away by partial insanity. We have this man in a county asylum, built on the newest and most approved principles for the cure of insanity, where the patients are drawn from a quiet, respectable class of people, where as much liberty is given them as possible, where even the window-panes are eighteen inches square, so that they may not resemble those of a prison, where everything is avoided that even suggests restraint or close confinement, and where the attendants are not in the least accustomed to manage such a man. The other man is quite insane, but as manageable as any patient in the house. He might just as well have been kept here at nine shillings a week as in Broadmoor at a larger sum during the years he was insane before his sentence expired. Yet by the present state of the law the dangerous man is sent away from Broadmoor, which was built at great expense, with all the arrangements for such as he, with a large staff of specially trained and highly paid attendants, to make room for, it may be, a harmless lunatic to be kept till his sentence expires. No notice is sent as to the character of this man beforehand, and along with him only a meagre statement of the fact that he is considered 'dangerous to others,' while special information as to his propensities, when asked for, is not given. We gradually find out that he had committed numerous assaults at Broadmoor, and that special precautions had been taken to prevent him from being dangerous, such as never allowing him to take exercise without a special attendant. To make matters more pleasant, the Commissioners in Lunacy come and point out that by the Act (30 Vict., c. 12, s. 6), it is purely optional with the Secretary of State or his advisers to send such cases away from Broadmoor at all, and say that they consider such a man quite an unfit inmate for an ordinary county asylum. Surely, when cases are sent from the State Criminal Asylum to county asylums, they ought not to be the lunatics with criminal and dangerous propensities. It would seem a far more rational thing to provide that such lunatics, when they are accidentally sent to ordinary asylums, should be sent to Broadmoor. The present working of the law is in the highest degree inconvenient, and unfair to the ordinary patients in county asylums."

Dr. Clouston refers to the difficulties which poor lunatics experience after leaving the Asylum—the fear, hatred, and disgust they excite, and which often induce relapse. But the point of chief interest is this. Our readers will remember Dr. Clouston's narrative of a fatal outburst of dysentery in the Asylum, arising from the emanations of sewage used for irrigation. Unfortunately there has been a recurrence of this accident, which is an additional argument for a reconsideration of the whole watercloset system.

"After the lower field of eight acres had been drained and levelled, the sewage was run on to it in the most approved method. It was run on fresh out of the main drain after having been deodorised by water impregnated with carbolic acid used in the water-closets. It was run on fresh land every day. There never was any smell perceived, and it seemed to answer perfectly well for two months. All authorities on sewage were so unanimous that, under the circumstances, there was not even the shadow of risk, that no misgivings about the matter ever entered my mind. But suddenly in the end of March six patients were attacked with dysentery and diarrhœa, more or less severe, within a few days of each other. They all were in that part of the house next the irrigated field, and on consulting a meteorological register kept by one of the patients, I found that the wind had been from the direction of that field to the part of the house inhabited by the patients affected by the dysentery for eight days continuously previous to the outbreak. We had been perfectly free from dysentery for two years while the sewage had been running into the beck, and have never had any traces of it since, having, by means of a new pump, wrought by the laundry steam-engine, thrown the sewage on a field to the north-east whenever the wind has blown north-west. Any one affecting scepticism as to the sewage irrigation and dysentery being cause and effect after this, taken along with our former experiences in 1864, 1865, and 1866, must either disbelieve my statements, or must hold that no fact can be proved by circumstantial evidence.

"To explain why sewage irrigation should be attended with risk here while elsewhere it should be perfectly innocuous to health is, I confess, not easy. Until we know the precise deodorising and absorbing power of every kind of soil, and are able to explain all the conditions on which decomposing organic matter is fixed and utilised by the soil and plants, we cannot explain satisfactorily such a phenomenon."

BIRTHS AND DEATHS IN TRINIDAD.

Dr. Bakewell, in his report on the sanitary condition of Port-of-Spain, Island of Trinidad, presented to the General Board of Health, February 1, 1869, makes the following statements, which are certainly sufficiently startling to excite general attention :—

"During the ten years ending December 31, 1868, there were registered in Port-of-Spain 8276 deaths and 5790 births, being at the rate of 827 deaths and 579 births per annum. Thus there were considerably less than three births to four deaths registered. These deaths were at the rate of 43·5

per 1000 of the population annually, and the births at the rate of 29 per 1000. Whether we consider the low birth-rate or the high death-rate, the subject is equally serious. The annual birth-rate of England and Wales during the ten years 1851-60 was 34 per 1000. The birth-rate of London was 33 per 1000. The counties of Devon, Hereford, Salop, Westmoreland, and those in North Wales were the only ones in which the birth-rate was as low as 29 per 1000. All these counties are agricultural, and from all there is a great migration to the great centres of industry. In none is there, as in Port-of-Spain, a large excess of women at the child-bearing age. Why they do not bring forth more living children is a question which would require a long and difficult investigation before it could be answered. Many of the causes that produce this state of things are beyond the reach of legislation, and even those that can be touched by it can only be acted on gradually, and in the course of years. The causes of the high mortality may be briefly summed up as two—bad air, bad food. Bad air from ill-ventilated, overcrowded dwellings, from cesspools, from heaps of rotting filth in yards, from stinking gutters in the streets, from the malaria of the swamps to the east of the town. The bad food—bad because it is innutritious or unsuitable—cannot be controlled by legislation. If food unfit for human use is sold in the markets, it may be seized and destroyed. Comparing this mortality with that of London during the last cholera season, the highest mortality was 36 per 1000. This was in Whitechapel, which contains the London Hospital with about 400 beds, and the resort of large numbers from neighbouring districts. The next was St. George's-in-the-East, with a mortality of 34 per 1000; St. George's, Southwark, was 33; St. Giles, 29; and Stepney and Mile-end Old Town 29. It thus appears that the average annual mortality of Port-of-Spain exceeds the mortality of the unhealthiest districts in London during the cholera year. What makes this mortality the more remarkable is that the population of this island is largely recruited by immigrants of the healthiest ages, both coolies and creoles of other islands, and that, in fact, the proportion of persons between the ages of 20 and 40 is much larger than in England, and the proportion of persons younger and older (among whom the mortality is greater) is much less. Another circumstance which ought to lower the death rate of Port-of-Spain is the great disproportion of females in its population. By the last census it appears that there were 1892 more females than males in Port-of-Spain, and it is well known that the mortality among females is much less than among males. That the frightful mortality of Port-of-Spain depends on causes for the most part removable there cannot be the shadow of a doubt. However unhealthy this island may be to Europeans, the vast majority of its inhabitants are just as well fitted to bear its heat as white people are to bear the cold of Europe. The whole of the negroes and coloured creoles and the coolies ought to be just as healthy here as the English are in England. This is shown, too, by the fact that the mortality of the rural districts of this island is nothing like that of Port-of-Spain. Even San Fernando has only a death rate of 21 per 1000 annually. As for the remedies to be adopted to improve this state of things, looking at the question solely from a sanitary point of view, Dr. Bakewell holds that there is nothing so effectual as underground sewerage. He says that had the sewerage been carried out through the whole town, no such mortality as that of the last few years would have occurred. The waste of water which, now running into the gutters, pollutes the whole place, would then have been washing the sewage into the sea. I am quite aware of the arguments against the system, but none of them, except the simple argument that the island cannot afford the expense, appear to me to have any real weight. It is not at this board that questions as to the advantage or disadvantage of sewerage or other sanitary measures can be decided, and the unanimous voice of all men who have studied these questions at home has pronounced in favour of underground sewerage as the only practicable measure for large towns. The recent report of Lieut.-Colonel Ewart seems to settle the question, even as to small towns."

FROM ABROAD.—ANNUAL MEETING OF THE FRENCH SCIENTIFIC SOCIETIES—MEETING OF THE FRENCH MEDICAL ASSOCIATION—DISCUSSION ON THE EMPLOYMENT OF CHLOROFORM IN TETANUS.

An interesting meeting takes place annually in Paris, to which we have no analogue—that of the delegates of the numerous scientific societies of France, presided over by the Minister of Public Instruction. The *séances* continue for some days, at which papers are read. These chiefly relate to historical and archæological science, but there is also a section for physical and natural science, which is well supported. Among the papers read in this last we may specify one by Professor Rouget, of Montpellier, on "Muscular Motion," which, it is sought to show, depends upon elasticity rather than contractility; one by MM. Estor and Béchamp, of the same city, demonstrating the existence in animal cells of molecular granulations endowed with Brownian movements, which, in their opinion, are "microphyte-ferments." M. Espagne, also of Montpellier, read a paper exhibiting the mischief often produced by sewing-machines on the workwomen, chiefly in consequence of their being worked by the foot. M. Diday, of Lyons, read an essay on "The Nature of the Lesions caused by Virus," and M. Sicard one on "The Physical Education of Young Children." M. de Labordette, of the Normandy Linnean Society, gave an account of his researches in asphyxia, and described the speculum he employs to overcome the contraction of the jaws, which, so far from being a sign of death, as long believed, is a certain one of the persistence of life. (We some time ago gave a drawing of this instrument.) M. Jeannel, of the Bordeaux Linnean Society, gives a further account of the preparation of chloroxide of iron. M. Bourguet, of Aix, and M. Plasse du Nord, furnish communications illustrative of epizootic diseases. At the end of the scientific *séances* one of an imposing character was held for the distribution of prizes. The Minister took the occasion of exhibiting, with some justifiable pride, how much the Government had done during the last year for the advancement of the highest stages of education by the creation of laboratories for instruction and researches in the same establishments, the establishment of scientific missions for observing the progress of science abroad, the formation of a meteorological observatory, and the direction of a vast machinery of study towards economic applications. Finally, he announced the establishment of new prizes in each of the universities for history, archæology, and the sciences. At the end of his address prizes were awarded to those delegates who had most distinguished themselves by their productions in the various branches of science.

Another important meeting took place also last week in Paris, that of the "General Association of the Physicians of France." The secretary reported it to be in a flourishing state, having now nearly 7000 members, and dispensing more than 30,000 fr. in succour, besides having founded several life-pensions. Judging from a criticism in the *Gazette Médicale*, it would seem, however, that the somewhat high-flown statements of M. A. Latour, the secretary, require some modification, as, without some alteration of its laws, the prosperity of the Association does not seem so well assured. M. Tardieu, its new president, is evidently of that opinion, believing that the enthusiasm which may have created and hitherto supported the institution must be succeeded by something more substantial. Such institutions are, he observed, more easy to originate than to keep going. Then, again, the council or governing body is accused of cliquism and monopolising an undue share of power. Two of the local societies have made an endeavour to secede from the Association, and, although outvoted at present, this looks ominous. As in all similar bodies, those who give much of their time to the management expect to be remunerated with an amount of power and influence which is unpalatable to outsiders. M. de Ranse, while advising changes tending to liberalise the management of the Association, also recommends it to give up the attempts it has hitherto made at the prosecution of charlatans. The few victories obtained, he observes, are as bad as defeats, for they only lower the Profession in the eyes of the public. In such contests, the quack, in the eye of the judge, is raised to the same level with his accuser, who only lowers himself in the process. If, as it is stated, there are parts of France where a living cannot be got in consequence of

the inroads of this illegal practice of Medicine, he thinks the wiser course will be to quit such localities rather than engage in these derogatory contests; and he believes the Association would beneficially employ its funds if it aided its members in making such changes of residence. "Never can you force a man to employ a Doctor if he has more confidence in a priest or a bone-setter, and to do so would be a violation of individual liberty. Let Practitioners quit a locality where such an evil is endemic, and this will be the surest way to bring its inhabitants to their senses. Deprived of all attendance that is really intelligent and efficacious, they will at last recognise, at their own expense, its value and utility, and, after enduring evils somewhat analogous to those caused by a famine, they will of themselves form more accurate appreciations. It will then be the turn of the Doctors to lay down the law." At all events, this suggestion does not lack on the score of novelty, whatever we may think of its practicability.

M. Labbé recently related an interesting case of fatal traumatic tetanus in which chloroform had been administered. Opium, in daily doses of fifteen centigrammes, was at first given, and, this proving of no avail, chloroform was resorted to. Less than four grammes were poured upon a compress, and the patient had made but a few inspirations when the breathing became stertorous, the face violaceous, and the pulse imperceptible. Artificial respiration was tried without success, and death seemed imminent, when, the jaws having been violently separated and the tongue drawn out, artificial respiration was again tried with more success. As the circulation became re-established the tetanic convulsions, which had completely ceased, reappeared, and the swollen tongue was found to be in danger of being bitten in two. The teeth were therefore separated again, and it was returned into the mouth. In a minute after respiration was again arrested, and the face became violaceous. Artificial respiration, and afterwards tracheotomy, were resorted to, but the patient died. It was observed in both the attacks of asphyxia that the tongue was not turned back into the pharynx, but remained in contact with the dental arch. At the autopsy there were found acute superficial meningo-encephalitis and signs of inflammatory irritation of the grey substance of the bulb.

In the discussion M. Lefort stated that he considered it dangerous to give chloroform in tetanus, and had observed in M. Denonvilliers' service a case very similar to that now related. M. Demarquay could not understand why chloroform should be given in tetanus, except at the very commencement, when trismus only is present. When contraction has invaded the diaphragm and other respiratory muscles, and when respiration is performed in a very imperfect manner, to give chloroform is to meet asphyxia halfway. Even supposing that the tetanic convulsions may cease temporarily under its influence, they are reproduced as soon as consciousness returns. M. Perrin, from the mere knowledge of the physiological action of anæsthetics, would, *à priori*, pronounce against their administration in tetanus. This action is first exciting and then paralysing. In tetanus, as in other convulsive affections, the symptoms being due to the exaggerated excitement of the nervous system, the excitement from anæsthetics adds to that produced by the morbid cause, and acts in the same direction as this. Chloroform should only be employed, in these cases, so as rapidly to pass over the period of excitement, and reach that of resolution. It is useful when, for example, it acts in causing the cessation of a convulsion whose prolongation menaces life, but which, by its nature, is only of limited duration, as in an attack of eclampsia. In all but such cases it should be abstained from. M. Perrin does not attach much importance to the thrusting back of the tongue in the production of the phenomena of asphyxia. These are usually due to a simultaneous spasm of the muscles of the larynx and the diaphragm, and the best way of combating them is not the drawing out the tongue, but the free practice of artificial respiration by means of a tube introduced into the trachea and a bellows. M. Tillaux observed that, in this case, the chloroform had little to do with the death, the tetanus having been the chief cause of this. M. Giraldès was of a similar opinion, adding that, in relation to treatment, we must distinguish between acute and chronic tetanus, no instance of a cure of the former existing, while there have been many recoveries from the latter. He believes, too, that the drawing out the tongue is of great utility in treating accidents from chloroform, especially when it is done by a forceps, which, at the same time, separates the teeth. M. Panas thinks that danger from chloroform arises much more from the mode of administration than the quantity employed. Almost all accidents occur at the commencement, during the stage of excitement, and it is this, not the sedative action of the chloroform, that is to be feared. It is small doses that kill, contrary to what is observed in other poisons, and we cannot, therefore, say that chloroform has had no influence in causing death in this case, seeing so small a quantity was used. M. Chassaignac has given chloroform in tetanus when the contraction has been limited to the masseters and the muscles of the back of the neck; but in a short time the symptoms have reappeared, and the patient has succumbed. This case of M. Labbé's should render us very reserved in our resort to it in tetanus that has become generalised. M. Trélat entirely agreed with M. Giraldès as to the influence of the thrusting back of the tongue. He has had several opportunities of observing this, and has found it taking place towards the end of the application, just when resolution was approaching. At this moment the tongue and the tissues in general at the back of the mouth mass together behind and arrest respiration. This is immediately re-established by drawing the tongue out in front by either the fingers or any appropriate instrument carried deeply backwards. M. Perrin has never seen, either in the human subject or in animals, asphyxia so produced. During all the period of anæsthesia the tongue remains in its place, and the upper orifice of the glottis is quite permeable to air. Spasm of the glottis is produced during the stage of excitement only, and to occupy oneself in drawing out the tongue in order to arrest asphyxia is but to lose time, and to let the opportunity slip of saving the patient by more efficacious procedures. M. Liégeois is of opinion that the nature of the phenomena under discussion has been erroneously interpreted. Traction of the tongue, the introduction of a tube, artificial respiration, insufflation, all, in his opinion, appear to act only as means of peripheric excitement, which, in reacting on the excito-motory centre constituted by the bulb, arouses by reflex action the respiratory movements. In this view M. Perrin expressed his concurrence.

PARLIAMENTARY.—LIFE PEERAGES—CAPITAL PUNISHMENT—ARMY HOSPITAL ESTABLISHMENTS—PHARMACY ACT AMENDMENT BILL—SEA BIRDS' PRESERVATION BILL—MODE OF ELECTION OF COUNTY CORONERS—ADULTERATIONS.

On Friday, April 9, in the House of Lords, Earl Russell's Bill for empowering the Crown to create life peerages, the total number to be twenty-eight, and the number appointed in a single year to be limited to four, was read a first time.

In the House of Commons Mr. Gilpin's Bill to abolish capital punishment was read a first time.

On Monday, April 14, in Committee of Supply,

On the vote of £366,800 for Army Hospital establishment, services, and supplies,

Lord Bury adverted to the item of £1123 under the head of contingencies of the Medical Department, and said that he had been informed that in a regiment quartered in London several invalids were ordered for change of air to some place on the sea-coast; but they were unable to take advantage of the order because no fund existed to pay their travelling expenses. The consequence was that the services of these men were likely to be lost to the country, and therefore he wished to know whether the item in the vote for travelling expenses included any travelling money for convalescents.

Mr. Cardwell said that the item alluded to by the noble Lord had reference to the travelling expenses of Medical officers, and there was not any sum in the estimate for the purpose mentioned by the noble Lord.

Lord Bury thought it hardly creditable to the country that no fund for that object was provided, and suggested that it would be advisable to ask Parliament to vote the necessary amount.

The vote was agreed to.

The Pharmacy Act (1868) Amendment Bill was read a second time.

The Sea Birds' Preservation Bill was read a third time, and passed.

On Tuesday, Mr. Goldney moved for leave to bring in a Bill to amend the law relating to the appointment of county coroners and for other purposes. He thought it extremely desirable that the appointment of county coroners should be vested either in the Lord Chancellor or the Home-office.

Mr. Bruce would not offer any objection to the introduction of the Bill. It could not be denied that the present mode of electing county coroners was cumbrous, expensive, and altogether unsuited to the character of the office.

On the motion of Mr. Dixon, leave was given to bring in a Bill to amend "the Adulteration of Food or Drink Act (1860)," and to extend its provisions to drugs.

ST. ANDREWS MEDICAL GRADUATES' ASSOCIATION.

A GENERAL session of the Association was held at the rooms of the Medical Society of London on Thursday, April 8, the President, Dr. Richardson, F.R.S., in the chair.

Professor Eckhard's communication on hydruria was postponed, in consequence of the Professor's inability to leave Germany.

A discussion took place on the restriction of the number of the Medical graduates to ten annually. A memorandum by the Hon. Sec., Dr. Sedgwick, was read, to the effect that it was not advantageous to the Profession and the public that worthy candidates should be excluded by the limitation of the number (as at present) to ten annually, nor by requiring that the candidate should have been in practice for nineteen years. A stringent and extensive examination and five years of actual practice would be, in the opinion of the authors of the memorandum, sufficient limitation.

After an animated discussion, in which Drs. Wynn Williams, Crisp, Drysdale, Rhys Williams, Tilbury Fox, Billing, Bloxam, and H. Day took part, the memorandum was received and adopted, and the Council were instructed to take such measures for bringing the subject before the University Court as they might deem expedient.

An interesting account of some experiments with hachisch on himself and two friends, by Professor Polli, of Milan, was communicated by the President, who related his personal experience of an overdose of morphia given him by mistake.

Dr. Cordwent, of Taunton, communicated a case of sudden death immediately after delivery in the upright posture, in which air was found in the coronary vein of the stomach, and also sent a specimen of phosphatic calculus removed from an old-standing perineal fistula.

An important paper, by Professor Eckhard, of Giessen, was then read, in which the learned author passed in review the current doctrines of the causes of the motions of the iris, and related the results of experiments performed in his own laboratory by Dr. Knoll to elucidate the matter. The paper is printed in full in the second volume of the *Transactions* of the Association, which is now passing through the press.

Much interest was expressed in the election of Assessor of the General Council which was then in progress, and all were unanimous in support of Dr. Richardson.

THE CAMEL.—Singular beings are these camels. They are always held up to us for their virtues, sobriety, patience, and all the rest of it; but no one ever says anything about their vices. They are grumbling, stubborn, puzzle-headed, pugnacious, and vindictive to a degree. A few days after our arrival, one of these brutes watched its opportunity and assassinated a child who a few days before had teased it. The poets are at liberty to celebrate the praises of this execrable hunchback, but I hope that these will never meet with an echo in the heart of a mother. —*About's Le Fellah.*

REVIEWS.

On the Ventilation of Dwelling-houses, and the Utilisation of Waste Heat from Open Fireplaces. By FREDERICK EDWARDS, jun. London: Hardwicke. 1868. Pp. 168.

On the Extravagant Use of Fuel in Cooking Operations; with a short Account of Benjamin Count Rumford and his Economical Systems, and numerous Practical Suggestions adapted for Domestic Use. By FREDERICK EDWARDS, jun. London: Hardwicke. 1869. Pp. 47.

THESE two works are well worth reading, not only for the grasp which they show the author to have acquired of his subjects, and the agreeable and readable manner in which he has discussed them, but also for the sake of the history of the efforts made by scientific men to improve our domestic appliances, with which each volume commences. The first of them contains a succinct but very interesting account of the labours of Dr. Reid in regard to ventilation, the other a similar account of the life and labours of another very remarkable man, Count Rumford.

Mr. Edwards fixes upon Dr. Desaguliers, in 1723, as the first person to make the ventilation of buildings a special study. He was a French refugee, who subsequently became vicar of Edgware and Chaplain to the Prince of Wales. The next name of distinction he mentions is that of another clergyman, Dr. Hales, rector of Faringdon. The former of these was employed to improve the ventilation of the House of Commons, and it is worthy of notice that the first attempt he made was by adopting a principle, that of rarefaction, which for the ventilation of public buildings, has been applied with the greatest success in our own days. That it failed in this instance was no fault of Dr. Desaguliers. He then invented a blowing-wheel, and endeavoured to get it into use in the navy instead of the wind-sail. Here, too, he was thwarted by the *vis inertiæ* of officials. Dr. Hales also adopted a mechanical method of drawing off vitiated air and injecting fresh by a modification of the bellows-principle. Mr. Sutton is the next mentioned. He endeavoured to ventilate ships by drawing the supply of air for the ship coppers by means of tubes from the hold and other places. His plan had the advantage of being self-acting. In 1811 Sir Humphry Davy undertook to improve the warming and ventilation of the House of Lords, but in this he only recurred to the first method of ventilation adopted by Desaguliers. The two philosophers to whose labours Mr. Edwards gives most space in his work are the Marquis de Chabannes and Dr. Reid. The former is described as the true inventor of the chimney valve or ventilator introduced thirty years later by Dr. Arnott, and is stated also to be the first person who actually introduced into this country the system of heating buildings with hot water. In the year 1834 a great part of the Houses of Parliament was destroyed by fire, and the House of Peers was thenceforth used as the temporary House of Commons. For so large an assembly the ventilating arrangements were found to be insufficient, and in 1835 Dr. David Boswell Reid, whose class-rooms in Edinburgh had attracted much notice in the previous year, was consulted, and charged with making the necessary improvements. Previous to commencing, he made experiments to ascertain the quantity of air that must pass periodically through a chamber occupied by 240 persons so as to keep the atmosphere free from unpleasant taint. His calculations led him to provide an area of discharge for vitiated air of no less than fifty square feet, and through numerous apertures in the ceiling the air was drawn off into an elevated chimney shaft by means of a furnace at its base. The air which entered the House was taken from Old Palace-yard, filtered, and then made to pass through some millions of apertures, diffusion being further aided by a covering of elastic and porous hair cloth carpet. In winter the air was warmed and moistened previous to its entry into the House. At times no less than 60,000 cubic feet were allowed to enter per minute, and arrangements were continued for regulating the temperature as necessary from time to time. Dr. Reid was so successful in his efforts that his services were engaged for the new buildings. Unfortunately differences arose here between Dr. Reid and the architect, Sir Charles Barry, which ended in Dr. Reid retaining his appointment only so far as the House of Commons was concerned. And now also Dr. Reid took a step which, although before experience it would appear to be advantageous, yet was one which not only failed in its object as respects the House of Commons, but failed in exactly the same way in the hands of another ventilator subsequently in the operations conducted at the

Lariboisière Hospital in Paris. Not content with the *vis a fronte* obtained by exhaustion as before, and taking his supply again from the nearest available source, he now took it from one of the high towers, and used a *vis a tergo* in the form of a powerful fan wheel to propel air into the chambers. The result, as we have said, was failure; there were inequalities of temperature and draughts, and instead of an excess of pressure within the house, there was a deficiency. Dr. Reid retired to America, and there died. "It is impossible," says Mr. Edwards, "for any one not to sympathise considerably with Dr. Reid in his fallen position; for to a man of such activity and earnestness the blow must have been a very severe one. Where he erred was unquestionably from excess of zeal. He was not a man to be satisfied with a small success, and to regard a respectable income and certain honours as his highest reward. He took up the subject of ventilation when it was in a very crude state, and he applied himself with unwearied industry to such consideration both of the leading points and the details as might raise it to the dignity of a science. Great inventors have risen to eminence often after years of dreary toil, and all who have a just conception of an inventor's career are perfectly aware that it is only by a steady overcoming of difficulties and determined perseverance, in spite of failures or pecuniary loss, that success is finally obtained. It would, therefore, be most unreasonable if the name of Dr. Reid should suffer because his labours were not free from the imperfection which attends everything human" (p. 41). We need not follow our author further in this part of his work. In the ordinary ventilation of dwelling-houses, Mr. Edwards is in favour of utilising as far as possible the exhausting agency of the chimney, and of making such arrangements in the construction of houses as shall render it available for the purpose. He dwells upon the principle which all, we believe, are now agreed upon, that the introduction of fresh air, if cold, should be effected from above, and, if warm, from the lower part of a chamber. After all, in small rooms, the success of a combination of warming and ventilation without draughts must depend upon a compromise where an open fire-place is in use—as it is and we hope always will be in this country—and upon the adaptation of the size and construction of the fire-place to the actual needs of the apartment and the amount of change of air required under ordinary circumstances. The chapter on the utilisation of waste heat is suggestive.

This, however, is a subject which, in one of its practical applications, is fully discussed in the second book, the title of which stands at the head of this review. Mr. Edwards fixes here upon Benjamin Thompson as the great and most successful innovator. Born at Rumford, in New Hampshire, U.S., he took the side of the Crown in the War of Independence, and, on the evacuation of Boston, was selected to convey the news to England, where he soon rose to fill the post of Under Secretary of State, and became a Fellow of the Royal Society. On quitting this post he again entered upon military life, first in America and subsequently in Bavaria, where he was at length charged with the administration of the War Department and that of the Police. Reorganising the army, he next sought to put down the mendicity with which the country was afflicted, and in this effort it became an object to provide food for a multitude of *employés* at the smallest possible cost. Hence he turned his mind to the economy of fuel in cooking. At the "House of Industry" he "made experiments, trials, and alterations until he succeeded in pushing economy nearly as far as he concluded it was possible to go, and this, for such a man, meant a great deal. The appliances for cooking which he erected were taken down, altered, and entirely rebuilt three times, with the ultimate benefit that the fuel used cost no more than *one* per cent. of the cost of the food. The fact that a thousand persons were provided with a soup dinner at a cost of fourpence halfpenny for fuel was vouched for by a certificate from certain persons in authority, for the satisfaction of the incredulous. For boiling water, eight large copper boilers were provided, each of which contained thirty-eight gallons, and were heated by one fire, the smoke and heat being made to pass by certain ramifications of flues and to come perpetually in contact with the boilers, so that the currents of hot air were tolerably well exhausted of the heat they contained before their final escape" (p. 7). Subsequently to this he settled in London, and introduced his arrangements for cooking at the Foundling Hospital, where he succeeded in roasting 112 lbs. of meat in ovens at the cost of fourpence. "Against the old English kitchen range he set himself most strongly, remarking that more fuel was frequently consumed in it to boil a teakettle than with proper management would suffice to cook a dinner for fifty men. . . . The system he adopted has been revived of late years, and become used in all the modern kitcheners, although hardly a person is to be found who knows that Count Rumford was its originator." (P. 11.) The bulk of the book is occupied by suggestions for the improvement of the kitchener. Both this and the work on ventilation are profusely illustrated with well-executed engravings. We congratulate Mr. Edwards on his literary success.

Phrenology, and its Application to Education, Insanity, and Prison Discipline. By James P. Browne, M.D. Edin. London: Bickers and Son. 1869. Pp. 586.

The Fundamental Principles of Phrenology are the only Principles capable of being reconciled with the Immateriality and Immortality of the Soul. By James C. L. Carson, M.D. London: Houlston and Wright. 1868. Pp. 470.

We cannot help thinking that one of the causes at least which have led to the discredit of the science treated of in these volumes is the assumption of a name which implies too much; for "phrenology" is but a word of Greeck composition, which signifies the science of mind; and it is but a just retribution upon those who have employed it to designate that part of the science only which deals with the connexion between the mind and its bodily organ, that their claims should be regarded with suspicion by some and with downright repugnance by others. Unfortunately, too, the professors of this branch of knowledge have had amongst them some who have degraded it by making it subservient to the practice of the grossest quackery; so that in many people's minds the term "phrenologist" has been tantamount to that of impostor; and the practice of "phrenology" as a fruitful art, has been classed with that of reading personal character by the aid of a page of handwriting. It is no rare thing in society for a Medical man to be asked by some one, of the fair sex especially, "Pray, Doctor, what do you think of phrenology?" For our own part, we have always felt something like a shiver when such a question has been put, for we have not always been quite sure that the questioner was at all aware of the signification of the term that was used, or that any reply was possible that his or her physiological or psychological knowledge would allow of being comprehended. So, like a good many others, we imagine, we have been accustomed to give some sort of jocose reply which nothing but an unusual amount of pertinacity would allow of being followed up.

"Phrenology," so called, claims for itself, however, a foundation upon observed facts; it claims to be based upon a large induction, and to be, within the limits assigned by human error, a *science*, and further, as a science "duly and methodically drawn from particulars," to be fruitful in its application to various circumstances in human life. Regarding it, then, as a branch of physiological knowledge, and as not occupying the whole field of psychological inquiry, we consider that its demand for due consideration is one which it would be foolish and injurious not to grant.

The first of the books on the list—that of Dr. Browne—is well calculated for the use of any person who desires to ascertain the general basis upon which phrenology claims to rest. The writer says, "It is with the view of demonstrating the stability and unchangeableness of those laws (discovered by Gall) that the composition of this treatise has been undertaken, in order to excite in its regard such a degree of attention as will tend to awaken it from the state of inauspicious somnolency in which it has for some years lain prostrate." We do not quote this sentence as a sample of the author's usual grammatical style. The perusal of the book will not make a man a phrenologist, but it may lead him to a deeper investigation of the subject, by placing it before him at first in an agreeable manner. The book is soberly written, well arranged, and concise, while the language used does not exceed the boundaries of philosophic modesty.

We cannot speak quite so well of Dr. Carson's volume. He undertakes "to prove that the phrenologist, so far from being a materialist, is the only man who can properly and consistently avoid materialism." He leaves it to his readers to judge how far he has succeeded in his onerous task. And we, too, must leave it to the same august tribunal. For our part we fail to see what more necessary connexion there is between this heresy and phrenology than between it and any other branch of physiological science. And as to reconciling phrenology with revealed religion, we are, like most other judicious inquirers into truth, inclined to leave them each to stand or fall by their own particular evidences, and, where they appear not to accord

to wait patiently the results of advancing inquiry and of a more perfect knowledge of both. Dr. Carson prefaces his work with a portrait full length of "Yours truly, James C. L. Carson." Dr. Browne has not similarly favoured us. We are sorry for this, not but that we think he has acted with more good taste, but because we should have liked to compare the portraits of two writers on the same subject, whose books are so dissimilar, and whose minds are cast in such different moulds.

FOREIGN CORRESPONDENCE.

FRANCE.

LETTERS ON THE SOUTH OF FRANCE.—No. IV.

Cannes, April 10.

It is not an easy task to give an exact appreciation of the therapeutical importance of the South. Statistics in this matter almost totally abandon us. In the first place, so many people are sent to this country absolutely incurable that the South, unless thaumaturgical, could not possibly yield a good statistic. On the other hand, doctors in the South so often exaggerate the state of their patients that the South seems to do miracles when its merit is really very trifling. A circumstance here well to be noted is this. Most people who decide upon a change of climate are compelled to it by an acute recrudescence of illness. Now such a recrudescence is generally followed by a relapse, wherever the patient may be. So it often happens that the South carries away the credit due to other things.

In judging the particularities of the South, one should be careful not to attribute to this climate the consequences—either good or bad—of accessory circumstances, such as the care the invalid takes of himself, the Medical treatment he undergoes, etc. One should be very careful not to judge this climate by one year only, or by a few years. We also have our good and bad years, and the luck of the invalid depends greatly on the year he falls in with. And, lastly, one should abstain from judging the South *en bloc*. One should analyse it, and judge each part by itself. And, which is essential, one should not confine the analysis to the different towns, for even the parts of the same town act differently. In Mentone, for example, there is a great difference between the east and the west part; and in every sea town there is a great difference between living on the coast or a little way from it. As to the differences of the towns among each other, we must distinguish exciting and relaxing climates.

It need scarcely be said that, to draw any conclusion from the working of the South on a patient, one should be exactly aware of the state of that patient. Now this is a difficult task, for our means of exploration are rather imperfect; the real nature of a deposit in the lungs is often out of control, and an enlarged bronchus with condensed tissue around presents often all the symptoms of a cavern, etc.

Another warning for those who judge the South is this—one should not in this matter proceed too much by reasoning *a priori*. Some people say the winters in the South are relatively cold, consequently it is of little use. But one should not forget that heat is not the only therapeutical agent in this world. Other circumstances, such as dryness of the air, chemical and physical peculiarities (ozone, electricity), should also be considered. And these latter qualities are perhaps of the most consequence in the action of the South. One thing is certain—that the South is not useless. I can say that its effect is sometimes really surprising. I can personally assert that as often as I come from the North in this country in the autumn, I almost immediately perceive a marked decrease of expectoration, rheumatism, and weakness.

A very striking case also is this. A countryman of mine, when he was about forty years old, suffered from so violent hæmorrhage of the lungs that his state seemed quite hopeless. In this state he went to Pau, in the Pyrenees. In this place he got better, and last year he was an active old man of past seventy. Besides, there are numerous cases of people who come back regularly every year to the South for the benefit of their health.

Now, I do not pretend to say that for those who do not mind taking long journeys there are not better winter stations than the South of France. Such places as Ajaccio, Algiers, Cairo, Melbourne, etc., are most likely preferable during winter. But I must state that the South of France is very beneficial to many people, and would be much more so if those who visit it were more scrupulous in taking precautions.

And not only is the South good for diseases of the respiratory organs and for rheumatism. As to those places where the air is exciting, they seem to agree with all those illnesses which are based on a lowering of the vital powers. Even cancer and diabetes are said by trustworthy observers to go on rather slowly in this country.

As to the mental powers, they apparently often undergo a strengthening and stimulating influence from this climate, and I am sure that it would be beneficial in cases of mental depression, hypochondriasis, melancholy, spleen, etc. For mental excitement, for insomnia especially, these places are decidedly unsuitable.

The choice of a winter place should depend entirely upon the state of the patient. Here one should look particularly at his physical peculiarities. One should not only look at the state of his lungs, but at his general constitution. As to the lungs, one should not only ask if they are sound or not, but ascertain the particular form of his affection as accurately as possible. Is it chronic or subacute? Is there much irritation of the larynx or not? Much expectoration or not? Is the expectoration purulent or not? How does the patient bear cold and damp and iron preparations?

Not only should one look at the health of the patient, but at many other peculiarities, such as the amount of his fortune, his power of resisting temptations to over-exertion (dancing, etc.), his inclinations, and his ability to bear the fatigues of travel. People with a strong tendency to nostalgia, those who are poor, and those who have not a good chance of deriving benefit from the South, should never be exposed to the dangers which it necessarily entails.

Heat, to my mind, is not the chief agent of the South. Nevertheless, for some invalids a temperature of 1° C. at least is required. Such people should be sent to Africa provided there were no hindrances. If there were any they would be better off in a warm, comfortable English room than between the draughty windows and before the phlegmatic *foyers* of the South of France. As to those who do not fear a little cold, they must pay regard to the exciting or relaxing nature of the climate. Exciting places are all those situated on the northern coast of the Mediterranean, especially Cannes and Nice, and they are the more exciting the nearer you live to the sea. Pau is a relaxing place, and the same may be predicated of some Italian towns—Rome and Pisa for example.

Of the French places Pau is the coldest, but is quite out of reach of bad-tempered mistral. There is much gaiety going on in Pau. Perhaps the South of England would do as well for invalids. Nice is a pretty and amusing little town, with plenty of amusement. But Nice is traversed by a river which causes a pernicious draught. Cannes has charming walks, and is not deficient in amusements. The authority and the police now are pretty active. There has been much change to the good since (*post hoc, propter hoc*) the appearance of *la ville de Doux-Repos*. There is much wind in Cannes, and those who pass their winter here should take their homes away from the sea towards the Cannet. Hyères is half an hour away from the sea, through not at all free from wind. Hyères is an interesting place in point of natural history. The least cold of the French wintering places seems to be Mentone. I was astonished at the wild plants in full blossom which were sent to me in February. *Du reste*, Mentone is said to be tiresome and poor in walks.

This is in brief my opinion about the South of France as far as I am able to judge of it. If I have made any mistake, or committed any injustice, I shall be thankful to any one who will enable me to correct it.

AUSTRIA.

Vienna, April 5.

Vienna, as most of your readers know, is a fine city. It is an improving city, a city on which, during the last ten years, countless thousands must have been spent. The fortifications, which till within a few years back completely surrounded the town, have been levelled with the ground, and on the site which they occupied a splendid new town has arisen, replete, as one would say, with every modern improvement. The streets in this new part are as wide as Portland-place, the houses on either side are palaces; four rows of trees, planted down the centre, form shady avenues during the summer months for pedestrians and equestrians, and you can be carried with rapidity from one extremity of the town to the other by means of omnibuses, which run without jolting or noise on the tramways invented

by G. F. Train. All this leaves nothing to be desired, and Vienna would be one of the most charming places in Europe if one were not obliged, at frequent intervals, to hold the nose. It has one great fault—it *stinks*. I am very sorry, but I really know no milder term. The improvers of Vienna have omitted one important item—water-works. There is no water to wash out the drains, scarcely any to water the streets, and even the newest and the grandest houses have no water supply. The inhabitants depend for water almost entirely on the public fountains, or else, perhaps, on a pump placed in the courtyards of the houses. The houses are four and five stories high, and contain, many of them, twelve or more families. Every drop of water that goes to the upper stories of these houses has to be carried up by men or women, most frequently the latter, whom one frequently meets staggering up the stairs under the weight of four or five gallons of water, contained in a pail slung on to the shoulders. Water is not scarce; there is always a constant flow from the public fountains, and an arm of the Danube runs through the city, which, to do the authorities justice, is as clear as crystal. The trouble and labour entailed in taking water to the spot where it has to be used is so great that it virtually becomes a very precious article indeed. The evils arising from this scarcity come under two heads—public and domestic. The public evils I have already hinted at, and they, of course, reach their worst pitch in dry weather. A noxious odour arises from every grating in the streets, and, if there be the least wind, clouds of dust arise, which more nearly resemble the dust-clouds of a Derby-day than anything else. If half that we have been hearing lately of the evils of dust be true, this state of things is very far from being conducive to public health. Now for the domestic evils. The personal cleanliness (?) of the Germans has been a matter of surprise for years. The supply of water on a toilet table amounts, at the outside, to a quart. Soap is a rare luxury. A bath in a private house is regarded as a curiosity. If this state of things existed in London, every other man would have the complexion of a chimney-sweeper. In Vienna it is not so. The inhabitants are uniformly clean, but then they have not, as we have in London, to do battle with "blacks." They live in a clear atmosphere, and not a sooty one, and the necessity for a constant use of soap and water has never arisen with them as with us. Be this as it may, there can be no doubt that the scarcity of water stands very seriously in the way of true personal cleanliness. Then, again, there is no water supply for the house-drains. The houses are all built in flats. They are four or five stories high, and on each story are two or three different residences. There is one water-closet to every two residences (about), and there are generally two water-closets on every flat. They are placed one above another, and their construction certainly has the charm of simplicity. A big pipe, 9 or 12 inches in diameter, runs perpendicularly from the top story to the drain or cesspool beneath the house, and this pipe is joined at each story by another of similar size, meeting it at an angle of about twenty degrees. Each branch pipe is provided with a wooden seat and a cover, and then you have the Austrian system of water-closets complete. There is no water supply for this apparatus. The sewerage of each water-closet has to be washed away by the very scanty household "slops" of the separate residences. One need hardly remark that the odour from these closets is something horrible. There is usually an upward current of air through the main pipe, so that the ventilation of the houses is in great part effected by means of air which has passed through a greater or less length of sewerage pipe. A German water-closet is like Polonius—"if you find it not, you shall nose it as you go upstairs." No attempt is made to counteract this nuisance by opening windows or other means, and if you call the attention of one of the natives to the unpleasant odour he simply laughs, and tells you "you are an Englishman," or else that "you have got a nose like a lady." I am thankful to say I have more nose than most Austrian ladies. I am drawing no exceptional picture. This state of things exists in good as well as second-rate houses, in public buildings, and in the best hotels. On looking at the statistics of the Krankenhaus for the year 1867 (the last year for which any return has been issued), I find that there were 497 cases of typhoid fever and 548 cases of "catarrh of the intestines" admitted in that year. Of the former 113 cases were fatal, and of the latter 29. The population of Vienna is 600,000, and there are other Hospitals besides the Krankenhaus. Are not the numbers given above enough to rouse the authorities to the carrying out of some kind of sanitary reform? One would think so, but yet one sees a new town in course of erection, and all the old evils remaining. The German race has the credit of being essentially scientific. Chemistry, physiology, medicine, and hygiene are all deeply indebted to German philosophers, and yet in one of the largest of the German towns, at one of the chief centres of learning, we see a yearly sacrifice of life which might certainly, to a great extent, be arrested if some of those good rules of life were put in force to the discovery of which German industry and German ability has contributed so much. I should say that Vienna, of all towns that I know, was the best suited for the adoption of the dry-earth system after Moule's plan. There is a clay soil, the one best suited for the formation of cesspools, and, from the mode of construction of the houses, the number of such cesspools would be comparatively small. If any enterprising capitalist could get the permission of the authorities to carry out this plan, I believe he would not only confer an incalculable benefit on the town, but reap a rich reward for himself.

On turning again to the statistics of the General Hospital, I find that, of the cases admitted in the year 1867, 1240 are entered in the report as "tubercle of the lungs." Of these 686 died in the Hospital. How many of the patients who appear in the report under other headings were tubercular as well, it is, of course, impossible to say. The amount of tubercular patients that one sees in the Hospital is simply appalling. A few days ago, in a ward containing twenty-two beds, I counted no less than thirteen patients whose disease was entered as tubercular. The term phthisis is not used here; it is called by a variety of names, among which are morbus communis pulmonum, morbus viennensis pulmonum, morbus viennensis—names that plainly show what a scourge this disease is to Vienna. What is the cause of this? I have heard two explanations offered. One is the climate, and the other is the dust, which is supposed by some to be inhaled into the lungs, thereby setting up irritation and causing a deposit of tubercle. A far more plausible explanation, to my mind, than either of these, and one which I have never heard offered by an Austrian, is the utter disregard everywhere manifested for the laws of hygiene. To bear out this assertion, I will give a slight sketch of domestic life in Vienna during the winter months.

It is customary to live and sleep in the same room. This room is provided with double windows, and, lest by any chance a little fresh air should find its way through a chink or cranny, a big cushion is placed between the windows. The rooms are all warmed by stoves, so that there is no open fireplace, as in England, to assist ventilation, and I have never seen an attempt made to ventilate by artificial means. Need I say that nineteen out of twenty rooms here are indescribably close and stuffy? Now the weather is getting milder, they are beginning to think, apparently, of taking in their summer stock of fresh air. One not unfrequently sees one set of windows open, but never both. During the winter months the windows are never opened, except under extraordinary circumstances. There are very strong prejudices here against "night air" especially, and any one opening a window after seven or eight o'clock in the evening would stand a good chance of receiving notice to quit from his landlady. The usual temperature of a German room is about 70° F.; often more, seldom less. The thermometer in the open air frequently stands below zero, so that one is exposed to great extremes of temperature. When an Austrian goes out of doors in the winter, he swathes himself from head to foot in fur, and walks with great deliberation, either to his place of business, or else to one of the innumerable cafés or beer-houses with which this city abounds. He leaves a bad atmosphere at home to sit in one which, if possible, is ten times worse. There is not, so far as I have seen, a café or a beer-house in Vienna where the least attention is paid to ventilation. There is a large café at the corner of every street. There are said to be between 700 and 800 of these houses in the city, and they all seem to be full at all hours of the day. Here the people sit and smoke, or read the papers, or else play at billiards, and here they remain for hours at a time in a state of placid contentment. Every device is put in action to vitiate the air of these apartments, which are for the most part low and vaulted, but no attempt is made to purify it. To go into one of these cafés from the open air is an awful transition. The windows are covered with streams of moisture, and the air is opaque with tobacco smoke. The temperature is that of a Turkish bath.

The Austrian diet is not what I should call a good one. It consists chiefly of third-rate tobacco-smoke. I believe an Austrian would go without bread rather than tobacco. He is literally never without a cigar or pipe in his mouth from the time he is 10 or 12 years old till he pays the debt of nature at 50, or in rare cases 60. Old people are very rare here, and one

never sees a very old man—women seem to live longer. This constant habit of smoking provokes an intolerable amount of expectoration. I believe, in this respect, Austria is far ahead of America. The spittoon is an indispensable article of household furniture. It is placed everywhere—in sitting-rooms and bed-rooms, in coffee-rooms of hotels, in passages, in the pews at church; everywhere, in fact, where they can possibly be required. They eat nothing to speak of till 12 or 1 o'clock in the day, when the principal meal is taken. They then fall into a state of torpor till 3 in the afternoon, when they are again fit for pleasure or business, as the case may be. Another heavy meal is taken at 8 or 9 in the evening before going to bed. There is very little drunkenness here. I have scarcely seen a tipsy man since I have been in Vienna. Intemperance is, however, quite as common as in much-maligned England—that is, people take far more than they require or is good for them. Five or six pints of Vienna beer is no uncommon allowance for one man at a sitting. The nature of the liquor is such that he does not become tipsy, but surely the evil effect upon his digestive organs can hardly be less than in the case of stronger beverages. I have a strong suspicion that the "national custom" of eating no breakfast may arise from a "national" want of appetite so early in the morning.

I leave your readers to judge for themselves how much influence these customs, some of which I have attempted to sketch, may have upon the sanitary condition of this beautiful city and the health of its inhabitants.

GENERAL CORRESPONDENCE.

CORRIGENDUM.

Letter from Dr. William Cholmeley.

[To the Editor of the Medical Times and Gazette.]

Sir,—Last week's number of the *Medical Times and Gazette* contains a report of the meeting of the Clinical Society of March 12, at which a very interesting case was communicated by Dr. W. H. Day; and it is stated that, in the discussion which followed, "Dr. Cholmeley and Mr. Barwell expressed the opinion that the enlargement of the limb was due to excessive arterial supply, and that accordingly the proper treatment would be to apply continuous pressure to the femoral artery." I hope you will allow me to state that I described a case of great enlargement of one of the lower extremities in a child which had been under my care, and which in many points closely resembled Dr. Day's case, but which differed from it in not presenting any visible enlargement of the lymphatics, and in which I had tried, among other things, pressure of the femoral artery, but without any satisfactory or lasting results; and that I did not say, and certainly did not wish to convey the impression, that I held the opinion that in Dr. Day's case the enlargement was due to excessive arterial supply, or could be cured by pressure of the femoral artery.

I am, &c.

40, Russell-square, April 12. William Cholmeley.

DYING DEPOSITIONS.

Letter from Dr. T. Clifford Allbutt.

[To the Editor of the Medical Times and Gazette.]

Sir,—I am very glad to see you have taken in hand the matter of dying depositions, and have drawn attention to the case of Regina *v.* Barrett. I have now seen several such depositions made, and I was present during the deposition of Eliza Thurkill when she accused Sarah Barrett of procuring abortion upon her. I was called in by Mr. Joseph Teale and Mr. Heyward to see Thurkill during her fatal illness, and my first visit was at the time of the deposition. Nothing could have seemed to me more unreasonable and more painful than the whole business. The clerk to the magistrates took down the story, which the dying woman told with surprising distinctness and coherency. She was then in a state of collapse, her face was pinched and deadly pale, her wrists were pulseless, and her extremities cold. In the intervals of her story she tossed restlessly upon her bed and snatched convulsively at the coverings. Her voice was remarkably clear, and her sentences coherent, or we should certainly have looked for instant death; as it was, we feared it from minute to minute. Every now and then she buried her face in the pillow and groaned to herself, "Oh, I am dying, dying!" or again, "Save me, save me, Doctor, if you can, but I know you cannot." Such sentences she frequently repeated, and was not only conscious of imminent death, but hysterically dreaded its approach. Yet, under such dreadful circumstances as these, the law could not take the deposition unless the young woman would calmly announce her own end! In spite of her frequently repeated interjections it was necessary to have a catechism after this fashion:—"Now, young woman, do you know you are going to die?" "Oh no. I don't know. I must not, cannot die. Oh, no, no! You must save me;" clutching my hand until she forced her finger-nails into the flesh. "Now, young woman, pray don't excite yourself; that does no good, you know. I want to know whether you are aware you are going to die." More passionate dread and entreaty follow from the poor girl, while the lawyer impassively arranges his papers and renews the inquiry. At the end of each outburst the girl turns her head aside and gasps—"But I know it must be so;" only, this not being a direct reply, the catechism recommences, and so on until the lawyer is wearied and gives it up. How sincerely she believed death to have been at hand was clear enough from her agony next day, when she had rallied somewhat, and had recovered a little hope; she then cursed herself for telling the story which covered her with shame. "Never would she have breathed a word to any one had she not felt certain she was going to die and be forgotten." And so these important depositions, accusing a notorious midwife who has but too often escaped her deserts, were waste paper, because a young woman abounding in life and beauty, but not abounding in virtue, is suddenly brought face to face with the grim spectre, and cannot calmly point to his approach! Can anything show more ignorance of human nature, and a blinder adherence to routine?

I am, &c.

Leeds, April 12. T. Clifford Allbutt.

BURSTING OF A HYDROCEPHALOUS HEAD.

Letter from Dr. Frederick James Brown.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your paper for March 27 I read the case of hydrocephalus narrated by Mr. Amyott, in which the head burst during life. I beg leave to record a case that occurred in my practice in 1864:—

Frederick W. S. W., aged 10½ months, died at Chatham on July 13, 1864, of chronic hydrocephalus, dating from birth. The head burst on July 9, 96½ hours before death. Two quarts of coffee-coloured fluid escaped during twelve hours; then ceased. The head fell in, as described by Mr. Amyott, looking like broken pottery. It was a horrible and sickening sight.

I am, &c.

Rochester, April 5. Frederick James Brown, M.D.

THE SOCK POISON.

Letter from Mr. Edward Mackey.

[To the Editor of the Medical Times and Gazette.]

Sir,—I beg to forward to you two cases of skin disorder produced by glove and shirt; also a specimen of the material in each case, and a note of the results of an analysis of the glove, kindly made by Dr. Hill, our borough analyst.

I am, &c. Edward Mackey.

Newhall-street, Birmingham, April 6.

Case 1.—The Rev. J. R., aged 28, consulted me on December 18, 1868. About three weeks before, he began to wear gloves with a woollen lining of magenta colour, and wore them more often than formerly accustomed to wear gloves of any kind. One week ago he noticed on his left hand (which wore the glove most) an eruption much the same as at present, but continued to wear the gloves, not suspecting them. Two days ago a similar eruption appeared on the right hand. Now the palmar surface of hands and fingers is swollen, and of deep red colour. It seems to be "creased," and closer inspection shows a number of small, hard, semi-transparent elevations, which are evidently irritated and enlarged follicles. The line of colouring is sharply defined along the edges of the hands and the fingers, and there is little or none on the back of them. There is no exudation; there is much itching, especially towards evening and during the night. Patient has some old spots of lichen simplex on the chest; no other disorder of the skin. The removal of the cause, frequent alkaline washings, the use of lead lotion and of zinc ointment, soon relieved him;

but the hands did not recover their natural colour till two months afterwards.

Case 2 occurred also in a clergyman, the Rev. L. T., aged 32. On January 31, 1869, showed me a red papular eruption covering the trunk and arms, and which had appeared within the last three days, with much itching. He could not think of any cause for it, till I questioned him about his under clothing, and ascertained that he had, five days before, put on a shirt of new flannel, of a bright scarlet colour, and we now found the eruption to be just limited to the parts in contact with this flannel. A warm bath, lead lotion, and zinc powder relieved him, but the skin did not return to its natural condition until six weeks afterwards. In the interval, the shirt had been washed in the ordinary manner, by which its colour had been made more of a "muddy red," and its texture softer. Patient wore it again, but only for a few days, when the same itching and the same red papular eruption returned. He left off wearing the shirt, and the symptoms are gradually subsiding.

"Borough Analyst's Laboratory, Queen's College,
Birmingham, February 20, 1869.

"My dear Sir,—I must apologise for having been so long in sending you the result of the examination of the glove, in which I do not find any arsenic or injurious metal. Such being the case, the irritating effect produced was doubtless the result of the property of the vegetable dye, many of these tar colours being well known to produce such effects. The nature of the irritant, however, is not understood.

"Believe me to remain, my dear Sir,
"Yours faithfully, "Alfred Hill.
"Dr. Mackey, Newhall-street."

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, March 23, 1869.

Edward Meryon, M.D., Vice-President, in the Chair.

Dr. William Ogle brought forward

A CASE ILLUSTRATING THE PHYSIOLOGY AND PATHOLOGY OF THE CERVICAL PORTION OF THE SYMPATHETIC NERVE.

J. R., found, in the commencement of 1866, that a hard lump had formed on the right side of the neck. This enlarged rapidly, and the arm became very much swollen, apparently from pressure upon the brachial vessels. The swelling of the arm soon subsided; but the lump in the neck grew bigger, and at length suppurated, forming a large abscess, which took many months to heal. While it was still open—about the close of 1866—the man's wife noticed that his right eye was smaller than the left, and the right ear redder than its fellow. On looking in a glass he found it was as she had told him. He soon also noticed that his right ear and cheek felt hotter to him than the corresponding parts on the left, and that this was specially the case when he had washed his face in cold water. Neither in mind nor body was he discomforted by these symptoms, and never thought of speaking about them to a Doctor. They were noticed accidentally when he was under treatment for slight rheumatism at the latter end of 1868. The following were the symptoms found by the author at that period. There was a puckered scar across the root of the neck, on the right side, extending from the median line behind to the clavicle in front. There was no pulse in the radial or brachial artery, though the arm was well nourished and fairly muscular. The superficial veins of the arm and right side of the thorax were swollen and tortuous. The lesion which had thus permanently obstructed the large brachial vessels had not interfered with the carotid. The right palpebral fissure was narrowed to about half its proper width, the upper lid having somewhat fallen, and the lower lid being somewhat raised. The upper lid could be raised perfectly when the man so chose, so that the ptosis was not due to palsy of the levator palpebræ muscle. The motions of the eyeball were quite normal. The right pupil was much smaller than the other. It dilated fully with atropine, and when this was applied to both eyes they dilated to an equal size. With Calabar bean the right pupil was reduced to a pin's point; the left not to quite so small a size. The right eyeball was somewhat retracted. The cornea was considerably flattened. The conjunctiva was rather more congested than that of the left eye, but in no great degree. There was no hyperæmia of the right retina, nor could any difference be detected with the ophthalmoscope in the condition of the two eyes. The sight was equally good on either side. The right ear was redder than the left, and sometimes the increased redness extended to the back part of the cheek, and to the skin above the eye. The right temporal artery was larger than the other. The right ear was hotter than the left one, and the difference could be even felt distinctly with the hand, as well as measured by the thermometer. The right nostril, also, and the right side of the mouth, were hotter than the corresponding parts on the left. This at least was the case when the man was at rest and in health. When he took violent exercise the thermometric conditions of the two sides were inverted; the left side became the hotter and the right the colder. At the same time, the left side of the face, head, and neck sweated profusely, while the right remained perfectly dry. According to the patient's account, there was a similar contrast on the two sides of the face in the other secretions. The right eye never watered as did the left, when exposed to a cold wind. The right nostril never discharged mucus, and the right side of the mouth felt drier than the left. There was abundant cerumen in both ears. Febrile excitement seemed to act in the same direction as exercise, and to equalise the temperature on the two sides. There were no nutritive alterations in the hyperæmic parts; no hyperæsthesia; no muscular paralysis; no alteration of form in mouth or nostril. The pulse was always rapid. There was a slight husky cough; but the voice and respiration seemed quite normal. The author explains these symptoms by supposing that the abscess had eaten through the cervical sympathetic. Such a lesion and no other would account for the phenomena. The chief symptoms are compared in the paper with those observed in the only other case on record of section of the cervical sympathetic in man, and also with the results of such section in animals. It is shown from the experiments of Schiff, and from similar ones made by the author, that the strange symptom of inversion of the thermometric conditions of the two sides from violent exercise, or other febrile excitement, was not exceptional. The physiological explanations of this and the other chief symptoms are considered.

Mr. Solly said that it was impossible to exaggerate the value of the paper. He wished, however, to ask one or two questions. The author had referred to the sympathetic almost as if it were a nerve arising from the brain, and again spoke of its origin in the spinal cord. He (Mr. Solly) did not recognise such an origin, but only a connexion with the cord, and would like to know what part of the sympathetic system had been injured—whether a ganglion, or commissural fibres, or branches. The case threw much light upon the office of the sympathetic.

Mr. C. Brooke inquired whether any examination of the optical condition of the eye had been made, and, if so, whether there was hypermetropia.

Mr. Savory said that in this great paper one point of chief interest had been very lightly passed over—namely, the effect of the increased vascularity on nutrition. Vascular changes were always proportionate to active changes, but were, he believed, the effect of the latter and not their cause. In this case we had a prolonged determination of blood to a part; and, if this was not attended by any increased nutrition, we had a strong proof that hyperæmia does not of itself produce active changes; or, in other words, that demand produces supply, not supply demand.

Dr. Pavy said the phenomena exhibited by Dr. Ogle's patient precisely resembled those that he had produced in animals by division of the sympathetic. Referring to the observations made by Mr. Savory, he said that, in one of his rabbits, the tip of the congested ear had mortified.

Dr. R. J. Lee described the differences in the structure of the iris in different classes of animals—erectile tissue predominating in some, muscular tissue in others—and thought that further experiments were needed to determine whether the movements of the pupil were similarly controlled in all, and whether the influence of the sympathetic was on muscle or blood-vessel.

Mr. Carter mentioned a case in which a railway injury to the upper part of the spine was followed by irregular expansion of the pupil under atropine, a portion of the dilatation being paralysed.

Mr. Power referred to the meagre and uncertain character of our knowledge about the sympathetic.

Mr. C. Moore sought to explain the dryness of the skin on the injured side by the suggestion that the dilated blood-vessels did not need the relief afforded by perspiration.

Dr. Ogle thanked the Society for the manner in which his paper had been received. In reply to Mr. Solly, he could not tell what part of the sympathetic had been injured. He tried to obtain evidence on the point, but could find only one small symptom. When the upper cervical ganglion of an animal has been torn out, he has noticed a peculiar little husky cough; and such a cough was a noticeable feature in his patient's case. Mr. Solly objected to the sympathetic being said to have its origin in the cord, but in this he (Dr. Ogle) used only the ordinary language. Mr. Brooke had inquired about the refraction of the eyes. No special observations had been made upon the point, but the sight of both was very good. He agreed with what had fallen from Mr. Savory, and had never seen such a lesion of nutrition as that described by Dr. Pavy. With reference to Dr. R. J. Lee's question, whether the sympathetic influence on the pupil was produced through muscle or blood-vessel, he referred to a case of ligature of the carotid, recently recorded by Dr. J. W. Ogle. In this instance, when the carotid was tied, the pupil remained unchanged. He could not accept Mr. Moore's explanation, because, when the man was heated, the vessels on the sound side also dilated.

OBITUARY.

THOMAS LEWIS MACKESY, M.D., F.R.C.S.I.,

Senior Medical Officer of the Waterford Leper Hospital.

A fortnight ago it was our mournful duty to record the death of an Irish Surgeon suddenly cut off in the early prime of life, and just as he had commenced to reap the fruit of years of earnest work. We have now to chronicle the removal of the foremost man among Irish provincial Surgeons—Thomas Lewis Mackesy, who, full of years and honour, brought to a close, on the morning of Friday, the 9th inst., at his residence in Waterford, a long career of active and beneficent usefulness.

The son of a Medical man, young Mackesy was early destined to follow his father's profession, and it is now more than half a century since, on January 16, 1809, he served as an Assistant-Surgeon in the Artillery, under Sir John Moore, at the battle of Corunna. On leaving the army, he returned to his native city, Waterford, where he soon attained to a very eminent position. In 1809 he became a Member of the London College of Surgeons, in 1844 he was admitted to the Fellowship of the Royal College of Surgeons in Ireland, and in 1863 the University of Dublin conferred on him the honorary degree of Doctor of Medicine. Dr. Mackesy did not, so far as we know, contribute to Medical literature, but for many years he lectured at the Leper Hospital, Waterford, on the practice of Medicine and Surgery. It was, however, chiefly as the able, unremitting, and energetic advocate of the rights of his Medical brethren that Dr. Mackesy entitled himself to the gratitude and respect of his colleagues, as an expression of which, and in recognition of his high Professional standing, he was, in 1862, elected President of the Royal College of Surgeons in Ireland, an honour never before or since conferred upon a Provincial Surgeon. On the expiration of his year of office, he was placed upon the Council of the College, a position which he continued to hold during the remainder of his life. Among the objects for which Dr. Mackesy principally laboured were due remuneration for the public services of Medical men, superannuation, and retiring allowances for Medical officers incapacitated by age or infirmity, and the representation of the Profession in Parliament. As to his extra-professional public services, we shall quote the testimony of a local journal, the *Standard and Waterford Conservative Gazette*, of April 10. "In every important work," it is there said, "carried on in Waterford for the last half-century Dr. Thomas Lewis Mackesy has been conspicuous for his wisdom, his energy, and his zeal. Under the ancient Corporation he was one of the chief Council, and he was the last Mayor who governed the city under the old *régime*. In the reformed Corporation he was elected senior Alderman of the city, and he might have been elected Mayor more than once had he desired to accept the office. Sanitary matters greatly engaged his attention, and in everything calculated to advance the comforts of the poor he was ready as their advocate and friend. His moderation and love of peace greatly served to allay discord and calm down asperity, and all in the Town Council venerated and respected him. On the bench, as magistrate, he tempered judgment with mercy, and his words of admonition were never wanting to reclaim the drunken or the dissolute. At the Poor-law Board he was one of the most useful and practical members, and the country Dispensaries owe much of their efficiency to his attention and advice. In every relation of life Dr. Mackesy was one of our most estimable men, and the feeling of regret for him is most unfeigned. At the time of his decease he was in his 79th year. Few had a larger circle of friends. He was hospitable, genial, courteous, and accessible. Rich and poor mourn his loss. He was kind and considerate, affectionate and good. In his Professional career few were more attentive or more skilled, and those whom he visited in his extensive Medical practice learned to regard him as the warmest, most kindhearted, and best of friends."

ALEXANDER BRUCE, F.R.C.S.

We unhappily have to record the death of a young Surgeon, whose life, if we may judge from the earnest he afforded in the past, was full of promise for the future.

Alexander Bruce, M.B., M.S., B.Sc., F.R.C.S., second son of the late Henry Bruce, of London, grandson of the Rev. Wm. Bruce, D.D., of Belfast, was seized with typhus on March 28, and died on the 11th inst., aged 27. Sir W. Jenner, Dr. Wilson Fox, and Dr. Green were in attendance, and he was nursed throughout his illness by his friend Dr. Squarey.

Mr. Bruce entered at University College in October, 1858, and remained there for the following six years. In this time he took the first silver medal, Chemistry; gold medal, Practical Chemistry; gold medal, Comparative Anatomy; gold medal, Botany; silver medal, Zoology; first silver medal, Anatomy; silver medal, Materia Medica; first silver medal Surgery; gold medal, Pathological Anatomy; gold medal, Medical Jurisprudence. In addition to these, he obtained the Longridge Prize of £40; the Filliter Exhibition of £30; the Atkinson Morley Surgical Scholarship of £45, tenable for three years; and the Fellowes Clinical Medicine Silver Medal.

In the University College Hospital Mr. Bruce was House-Surgeon to Richard Quain; afterwards was Medical Officer at the Consumption Hospital, Brompton, and resigned that post in April, 1865, on receiving an offer of the Assistant-Curatorship, under Dr. Sharpey, of the Museum at University College. From Brompton Mr. Bruce went to Berlin, to complete his studies under Virchow, and returned thence to his new duties at the museum.

In July, 1866, during the Austro-Prussian war, he went to Dresden, arriving there thirteen days after Sadowa had been fought. On his application he was immediately appointed to one of the lazarettes—the Cadetten-Haus, under Drs. Knorr and Kohnhorn—and while there conducted the pathological examination of all the more interesting cases. On his return he published a very valuable and interesting monograph on the military Hospitals of Dresden.

In December, 1867, Mr. Bruce was elected to the Assistant-Surgeoncy of the Westminster Hospital, and immediately afterwards was unanimously voted to the Lectureship of Anatomy. Here Mr. Bruce brought out a most useful and practical *brochure*, for the use of students, on venereal diseases, and the last work on which we believe Mr. Bruce was engaged was the rewriting the Pathology of the last edition of "Erichsen's Surgery."

Of the Clinical, Medical, and Scientific Societies to which Mr. Bruce belonged, none will regret his loss more deeply than the Pathological, on whose Committee of Morbid Growths he was a most zealous and invaluable member.

It is in no conventional sense that we say the Profession has sustained a loss in Mr. Bruce's decease. We of the *Medical Times and Gazette* have lost in him a zealous contributor to our pages, on whose knowledge and judgment we could always implicitly rely, whilst the modesty and courtesy of his demeanour rendered it a double pleasure to confer with him and listen to the great fund of Surgical lore which he always had at command; and, in concluding this short notice of an earnest student and honourable gentleman, we can at least console his friends with the assurance that, though his labours have been cut short, he has not lived in vain nor died ingloriously.

The Mortality of Young Infants.—The French Minister of the Interior has just issued a commission of inquiry into the causes of the great mortality which takes place among young infants. It is composed of several persons skilled in administrative affairs, and has four Medical members. These are M. Husson, Director of Public Assistance; M. Bondet, President of the Infants' Protection Society; Professor Broca; and Vice-Professor Blot.

NEW BOOKS, WITH SHORT CRITIQUES.

Lectures on the Preservation of Health. By C. A. Cameron, Ph.D., M.D., Professor of Hygiene in the Royal College of Surgeons, Ireland, etc., etc. London and New York: Currell and Co. Pp. 182.

⁂ This little volume contains a condensed report of a course of twelve lectures on public health delivered in the Royal College of Surgeons, Ireland, and is published at the request of the Dublin Municipality in the hope that it may serve to extend a knowledge of some of the elementary laws of health. The work is extremely condensed, and, on the whole, very good. The only fault we have to find with it many might think a great virtue—it is somewhat too scientific.

Industrial Employment Association for the Prevention of Pauperism and Crime. Reports No. 1 and 2.

⁂ An able exposition of the present state of society in respect to pauperism and crime as resulting from want of industrial employment for the poor and destitute. The Council suggest remedies for this sad state of things, and recommend application to Parliament for the following powers: —"No. 1. Power for the guardians to purchase or hire such waste or other land as may be found to be necessary under the certificate of the Inspector-General of Farm Schools. No. 2. Power to establish farm schools for destitute or neglected children who have not been convicted of crime or sentenced by a magistrate. In all these cases the children should be apprenticed for a term, and a magistrate should have the power to decide for what time each child should be so apprenticed, and what contribution (if any) should be made by its parent. No. 3. Power for the State to advance money for the purchase of land and the erection of necessary buildings on farm schools at 3 per cent. per annum. No. 4. Power to employ the adult pauper upon Government and other waste lands, as well as to utilise convict labour in reclaiming land from the sea."

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their Primary Examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 8th inst., and, when eligible, will be admitted to the Pass Examination:—

Allwood, J. P., of Guy's Hospital.
Aylen, T. V., of St. Bartholomew's Hospital.
Bailey, H. B., of Guy's Hospital.
Batchelor, F. C., of Guy's Hospital.
Bayliffe, A. M., of the London Hospital.
Beech, Lionel, of the London Hospital.
Berry, Walter, of King's College.
Blyth, A. W., of King's College.
Brabant, T. H., of St. George's Hospital.
Bradford, Henry, of St. Bartholomew's Hospital.
Brash, E. A., of St. Bartholomew's Hospital.
Canton, Frederick, of St. George's Hospital.
Clarke, F. H., of Guy's Hospital.
Connolly, B. B., of Cambridge and Guy's Hospitals.
Coombe, G. A., of Guy's Hospital.
Cooper, Arthur, of Guy's Hospital.
Crookshank, H. M., of the University College Hospital.
Fayrer, Edward, of St. Mary's Hospital.
Haines, A. H., of Guy's Hospital.
Hart, John, of Calcutta and University College Hospitals.
Harvey, Thomas, of the Westminster Hospital.
Head, W. C., of St. Bartholomew's Hospital.
Hind, Henry, of St. Bartholomew's Hospital.
Hosegood, Samuel, of Guy's Hospital.
Huggins, S. T., of St. Bartholomew's Hospital.
Hutson, Charles, of St. Bartholomew's Hospital.
Law, W. T., of Guy's Hospital.
Nesbitt, W. P., of Guy's Hospital.
Rose, J. B., of the London Hospital.
Sutcliffe, John, of St. Thomas's Hospital.
Willcocks, Isaac, of St. Bartholomew's Hospital.

Five candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their anatomical and physiological studies for three months. The following passed on the 13th inst.:—

Allnutt, William, of King's College.
Baber, E. E., of St. George's Hospital.
Betts, A. R., of Guy's Hospital.
Brown, J. L'O., of Guy's Hospital.
Burroughs, G. E. E., of the Charing-cross Hospital.
Cable, G. H., of Guy's Hospital.
Cartwright, J. H., of St. Thomas's Hospital.
Chalmers, A. J., of King's College.
Chinery, C. W., of St. Thomas's Hospital.
Clunn, T. R. H., of Guy's Hospital.
Crackle, T. A., of Guy's Hospital.
Dundas, G. A., of Guy's Hospital.
Evans, A. H., of Guy's Hospital.
Fielding, James, of Victoria College, Toronto.
Gill, S. A., of the London Hospital.
Halland, G. C., of Guy's Hospital.
Hopkins, F. F., of the Birmingham School.
James, Henry, of King's College.
Kitching, Walter, of the London Hospital.
Noot, W. M., of the Middlesex Hospital.
Richmond, O. R., of King's College.
Robinson, J. D., of the Charing-cross Hospital.
Sargeant, Edward, of St. Thomas's Hospital.
Stephens, T. P., of Guy's Hospital.
Thane, G. D., of University College.
Thompson, Edwin, of Edinburgh.
Turner, H. C., of Guy's Hospital.
Waldo, Henry, of the Bristol School.
Walker, A. J. McR., of the Charing-cross Hospital.
Walker, G. E., of St. George's Hospital.
Williams, T. W. T., of King's College.
Willmore, F. W., of the Birmingham School.

Four candidates failed to acquit themselves to the satisfaction of the Court of Examiners. The following passed on the 14th inst.:—

Atkinson, J. C., of King's College.
Balkwill, W. E., of St. Bartholomew's Hospital.
Barrow, F. E., of Guy's Hospital.
Barrow, H. J. W., of Guy's Hospital.
Budd, A. W., of King's College.
Cockburn, J. A., of King's College.
Crocker, James, of the Leeds School.
Duke, David, of Guy's Hospital.
Edwards, J. E., of Guy's Hospital.
Feltham, Charles, of St. Bartholomew's Hospital.
Fendick, T. R., of St. Bartholomew's Hospital.
Galpin, Richard, of Guy's Hospital.
Gibson, C. H., of Edinburgh.
Giffard, D. W., of St. Bartholomew's Hospital.
Gillithe, A. A., of St. Bartholomew's Hospital.
Hadley, Clement, of the Birmingham School.
Hazel, W. F., of King's College.
Jones, O. T., of St. Bartholomew's Hospital.
Monks, F. A., of Guy's Hospital.
Parker, A. H., of the London Hospital.
Parris, Richard, of St. Bartholomew's Hospital.
Parsons, A. D., of St. Mary's Hospital.
Pope, H. C., of the Liverpool School.
Rat, J. N., of King's College.
Rix, Benjamin, of Guy's Hospital.
Robinson, J. E., of St. Bartholomew's Hospital.
Rose, William, of King's College.
Seaton, J. J., of King's College.
Spencer, F. H., of King's College.
Wallis, Ferdinand, of the Westminster Hospital.
White, B. S., of King's College.
Wright, F. W., of the Leeds School.

Four candidates failed to acquit themselves to the satisfaction of the Court of Examiners.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, April 8, 1869:—

Beadles, Ferdinand, Broadway, Worcestershire.
Box, William Henry, Forest-hill, Kent.
Dawson, Frederick William Edmund, New Zealand.
Green, William Edward, Warwick.
Morrish, Richard Alfred, Ledbury, Herefordshire.
Pearce, William Henry, Holsworthy, North Devon.
Smith, Leonard, Cambridge-street, Pimlico.
Winslow, Lyttleton Stewart, Cavendish-square.

The following gentlemen also, on the same day, passed their First Examination:—

Banting, James, Guy's Hospital.
Park, Robert, Glasgow University.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

FORD, JAMES, M.D., M.R.C.S., L.S.A., Chulmleigh, North Devon—Poor-law Medical Officer to the Seventh and Eighth Districts of the South Molton Union, *vice* J. A. Tidbould, M.R.C.S., L.S.A., resigned.

GOURLEY, S., M.D.—Surgeon to the Hartlepool Hospital.

PIERCE, F. M., M.D., L.R.C.P. Lond., M.R.C.S.E., Associate of Owen's College, Manchester—House-Surgeon to the Victoria Hospital for Sick Children, Chelsea, W.

RENDLE, RICHARD, late House-Surgeon, Guy's Hospital—Surgeon to the Yorkshire Society's School, and District Surgeon to the Royal South London Dispensary.

NAVAL APPOINTMENTS.

ADMIRALTY.—The undermentioned officers have this day been promoted to the rank of Inspectors-General of Hospitals and Fleets in her Majesty's Fleet:—Charles Abercromby Anderson, M.D.; William Richard Edwin Smart, C.B., M.D.

BIRTHS.

ALLINGHAM.—On April 7, at Bronté Villa, Milton-on-Thames, the wife of William Allingham, F.R.C.S., of Finsbury-square, of a son.

BROWN.—On March 12, at Annarkulee, Lahore, Punjab, the wife of R. Burton Brown, M.D. Lond., of a daughter.

ELLIS.—On April 12, at 118, Warwick-street, Eccleston-square, the wife of Edward Ellis, M.D., of a daughter.

GOODACRE.—On April 10, at Wilby Rectory, Norfolk, the wife of the Rev. F. Goodacre, M.D., rector of Hargham and Wilby, of a son.

SMITH.—On April 6, at Tunbridge, Kent, the wife of Cleveland Smith, Surgeon, of a son.

WILLIAMS.—On April 3, at Tudno Lodge, Llandudno, the wife of Dr. Bold Williams, of a son.

MARRIAGES.

Adcock—Durst.—On April 13, at St. James's, Norland, John Adcock, M.D., Army Medical Staff, to Mary, only daughter of John Durst, Esq., of Walmer, Kent. No cards.

Cowan—Lucas.—On April 6, at Crickhowell Church, Walter Frederic J. Cowan, Royal Welsh Fusiliers, to Frances Anne, fourth daughter of Henry Lucas, M.D., Glanyrafon, Crickhowell.

Hills—Scott.—On April 7, at St. Stephen's Church, Norwich, William Charles Hills, M.D., to Kate, daughter of the late R. Scott, Esq.

Jackson—Aveline.—On April 10, at the church of St. Mary-in-the-Castle, Hastings, the Rev. Edmund Frederick Jackson, of Canterbury, to Elizabeth Brackstone, eldest daughter of the late Pendock William Aveline, Esq., Surgeon, of Camberwell, S.

Joseph—Lawrence.—On April 10, at St. Mary's, Battersea, James John Joseph, M.D., second son of John Charles Joseph, Esq., of Kilmore, Artane, County Dublin, to Amy Elizabeth, eldest daughter of William Lawrence, Esq., of Battersea, Surrey.

Stolterfoth—Preston.—On April 7, at St. John's, Clifton, the Rev. Charles Alfred Stolterfoth, of Wimslow, Cheshire, youngest son of Sigismond Stolterfoth, M.D., of Chester, to Frances Eliza, daughter of the late Rev. Geo. Preston, of Westminster School.

Young—Harris.—On April 7, at St. Barnabas, Clapham, Walter Wilson Young, M.D. Edin., of Aldershot, to Laura Jeanette, second daughter of Robert Harris, Esq.

Williams—Peebles.—On April 8, at St. Mary's, Bryanston-square, the Rev. Frederick Williams, Rector of Bettiscombe, Dorset, to Agnes Mary, daughter of the late John Hoome Peebles, M.D., F.R.C.P. Edin.

DEATHS.

Bruce, Alexander, of 8, Old Cavendish-street, Master of Surgery, Lond., F.R.C.S., B.S., Assistant-Surgeon and Lecturer on Anatomy at Westminster Hospital, at the residence of his mother, 6, Albert-terrace, Regent's-park, on April 11, aged 27. He was second son of the late Henry Bruce, Esq., of London, and grandson of the Rev. Wm. Bruce, D.D., of Belfast.

Colquhoun, Captain James, of the Madras Staff Corps, and of the 30th Regt. M.N.I., younger son of the late Dr. Colquhoun, 1st Madras Light Cavalry, at Suez, on his way home, on March 18, aged 32.

Mansell, William, late Surgeon, Indian Army, Bengal Presidency, at his residence, Les Touillets, Castel Parish, Guernsey, on April 10, in the 80th year of his age.

Nicholls, Helen Louise, eldest daughter of Dr. Nicholls, of Knutsford, on April 13, aged 10 years.

Oswin, Anna Frances, the beloved wife of Charles Oswin, M.R.C.S., formerly of Harley-street, Cavendish-square, London, at Woodhall Farm, Middleton Dane, Wisconsin, U.S.A., on March 9.

Sutton, Ursula Nisbet, the wife of Field Flowers Sutton, M.D., at Balham-hill, S., on April 11.

Toulmin, Eliza, the wife of Frederick J. Toulmin, F.R.C.S., at 36, Thurloe-square, South Kensington, on April 12.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Bristol Royal Infirmary.—Dispenser; must understand purchasing drugs and compounding and dispensing medicines. Applications and testimonials to the Committee on or before May 4.

Charing-cross Hospital, West Strand.—Assistant Physician and Physician for the treatment of diseases of the skin. Candidates must have a degree from one of the principal Universities of the United Kingdom, and be F. or M.R.C.P.L. Applications and testimonials to the Secretary on or before the 27th inst.

Convict Service.—Compounder of Medicines. Candidates must be thoroughly competent to perform the duties of a dispenser of medicines, and be between 24 and 40 years of age. Applications, with certificates of qualifications, to the Directors of Convict Prisons, 45, Parliament-street, Westminster, where further information may be obtained.

Farringdon General Dispensary and Lying-in Charity, 17, Bartlett's-buildings, Holborn.—Honorary Surgeon; must be F. or M.R.C.S.E., not practising Midwifery or Pharmacy. Applications and testimonials to Mr. Green, St. Michael's-house, St. Michael's-alley, Cornhill, on or before the 26th inst. Election on May 4.

Hospital for Sick Children, 49, Great Ormond-street.—Assistant-Physician; must be F. or M.R.C.P.L. Applications and testimonials to S. Whitford, Esq., Secretary, on or before the 28th inst.

Liverpool Dispensaeies.—Three Assistant House-Surgeons; must be duly registered. Applications and testimonials to the Secretary on or before the 28th inst. Candidates will be required to attend before the Medical Board at the Dispensaries' Office, Leith Offices, Moorfields, on the 30th inst. at 2 o'clock p.m.

Meath Hospital and County of Dublin Infirmary.—Surgeon. Applications and testimonials to the Secretary at the Institution.

Midhurst Union.—Medical Officer for the Fernhurst District. Candidates must be legally qualified and registered under the Medical Act, 1858. Applications and testimonials to Mr. Edwin Albery, Midhurst, on or before April 20. Election the same day.

Mile-end Old Town.—Medical Officer for the North District. Candidates must be registered and legally qualified. Applications and testimonials to E. J. Southwell, Esq., Clerk, Workhouse, Bancroft-road, Mile-end, N.E., on or before the 22nd inst. Election on the same day at 3 o'clock p.m.

North-Eastern Dispensary for Children.—Physician. Further particulars may be obtained on applying, by letter, to J. D. Fry, Secretary, 9, College-hill, E.C.

Retford General Dispensary.—House-Surgeon and Apothecary; must have both Medical and Surgical qualifications. Applications and testimonials to the Dispensary Committee on or before May 8. The duties will commence on July 1.

St. George's and St. James's Dispensary—Physician; must be F. or M.R.C.P. Lond. Candidates to attend with diplomas and testimonials at the Institution, No. 50, King-street, Regent-street, at 4 o'clock p.m. on April 22.

St. George's and St. James's Dispensary—Accoucheur; must be F. or M.R.C.P. Lond., or F. or M.R.C.S. Eng., and not practising pharmacy. Candidates to attend with diplomas and testimonials at the Institution, 50, King-street, Regent-street, at 4 o'clock p.m. on April 22.

Wandsworth and Clapham Union.—Medical Officer for the district of St. Mary's, Battersea. Candidates must be legally qualified and registered. Applications and testimonials to Mr. J. Sanders, Clerk, Union Offices, East-hill, Wandsworth, on or before the 20th inst. Election on the 22nd inst.

West London Hospital, Hammersmith.—Assistant House-Surgeon; must be legally qualified. Applications and testimonials to the Secretary on or before May 15.

Windsor Royal Infirmary.—Dispenser; must be unmarried. Applications and testimonials to Mr. G. Cartland on or before the 21st inst.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Crediton Union.—Mr. Josiah Body has resigned the Cheriton Fitzpaine District; area 10,980; population 1963; salary £45 per annum.

Darlington Union.—Mr. S. E. Piper has resigned the Darlington District; area 8420; population 16,883; salary £70 per annum; also the Workhouse; salary £30 per annum.

North Witchford Union.—Mr. Charles Farrar has resigned the Fourth District; area 13,860; population 3700; salary £50 per annum.

APPOINTMENTS.

Berwick-upon-Tweed Union.—Thomas Davidson, L.R.C.P. Edin., M.R.C.S.E., to the Islandshire District.

Lymington Union.—William R. Hill, M.D. Edin., M.R.C.S.E., to the Boldre District.

The Medical Lord Mayor of Dublin, the Right Hon. Sir William Carroll, M.D., had the honour of entertaining H.R.H. Prince Arthur at a ball and supper at the Mansion-house on Monday evening.

A Cottage Hospital is to be established in or near the town of Bromyard.

At the evening meeting of the Association of Medical Officers of Health to be held on April 17, Dr. Letheby will criticise the inferences drawn by the Registrar-General from Dr. Frankland's system of water analysis.

We understand that the Council of the Obstetrical Society are completing their report on the subject of infant mortality. Any Fellows of the Society who have not yet returned answers to the circulars sent them would oblige by forwarding them to either of the Hon. Secretaries, Dr. Murray or Dr. Gervis, at their earliest convenience.

Mr. T. P. Hoare, the banker, is building an Infirmary and Dispensary at Beckenham, Kent, to which also baths and washhouses will be attached for the gratuitous use of the inhabitants of the neighbonrhood.

South Staffordshire Hospital.—£2350, the unrequired balance of a fund which was subscribed for the survivors of the Oaks and Talke Colliery explosions, is to be appropriated in aid of the amount now being raised to enlarge the above Hospital.

The Greenwich Hospital pension of £50 a year, vacant by the death of Mr. James Hall, Surgeon, R.N., on the 30th ult., has been awarded from that date to Mr. Charles Henry Fuller, Deputy Inspector-General of Hospitals, R.N.

At a meeting of the Profession held in the Medical School, Sheffield, on Saturday, April 3, it was unanimously resolved to form a Medico-Chirurgical Society for Sheffield and the neighbourhood. Promises of support have been received from forty Practitioners.

In consequence of the domestic bereavement sustained by his Royal Highness the Prince Christian in the death of his late father, the Duke of Holstein, the annual festival in aid of the funds of the University College Hospital, announced for the 20th instant, at which His Royal Highness had graciously undertaken to preside, has been unavoidably postponed until June.

Farringdon General Dispensary and Lying-in Charity.—We observe that there is a vacancy in the honorary staff of Surgeons to this charity. Applications should be made before the 26th inst., and the election, which is with the committee, is fixed for the 4th proximo.

The festival dinner of the Westminster Hospital, to celebrate its 150th anniversary, was held on Wednesday evening, at Willis's Rooms, St. James's. A very large company sat down, under the presidency of Hatherley, the Lord Chancellor, who has long taken an interest in the institution. Upwards of £1650 were collected in aid of the charity. Some excellent music served to diversify the speeches of the evening.

UNIVERSITY OF EDINBURGH.—The University Court have resolved, on the consideration of a report by the Senatus Academicus, to authorise the expenditure of £4500, to be applied to the purchase of an official residence for the Principal. Arrangements have been made by which Dr. A. Dalzell is to conduct the class of Practical Chemistry this summer, in room of Professor Playfair, resigned.

THE dinner given by the Liebig Extract of Meat Company at St. James's Hotel on Saturday last has given occasion for a great deal of writing this week. The Company's object was to show how valuable an adjunct to modern cookery is the extract they produce in their South American kitchen, and in this, through the all-powerful agency of Francatelli, they were perfectly successful. The writer in the *Pall-mall Gazette*, though he could not withhold a sneer, published the *menu* at full length. Francatelli's testimony to the excellence of the Company's extract and its value as *a stock* is not to be impugned. Long ago we intimated our high opinion of its value as an article of diet in the sick room, and especially as a means of giving a relish to the poor man's mass of carbonaceous or, let us rather say, starchy nutriment. We should be extremely glad to see it more extensively utilised in the latter direction, but its present high price and the quantities in which it is sold forbid its being employed as we should be glad to see it.

PRESTON MEDICAL SOCIETY. — The first monthly meeting of this Society was held on Tuesday, April 6. There was a large attendance of members. Dr. Haldan, the President, in the chair, in a short address dwelt upon the advantages of union and interchange of Professional experience. He congratulated the Society on the hearty unanimity of their proceedings up to the present time, and assured the Society of his cordial co-operation in everything for the good of the Profession. Drs. Moore and Gilbertson read interesting reports on two cases of hydrophobia which have occurred in Preston during the past few months. Both proved fatal, the symptoms in Dr. Moore's case developing themselves seventy-two days after the bite, and in Dr. Gilbertson's sixty-seven days. Dr. Moore's case lived nearly five days from the first symptom of the disease, Dr. Gilbertson's sixty-three hours. Dr. Hammond briefly mentioned an instance of pneumothorax of the right side of the chest terminating fatally in thirty-six hours which occurred in the course of general tuberculosis. Post-mortem examination showed the left lung to be infiltrated with tubercle, the pleura firmly adherent on the right side; the lung was nearly healthy, but pushed up to the upper and back part of the chest. Dr. Smith related an extraordinary case of recovery after rupture of abdominal walls with protrusion of bowels in an elderly woman who had seven years previously been operated on for ovarian tumour by Mr. Spencer Wells. The rent occurred in the old cicatrix. At some future meeting further particulars will be given of this remarkable case.

THE Monthly Return of the Births, Deaths, and Marriages registered in the Eight Principal Towns of Scotland for March, 1869, states that during the month of March there were registered in the eight principal towns of Scotland 3574 births, 550 marriages, and 3218 deaths. These numbers are the highest recorded during any month of March since the Registration Act came into operation in 1855; and, allowance being made for increase of population, the births are 222, the marriages 47, and the deaths 618 above the average of the month during the last ten years. Previous to this, the highest monthly number of deaths was recorded in January, 1864. In Glasgow the mortality has been high beyond all precedent, the registered deaths being 53 in excess of the births. The high mortality has not been caused by the prevalence of any epidemic, but by atmospheric agencies, and in especial by the biting severity of the northerly and easterly winds which have been the prevalent aërial currents during March. These not only raised the mortality from all diseases, but caused an immense increase and fatality of inflammatory affections of the respiratory organs. Of the 3574 children born during the month, 1819 were males, and 1755 females. Of these 3206 were legitimate, and 368 illegitimate; showing that 10·3 per cent. of the births were illegitimate, or one illegitimate in every 9·8 births. Of the 3218 deaths, 1455, or 45 per cent., were of children under 5 years of age. The zymotic (epidemic and contagious) class of diseases proved fatal to 688 persons in the eight towns, and thus constituted 21·4 per cent. of the mortality; but the actual number of deaths from that class of diseases in each town, excepting Perth, was much above what it had been in February, showing the baneful effect of the atmospheric vicissitudes even on epidemic diseases. Fevers still continue the most fatal of the epidemics, having caused 189 deaths, or 5·8 per cent. of the mortality. This rate was slightly exceeded in Glasgow, Paisley, Perth, and Aberdeen. Of the 189 deaths from fever, 126 were attributed to typhus, 46 to enteric, 3 to relapsing, 4 to simple continued, and 10 to infantile remittent fever. Hooping-cough, the next most fatal of the epidemics, caused 141 deaths, scarlatina 100, measles 97, diarrhœa 42, croup 32, diphtheria 15, dysentery 7, small-pox 6 (of which 5 occurred in Greenock), and metria 3. The deaths from inflammatory affections of the respiratory organs (not including consumption, hooping-cough, or croup) amounted to 812, being more than double the number during the corresponding month of last year, and 225 above those of February, 1869. The deaths from consumption alone were 408. In the Royal Infirmary, Edinburgh, a chemical works labourer, aged 50 years, died of exhaustion from leprosy of four years' standing.

THE BRITISH LYING-IN HOSPITAL.—Yesterday a meeting in connexion with Hospital management was held at the Freemasons'-hall, Great Queen-street. The meeting was one of the governors of the above Hospital, and had been called on a requisition to which the names of some most distinguished subscribers and governors were attached, as those of Lady Shaftesbury, Lady Buxton, Colonel Hamilton, Mr. J. H. Mann, the vice-president; Messrs. Hoare, the bankers and treasurers of the institution; Messrs. Bevan, Mr. A. Kinnaird, Messrs. Findlater, Mackie, and Co., and a number of other well-known names. Mr. Bevan, the banker, was called to the chair, and from the requisition he read it appeared to be charged against the present management that the institution, which is upwards of a century old, has been made to serve other purposes than that for which it was founded. The constitution of the meeting was at first questioned by some gentlemen who form the present board of management, inasmuch as, because the governors had not called the meeting upon the requisition, the requisitionists had called it themselves. After other technical objections had been overruled, Mr. W. T. Marriot, of the Temple, proceeded to speak on behalf of the requisitionists. He proceeded to give an account of the connexion of Dr. Edmunds, the Physician to the Hospital, and stated that various charges had been made against that gentleman respecting his conduct in the Hospital, and into which an investigation had been entered by the governors. But Dr. Edmunds had instructed his solicitors to proceed against his accuser, Dr. Snow Beck, and then told the governors that they would be liable to be proceeded with for contempt of court if they still entered upon the matter while the case was before the Court. It was further alleged by the speaker that Mr. Layton, the Chairman of the Board of Management of the Hospital, was Dr. Edmunds's attorney, and that Dr. Edmunds had obtained the support, the introduction, or appointment to the Board of Management of men who supported his peculiar modes of treatment, such as the deprivation of all the patients of the use of stimulants, and likewise that he had joined the Hospital to a women's school held at his own house, and called the Female Medical College, to the members of which he gave certificates on his own responsibility. There was a vast deal more entered upon beyond these, but the other statements were relative to charges which had been allowed to fall through. The resolutions proposed were:—"That Dr. Edmunds be requested to resign his position to the Hospital, and that in the event of the secretary not receiving Dr. Edmunds's resignation within seven days after this meeting, his name be struck off the list of officers belonging to the Hospital." "That the laws of the Hospital printed in 1849 (stated to have been abrogated by the new board without reference to the general body of subscribers and governors) be considered in force, and be re-adopted as the laws of the Hospital; and that the new rules proposed at the general meeting of governors on November 5 be considered null and void," and that a "new Board of Management be appointed." "That Dr. Lee and Mr. Brooks be requested to nominate a Physician or Surgeon to act as Medical officer of the Hospital until the election of the new officers at the annual meeting." "That the connexion between the Female Medical Society and the British Lying-in Hospital should cease for the present." The discussion which followed was of a very warm character. The requisitionists were charged by Dr. Edmunds with forging the names of some who appeared on their lists, and, after some debate, it was moved on behalf of the Board of Management that Mr. Henry Hoare should be requested to resign his seat at the board, and that the treasurers be requested to appoint some other member

of their form to represent them at its meetings. This was put first to the meeting, and lost by three to one. The Rev. Canon Nisbet then entered into a very temperate exposition of his views, and was listened to in calmness. He advocated the resignation of Dr. Edmunds as the only means of restoring peace and harmony to the institution, and moved a resolution to that effect. Mr. Neate seconded this, and then the exponents of teetotalism, several of whom were spoken of as members of the Board—namely, Mr. Tweedie, Mr. Joseph Bormond, Dr. Jabez Burns, and others—spoke at great length on general principles, and declared that the treatment had done good, as the books would show. Colonel Hamilton called attention to a resolution carried by the present Board, to the effect that no persons affected with any organic disease should be admitted as patients; and Mr. Cox, the banker, stated that he had evidence that the poor City objects of the charity would not accept letters for the Hospital. Other matters entered upon alleged abusive language made use of by Dr. Edmunds to a patient, and said to have been acknowledged by him; and at length, after futile attempts had been made to adjourn the proceedings, the resolution of Canon Nisbet was put to the meeting by the chairman, amid the protests of Dr. Burns, and was voted for by about three-fourths of those present. On the "contrary" being put, there was a call, "Don't vote," and few hands were put up. The chairman, who had presided from midday until sundown, now retired, and Mr. Cox took the chair. Dr. Edmunds then desired to have a committee called to investigate the charges against him, but those present considered the Rev. Canon Nisbet's resolution exculpated him, and the proceedings terminated with a vote of thanks to the chairman.—*Times*, Wednesday, April 14.

Some twenty miles from Liége there is a healthful, quiet, little town, called Gheel, where time out of mind a tradition has prevailed that mad people are seldom as unmanageable as they are frequently thought to be. Not only the men of the place, but the women and children, are used by early training to exercise that true courage in dealing with the mentally diseased which implies silent watchfulness and self-command. The vulgar proverb that a mad doctor can quell every patient by fixing his eye upon him, is but the expression of the rudimentary truth well understood among the inhabitants of Gheel—namely, that the insane are, happily for themselves, seldom able to resist the sway of combined firmness and kindness in those whom they tacitly own to be calmer and more reasonable than themselves. The rule of life in the place seems to be to try and find out the point of honour or of sensibility in each of the patients there, and to rely on that element of health and hope to work steadily towards a cure. Each sufferer is placed as an inmate of a house occupied by a respectable family, all of whose members take part in the Samaritan duty of amusing, consoling, and associating with their guest. They betray no signs of fear at his being suffered to go about freely whither he will. The Physician generally exacts from him a promise not to forsake his place of abode without notice, and sometimes not to harm those around him, although this is seldom necessary. They are made aware of the subjects on which he is troubled with delusion, and they acquire tact from experience in avoiding and evading them. It is found that by degrees most of the demented are tranquillised and softened by the absence of conflict and irritation, and that very rarely they break their *parole*. Within a certain extensive *cordon* they are allowed to roam at large, and to seek such amusement and society as the place affords, without being ostensibly under surveillance. Occasionally they get squabbling amongst themselves, pretty much as other people do, without any sufficient cause; but they are not on that account seized and caged, starved or straitwaistcoated, or, what equally tends to confirm dementation, they are not spoken to and treated as irrational animals. The whole theory and practice at Gheel is founded on the principle of not showing madmen that you believe that they are mad, but, on the contrary, of trying to stimulate in them the pride of conquering their morbid tendency to give way to foolish or whimsical notions.—*London Review*.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Union Surgeon should subscribe to the *Parochial Critic*, which contains an abundance of information on the subjects which interest him.

Stamen.—The licence of the Hall suffices, as far as the examination in Medicine is concerned, both for the Fellowship and Membership of the Royal College of Surgeons, but it clearly would not exempt from the other parts of the examination. Write to the Secretary of the College.

Anti-vaccination, Brighton.—The allegations are twofold—first, that vaccination is no preservative against small-pox; secondly, that it is a cause of consumption, scrofula, human degeneracy, etc., etc. If our correspondent were to work up the subject historically, he would come to a different conclusion.

John Hunter's Chairs.—You will find an account of the sale in vol. xxv. p. 347 of this journal. The wood of which they were made was brought to this country by the celebrated Captain James Cook.

Mr. Hallett.—A gentleman holding the qualification only of the Royal College of Surgeons cannot maintain an action at law for attendance and medicine supplied in a Medical case. The 31st clause of the Medical Act runs as follows:—

"Every person registered under this Act shall be entitled, according to his qualification or qualifications, to practise Medicine or Surgery, or Medicine and Surgery, as the case may be, in any part of her Majesty's dominions, and to demand and recover in any court of law, with full costs of suit, reasonable charges for Professional aid, advice, and visits, and the cost of any medicines or other Medical or Surgical appliances rendered or supplied by him to his patients. Provided always, that it shall be lawful for any College of Physicians to pass a by-law to the effect that no one of their Fellows or Members shall be entitled to sue in manner aforesaid in any court of law, and thereupon such by-law may be pleaded in bar to any action for the purposes aforesaid commenced by any Fellow or Member of such College."

A Subscriber.—It has never yet been determined what is the highest fee legally recoverable by a Surgeon in general practice. In the case referred to, the jury allowed only 7*s*. 6*d*.; but this is applicable to the case in question, and does not hold good generally. Fees must be regulated rather by the capacity of the patients to pay than by any arbitrary rules. The Physicians to Henry VIII. held that "the rich should pay for the poor," and to some extent this is not only justifiable, but commendable. But the Practitioner should endeavour in making charges not to exceed, but rather to come within, the limits which law and equity approve. In answer to the various queries of "Subscriber" we shall give as near an approximation as possible to the standard required. 1. From 2*s*. 6*d*. to 5*s*. 2. Ditto. 3. 7*s*. 6*d*. to £1 1*s*. 4. 3*s*. 6*d*. to 5*s*. 5. £1 1*s*. to £3 3*s*. 6. A small addition—say one-third for each person. 7. To half the fee received by the person met in consultation.

Foreign Degrees.

The following choice morsel is culled from the advertising columns of the *Times* of April 8:—

"Degrees.—Qualified gentlemen, desirous of taking their degrees from foreign Universities, receive official advice and instructions how to proceed, by applying to Dr. M., 16, Margaret-street, Cavendish-square, W."

The Use and Abuse of Hodge's Pessary.

By Clement Godson, L.M.,
Obstetric Assistant St. Bartholomew's Hospital.

There is such a diversity of opinion with regard to the use of Hodge's pessary that any fresh information on the point must be of great interest. Many leading Obstetric Physicians look to it as their sheet-anchor in cases of retroversion of the uterus, vesicocele, etc., while others entirely deprecate its use, and are, indeed, most bitter against it, and ever ready to enumerate a host of inconveniences likely to follow from its introduction. I have lately met with a remarkable accident which had arisen from its use—I should rather say from its abuse, for it could be only attributed to the most gross neglect. However, its enemies will, I dare say, be only too glad to add this rare consequence to their category, and I have more pleasure in recording it for this reason, that though I have been educated in a school of Hodge, if I may use the expression, of which Dr. Greenhalgh is the head, though I have watched its effects most carefully, yet I have met with but few instances in which it has been productive of inconvenience to the patient, and these of a temporary character, while hardly a day passes without my witnessing evidences of its good effects. A few days ago I accompanied Dr. Greenhalgh to a patient, an old lady upwards of seventy years of age, in whom, three years and a half since, one of Hodge's bar pessaries had been introduced for rectocele. She sent for us because she was somewhat alarmed at seeing part of the instrument, the three bars, come away; and she fancied from this that it was time she had a new pessary. She was suffering no pain, nor could we obtain a history that she had done so since its introduction; however, upon examination, a most peculiar state of affairs presented itself. The upper portion of the pessary had become firmly imbeded in the mucous membrane of the fornix of the vagina, to the extent of about an inch and a half, and was encircled by it as by a broad ring. By traction upon the pessary the parts were brought into view, when, by means of some champagne nippers, the pessary was cut through close to one of the openings, and readily drawn from its bed. No irritation whatever was set up by its removal. The rectocele again descended when, after two days' rest, the patient began to move about; the parts were replaced by the introduction of a new pessary, and the poor old lady's peace of mind is once more restored.

Ununited Fracture of Olecranon.

To the Editor of the Medical Times and Gazette.

Sir,—I shall feel extremely obliged if, in your answers to correspondents, you will kindly inform me what is the most approved treatment for ununited fracture of olecranon. In the case now in our wards, the olecranon process is widely separated from the ulna, and is quite movable. Flexion of the arm is complete, but it cannot be straightened completely; but all movement is performed with constraint. The patient is young and healthy. I should not trouble you but that I cannot find the information I seek in any books within my reach. I am, &c. R. E. P.

Anti-Vaccination.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—My attention has been called to a paragraph in your issue of March 27 headed "Vaccination." Under advice, I must ask you to give a place to this letter, as in that paragraph the character of a highly respected and old West-end Physician is impeached, by casting a doubt upon the veracity of the certificates I handed to the learned magistrate. Whoever your informant may be, he is as far behind in his communication of Medical news and intelligence as it would be to inform a charity boy of the death of Queen Anne. I was summoned on December 28, 1868, since which time I have received newspapers and communications from every part of the country—in the one case giving lengthened and correct reports, and in the other congratulations and statements from the parents and relatives of those who have been compelled to submit to the filthy and barbarous operation of reckless vaccination. Were you, Sir, to read the correspondence, you would grieve that such practices and results could be.

The paragraph states that I refused to allow my baby to be vaccinated unless the guardians would guarantee the purity of the matter. Their inspector—a very respectable coal merchant and greengrocer—placed my proposition before them. They, in reply, said: "We know nothing at all about matter; tell him to take the child to any of our district officers." This I declined, knowing the frightful results in skin diseases from a proper want of discrimination in selecting lymph for transmission. You further state it was intimated I should be again prosecuted, etc. With all due respect to your informant's general veracity in this case, no such intimation was or has been made.

That section of the Act from which I took my stand of opposition, I am determined to maintain my ground upon. When I have published the whole of the provincial reports, comments, correspondence, etc., in connexion with the above case, perhaps you will kindly accept a copy, and be honest in writing—

"I know not how the truth may be,
But tell the tale as told to me."

I am, &c.

1, Caversham-road, N.W., April, 1869. William Thomas Jones.

COMMUNICATIONS have been received from—

Dr. W. Frank-Smith; R. E. P.; Mr. G. Street; Dr. W. Arding; Dr. W. T. Jones; Dr. B. W. Williams; Dr. Whitmore; Dr. R. Beveridge; Dr. Sedgwick; Mr. R. Ellis; Dr. Astley-Cooper; Mr. Haslett; Dr. Burder; Dr. Chisholm; Mr. R. Rendle; Dr. Pierce; Professor Schwartze; Dr. Clifford Allbutt; Experimentalist; Dr. Gourley; Dr. James Ford; Dr. Clarke; Mr. Walter Tyrrell; Mr. D. W. Crompton; Dr. Lankester; Mr. A. Brady; Dr. F. A. de Hartsen; Dr. Poore; Dr. Good; Dr. Symes Thompson; Mr. J. H. Gornall; Mr. J. B. Holloway; Mr. J. Chatto; Mr. T. Bryant; Mr. T. M. Stone; Dr. Ballard; Dr. Lionel S. Beale; Dr. Bateman.

BOOKS RECEIVED—

Finlayson's Normal Temperature in Children—Bauer's Remarks on Dr. Sayre's Paper—Glasgow Medical Examiner, No. 1—Cumberland and Westmoreland Lunatic Asylum Report—Wallis's Address—Durand's Influence des Milieux—Durand's Philosophe Physiologique et Médicale—Pocket Guide to the British Pharmacopœia—Jencken on Light, Colour, Electricity, and Magnetism—Trültsch and Roosa on the Ear—Statistical Tables of Patients treated in Guy's Hospital during 1868—Thomas on the Diseases of Women—Smith on the Diseases of Children—Hartshorne's Essentials of Practical Medicine—Hartshorne's Conspectus of the Medical Sciences—Billet's Origin of the British Constitution—Roscoe's Lessons in Elementary Chemistry, new edition.

NEWSPAPERS RECEIVED—

Indian Medical Gazette—Buxton Advertiser—New York Medical Gazette—California Medical Gazette.

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 10, 1869.

BIRTHS.

Births of Boys, 1133; Girls, 1092; Total, 2225.
Average of 10 corresponding weeks, 1858-67, 2070·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	829	721	1550
Average of the ten years 1858-67	725·5	693·3	1418·8
Average corrected to increased population	...	...	1560
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	...	2	9	2	12	6	1	...
North	618210	1	3	6	2	19	18	1	...
Central	378058	...	6	2	...	10	4	3	...
East	571158	1	6	15	...	20	10	1	...
South	773175	2	17	7	1	24	10	6	...
Total	2803989	4	34	39	5	85	48	12	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·850 in.
Mean temperature	47·1
Highest point of thermometer	68·3
Lowest point of thermometer	34·3
Mean dew-point temperature	43·6
General direction of wind	Variable.
Whole amount of rain in the week	0·17

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 10, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending April 10.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending April 10.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3170754	40·7	2225	1462	1550	68·3	34·3	47·1	0·17	17
Bristol (City)	169423	36·1	138	76	*87	73·0	31·6	48·5	0·28	28
Birmingham (Boro')	360846	46·1	275	175	136	64·5	34·6	45·6	0·37	37
Liverpool (Boro')	509052	99·7	297	295	297	62·3	39·8	46·4	0·71	72
Manchester (City)	370892	82·7	261	210	*197	67·0	35·0	45·5	0·62	63
Salford (Borough)	119350	23·1	106	60	54	66·0	34·9	45·0	0·69	70
Sheffield (Borough)	239752	10·5	165	126	125	67·2	34·5	46·8	0·44	44
Bradford (Borough)	138522	21·0	100	71	80	55·5	35·4	43·9	0·47	47
Leeds (Borough)	253110	11·7	131	129	127	56·0	37·0	44·5	0·43	43
Hull (Borough)	126682	35·6	78	59	70	63·0	30·0	43·5	0·23	33
Newcastl-on-Tyne, do.	130503	24·5	95	69	73	59·0	30·0	41·4	0·29	29
Edinburgh (City)	178002	40·2	133	86	96	57·7	26·0	43·0	0·40	40
Glasgow (City)	458937	90·6	352	268	329	55·0	28·8	42·9	0·56	57
Dublin (City and some suburbs)	320762	32·9	126	158	155	65·2	33·5	47·3	0·66	67
Total of 14 large Towns	6546587	35·5	4482	3244	3376	73·0	26·0	45·9	0·47	47
					Week ending April 3.	Week ending April 3.				
Vienna (City)	(1863) 560000	...	...	...	324	...	...	46·6	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·850 in. The barometrical reading increased from 29·21 in. at the beginning of the week to 30·02 in. on Monday, April 5.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

April 17. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Metropolitan Association of Medical Officers of Health, 7½ p.m. Meeting.

Royal Institution, 3 p.m. Mr. A. Geikie, "On the Origin of Land Surfaces."

19. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Medical Society of London. 8 p.m.: Casual Communications. 8½ p.m.: Dr. Routh, "On some of the Causes of the Unproductiveness of Marriages, considered in a National Point of View."

20. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Anthropological Society, 8 p.m. Dr. Davy, F.R.S., "On the Character of the Negro." Dr. Charnock, V.P., "On the People of Transylvania."

Pathological Society, 8 p.m. Meeting.

Royal Institution, 3 p.m. Prof. Grant, "On Stellar Astronomy."

21. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

22. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Royal Institution, 3 p.m. Prof. Tyndall, "On Light."

23. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Clinical Society, 8½ p.m. Dr. Hermann Weber, "Treatment and Prognosis of Hæmoptysis." Messrs. Holmes Coote and Arthur Myers, "Cases of Syphilis."

Royal Institution, 8 p.m. Mr. E. B. Tylor, "On Savage Thought in Modern Civilisation."

ORIGINAL LECTURES.

ON THE

METHODS OF ESTIMATING NITROGENOUS MATTER IN POTABLE WATERS,

AND ON THE VALUE OF THE EXPRESSION "PREVIOUS SEWAGE CONTAMINATION," AS USED BY THE REGISTRAR-GENERAL IN HIS MONTHLY REPORTS OF THE METROPOLITAN WATERS.

By Dr. LETHEBY, M.B., M.A., etc.,
Professor of Chemistry in the London Hospital, and Medical Officer of Health for the City of London.

After a short sketch of the progress of legislation as regards the water supply of London, Dr. Letheby said those measures were so efficient that they have continued to operate in the most satisfactory manner, and now, instead of receiving from the companies water which contains from 66 to 73 grains of solid matter per gallon, with from 4 to 6 grains of organic matter, we are supplied with water that is rarely charged with more than 20 grains of solid matter per gallon, or with more than half a grain of organic. This improvement has been effected by taking the water of the Thames above the tidal reach, by filtering it in the most careful manner, and by storing it in covered reservoirs. But for all this, great as the improvement is, the public mind continues to be agitated and alarmed by vague fears, which are not only the chronic remains of the former complaint, but which are unnecessarily excited by the persistent use of certain expressions of an improper kind by those who have taken upon themselves to report in a pseudo-official manner of the quality of the London waters. It is for us, gentlemen, who are the acknowledged custodians of the public health, to keep our attention fixed upon such questions as these, and, having investigated them with care and caution, to take heed that, while on the one hand we are anxiously careful of the public health, so on the other we are desirous that there should be no undue excitement and alarm of the public mind. It is for this reason I have brought the matter under your notice to-night.

And now, gentlemen, at the onset of our inquiries into the subject, I think it is hardly necessary to tell you, who are so well acquainted with the prime facts of physiology and pathology, that organic matter, which is the horror of some persons, is not necessarily unwholesome—that, on the contrary, whether it is present in food or drink, it is the *materia salutaris* of the living world, and exists solely for the benefit of living plants and animals—that it is only on rare occasions that it assumes a malignant form. It is hurtful, for example, when in certain molecular states it constitutes the organic poisons. It is always hurtful, perhaps, as the excreta of plants and animals, *quoad* the class of beings secreting it. It is hurtful when, in some unknown, but probably germinal, form, it is the *contagium* of disease; and lastly, it is hurtful in certain stages of putrefactive decomposition. But all these are comparatively rare conditions of it, looking at the forms which it more naturally assumes; and so abnormal are they, that Nature is ever striving to hurry them onward to more suitable and wholesome conditions. We have illustrations of this in the rapidity with which organic matter dissolved in water is absorbed by the soil, or utilised by plants and animals, or converted into mineral products. There are, for example, hundreds of streams in this kingdom where sewage matters, or the products of manufacturing operations, are so quickly appropriated or destroyed that their presence is not discoverable after dilution and a flow of a few miles. I have observed this so frequently that I am impressed with an opinion that ordinary sewage mixing with twenty times its volume of good water, and flowing for a distance of ten or twelve miles in a river abounding with fish and healthy vegetation, is not to be discovered by chemical means; and there is no greater fallacy than to suppose that sewage once entering a stream must remain in it to the end of its course. Dr. Angus Smith has given some excellent illustrations of this, by showing that when azotised compounds decompose and form ammonia, the ammonia is rapidly dissipated. On examining a very putrid stream, where carburetted hydrogen was passing off in great volume, and where a cubic foot of the gas could be obtained in a few minutes by stirring the mud, he found that the amount of ammonia was from 0·5 to 0·7 of a grain per gallon, but after going fourteen miles the amount was only 0·07 of a grain, and after twenty miles none at all was found. So also with the mud: at the point where it was in a state of active putrefaction it contained 0·797 per cent. of ammonia, a mile lower down it contained only 0·420, and at the end of a second mile it was but 0·171 per cent. In another case, where a stream was charged with even more sewage than the Clyde, he observed that in three days the whole of the nitrogen of it had disappeared, and in some experiments which he made on the Clyde water with permanganate of potash he found that the organic matter of that river was rapidly oxidised during the flow of the stream. At Bothwell, which is about six miles and a half above the quay at Glasgow, he ascertained that the quantity of oxygen required to oxidise the organic matter in the water was equal to 3·15 grains per 100 gallons, and that at Glasgow it amounted to 15·4 grains. Lower down it steadily diminished, so that at Port Glasgow, which is twenty miles below the city, it had become equal to what it was at Bothwell; and in those places where the river had spread out and exposed a larger surface of water to the action of the air, the oxidising effect was still greater, for the proportion of oxygen required to oxidise the organic matter fell from 3·15 grains per 100 gallons of water to 0·375 of a grain in a space of about two or three miles, thus proving how carefully Nature provides for the complete obliteration of dead organic matter, and that it ceases altogether to be found in running streams. The same is true of the mineral forms of it—the nitrites and nitrates—for they also are rarely found in any quantity in river-water, where the assimilating power of aquatic plants and the reducing action of organic decay rapidly destroy them. "I conclude from these data," says Dr. Angus Smith, "that the organic matter and the nitrogen in it are equally incapable of giving us a sufficient history of the water. We may draw another conclusion—that Nature has provided a mode in certain conditions for its perfect removal." A like opinion is expressed by Professors Graham, Miller, and Hofmann in their report in 1851 on the chemical quality of the supply of water to the metropolis, for in speaking of the influx of sewage into the Thames above Kingston, where a population of three quarters of a million is found upon the banks of the river and its tributaries, they say, "We doubt whether the existence of organic contamination from town drainage is at present perceptible in the Thames above the reach of the tidal flow, or amounts there to a sensible evil. The indefinite dilution of such matters in the vast volume of the well-aerated stream is likely to lead to their destruction by oxidation, and to cause their disappearance. The river may reasonably be supposed to possess, in its self-purifying power, the means of recovery from an amount of contaminating injury equal to what it is at present exposed to in its higher section." These, you will remember, are the results of observation and experiment, and they must be properly distinguished from any hypothesis to the contrary. It is an hypothesis, for example, when a distinguished chemist, relying entirely on chemical principles, and on the difficulty of oxidising organic matter in the laboratory, states that, in his opinion, "it is simply impossible that the oxidising power, acting on sewage running in mixture with water over a distance of any length, is sufficient to remove its noxious quality." Even Dr. Frankland, who quotes this opinion in support of his own, has given abundant evidence of its inaccuracy, for he has reported again and again that the water of the East London Company, which everybody knows is derived from a river that receives through its tributaries a large amount of sewage, has shown no previous sewage contamination, so far as his analyses can discover. And this must be so, or the large rivers of England would be so contaminated as to be absolutely unendurable. Take the Trent, for example, at the point where the Nottingham Waterworks Company take water for the supply of the city. It drains an area of about 1,830,466 acres, with a population in 1861 of 1,542,749, and it receives through its tributaries, the Sow, the Tame, the Derwent, the Soar, etc., the sewage of Tunstall, Burslem, Stoke, Longton, Newcastle, Burton, Nottingham, Stafford, Wolverhampton, Bilston, Walsall, Wednesbury, Tipton, Dudley, Oldbury, Edgbaston, King's-Norton, Handsworth, Birmingham, Tamworth, Buxton, Bakewell, Derby, Leicester, Longhborough, and a host of smaller towns and villages, and yet at Nottingham, where it is taken for the supply of the city, it is difficult to discover any sign of serious pollution. It is not so, however, with nitrogenous matters, which percolate the ground, and remain beneath the surface, for they are oxidised within the pores of the soil, and are converted into alkaline or earthy nitrates, which often furnish a record of their probable origin. Not that this record is always clearly intelligible, for, like the nitrates of a running

stream, they may have been derived from other sources than sewage pollution: they may have come from the ammonia and nitric acid of the air, from vegetable substances containing azote, from peat and humus, which are always highly charged with ammonia, from the infusoria of lakes and rivers, from extinct animals whose nitrogenous remains have been buried for ages, and even from ammoniacal salts and alkaline nitrates, which are largely used for manure. It is enough that neither the presence of nitrogenous matters in water is proof of a previous sewage contamination, nor is the absence of them a sign to the contrary.

The means that are adopted for the recognition of nitrogenous matters in water are various, and depend on the condition in which they exist therein. If they are present in an unoxidised form, they are discoverable with more or less certainty in several ways, as—

1. *They give colour to the water*, and this may be observed by examining the water in large volume, as in a glass tube two feet in length and about two inches in diameter, filling it with water and looking down upon it while it stands upon a piece of white paper. The tint is decidedly brown with peaty water. It is yellowish brown with river water, and it is more or less green with well water.

The quantities of organic matter which are discoverable by this means are very minute. As little as the 0·025 of a grain of peaty matter gives a distinct brownish shade, and the 0·05 of a grain is strongly marked.

2. *The odour of the water* is very marked when the nitrogenous organic matter is in a state of decomposition, and this may be observed by shaking the water in a wide-mouthed quart bottle and smelling it, or by warming it a little. If kept for a few weeks in a stoppered bottle, at a temperature of from 60° to 80° Fahr., it will putrefy and become offensive if the organic matter be abundant.

3. *The Ignition of the Solid Residue.*—Up to the year 1851 the estimation of organic matter in water was always made by evaporating the water, drying the residne, igniting it, observing the odour, and then determining the loss; but as this loss consisted of a variety of things, as moisture, carbonic acid, sulphuric acid, and the oxygen of nitrates, the proportion of organic matter was always exaggerated. To some extent this was avoided by Professors Graham, Miller, and Hofmann, when in 1851 they undertook an examination of the waters supplied to this metropolis, for they added a known proportion of carbonate of soda to the water before evaporating it, and they dried the residue at a temperature of 248° Fahr. before they ignited it, and they then moistened it with a solution of carbonate of ammonia, and again dried it at 248° before they weighed it for the loss. Their process was published in 1855, but since then the drying temperature has been increased to 266°, and even to 284°.

The objections to the process are that certain organic substances, as urea, are decomposed by carbonate of soda during the evaporation of the water, and that moisture is still retained even at the higher temperatures. Nitrates also are liable to decomposition if the igniting-point be high, and they will certainly lose oxygen if the organic matter be abundant. On the other hand, there are certain kinds of organic matter which are very difficult to burn. The process, therefore, is now rarely employed, although it is a good process to distinguish the nature of the organic matters, for the odour of them while burning is very characteristic.

4. *The Oxidation of the Organic Matter by means of a Solution of Permanganate of Potash.*—This test was proposed in the year 1850 by Professor Forchhammer, of Copenhagen, and it has been subsequently modified and improved by Professor Miller, Dr. Angus Smith, and others. It owes its value to the property which the permanganate possesses of yielding oxygen to organic and other oxidisable matter, and of thus losing its pink colour, especially in the presence of an acid.

In the first place, it is necessary to use a solution of the permanganate of definite strength. Dr. Miller recommends that 3·95 grains of the permanganate should be dissolved in 10,000 grains of water, whereas Dr. Angus Smith employs a solution of four times this strength. In the former case the available oxygen of the permanganate is, in an acid solution, as 1 to 10,000, and in the latter it is as 1 to 2000. For convenience of working, I employ a solution of two grains of the crystals of permanganate in a decigallon (7000 grains) of water, and as there are 1000 septems in a decigallon, they represent half a grain of available oxygen. We use these measures because our tubes are gradnated for them.

There are several ways of employing the solution, but in all cases it is proper to take a twentieth part of a gallon of water in a clean pint flask, and stand it npon a sheet of white paper. Dr. Angus Smith adds the permanganate solution, drop by drop, until the colour of the chameleon stands for fifteen minutes, and he then notes the quantity used. This represents the most important kind of organic matter—namely, that which is in a state of change or putridity, while that which requires a longer time, as some hours, for its oxidation is of less value in a sanitary point of view. At one time this was the process which I followed, but it has the disadvantage, when much organic matter is present, of becoming brown from the separation of oxide of manganese, which masks the red colour, and makes it difficult to jndge of the results. This, however, is overcome by experience, and is after all, in a sanitary point of view, a matter of no importance, for if the quantity of permanganate used be so large as to produce embarrassment from the brown oxide of manganese, it indicates, in a very unmistakable manner, that the water is not fit for domestic use.

To guard against this coloration of the water, it is acidulated with dilute sulphuric acid before the permanganate is used, and the chameleon solution is added either in successive small doses until an excess is reached, or an excess of the permanganate is at once added, and, after standing for three hours, the excess is determined by a standard solution of hyposulphite of soda, with the assistance of iodide of potassium and starch. If the former process is followed, a decigallon of water is acidulated with twenty septems of a mixture of one part snlphuric acid with three of water, and the permanganate solution is dropped in at the rate of a few septems at a time as fast as the colour disappears, and until the colour remains permanent for half an hour. But if the latter process is followed, an excess of permanganate—say twenty septems—is added at once to the acidulated water, and it is allowed to stand for three hours, using more permanganate if the colour is notably diminished. At the end of that time the excess of permanganate is estimated in the following manner:—A few drops of a solution of iodide of potassium is added to the water, and then a drop or two of a solution of recently boiled starch. This will produce a deep blue tint; and now a standard solution of hyposulphite of soda, containing five grains of the salt in a decigallon of water, is added, drop by drop, nntil the blue colour exactly disappears. The relative valne of the hyposulphite to the permanganate solution must be determined on each occasion by experiment, as both of the solutions are very liable to decompose, and thus the proportion of permanganate remaining unchanged in the water is ascertained, and the amount of oxygen used by the oxidisable organic and other matters easily estimated.

The delicacy of the process is sneh that very minute proportions of organic matter in a state of decomposition are readily discovered by it; and although there is no rule whereby the actual proportion of organic matter may be thus estimated, yet, from a very large number of examinations of water, I have observed that the proportion is very nearly as 1 to 8. In illustration of this, I may refer to results obtained by Dr. Odling, Mr. Abel, and myself in the examination of the metropolitan waters in 1867 and 1868. The incinerations were made by all of us, and the oxygen was determined by myself. They stand thus:—

	1867.	1868.	Mean.
Oxygen required to oxidise .	0·103	0·070	0·086
Calculated organic matter .	0·824	0·560	0·692
Loss by incineration . .	0·963	0·459	0·711

In the case of peaty waters, however, the relation is not in this proportion.

The objections to the process are that it does not completely oxidise many organic substances, as gum, starch, sugar, gelatin, creatin, urea, hippuric acid, etc.; and, secondly, that the permanganate is decolorised by certain inorganic compounds, as the nitrites and the protosalts of iron. In a sanitary point of view, however, both of these objections are invalid, for it is only when organic matters are in a state of decomposition that they are hurtful, and when in this condition the permanganate will always discover them; and with regard to the action of other matters, as the nitrites and the protosalts of iron, their presence is so easily determined by other means that they need not occasion the least embarrassment. I am therefore disposed to regard the permanganate test as a valuable indication of the quality of a water.

4. *The Determination of Ammonia in the Water.*—This is readily accomplished by means of the test originally proposed by Nessler and modified by Mr. Hadow. It is a solution of corrosive sublimate in a very alkaline solution of iodide of potassium, and may be made according to the formula given by Dr. Miller, by adding a concentrated solution of an ounce

or more of corrosive sublimate to a solution of two ounces and a half of iodide of potassium in ten ounces of water; then adding a solution of six ounces of caustic potash (potassa fusa) in its own weight of water, and making up with distilled water to a quart. The mixture is to stand for a day or two until it becomes clear and nearly colourless, when it is fit for use.

The mode of using it for determining the proportion of ammonia in water is as follows:—Take about a twentieth of a gallon of the water, and add to it sufficient caustic potash to render it distinctly alkaline. After standing for an hour, the earthy carbonates will precipitate, and will leave a clear and colourless supernatant liquid, which may be poured off into a measured glass vessel, and tested with five or six septems of the Nessler liquid. If ammonia be present, the water will acquire a rich brownish tint that varies in intensity according to the proportion of ammonia present; and this is determined by comparison with the tints of known quantities of ammonia or by graduated tints prepared in any other manner. The tints which I am accustomed to use for comparison are standard tints of a solution of burnt sugar in water.

If the water be coloured with peaty matter, it will be necessary to distil it after it is made alkaline, and to estimate the ammonia in the distillate, or it may be rendered colourless in the way recommended by Dr. Frankland—that is, by adding a little chloride of calcium to the water, and then a little carbonate of soda, whereby the colouring matter is precipitated with the earthy carbonate, leaving a clear and colourless solution for Nessler's test.

The delicacy of this test is remarkably great, for it will readily discover the presence of one part of ammonia in 35,000,000 of water, or about 0·002 of a grain of it in a gallon; and the test is applicable to about sixteen times this quantity, when the tint is so deep as to be difficult of comparison, and beyond that it becomes turbid from precipitation. I do not know that there are any serious objections to the process unless it be that certain saline matters, as chlorides, in the water may modify the tint.

5. *The Determination of Nitrites.*—These are frequently present in well waters, especially when they are derived from the subsoil of towns, and they represent a progressing oxidation of nitrogenous matter. There is no difficulty in discovering them, even when they exist in the proportion of one part of nitrous acid in three millions and a quarter of water. A twentieth of a gallon of water is to be put into a flask and acidulated with twenty septems of the dilute sulphuric acid already alluded to; a few drops of a solution of iodide of potassium is then added, and a little recently boiled starch. After standing for a short time the iodine is set free, and it tints the starch of a blue colour, which varies in shade according to the proportion of nitrite present.

6. *The Determination of Nitrates.*—This is a more difficult operation, especially when we desire to know the exact amount of them. For the mere discovery of their presence there are several tests which are very delicate and reliable. Having evaporated a portion of the water to a small volume, it may be tested for nitric acid as follows:—Colour a little oil of vitriol with sulphate of indigo, and add a drop of the concentrated solution of the water; if nitric acid be present, the colour will be instantly discharged, even when the proportion of nitric acid is not more than the 1-500th part of the liquid. Again, it is discoverable by means of a solution of protosulphate of iron (green vitriol) poured carefully upon oil of vitriol to which a drop of the concentrated water has been added; in this case there is a line of colour in the iron solution at the point of contact with the oil of vitriol, and by carefully moving it the colour will diffuse itself through the sulphate of iron. This will detect the presence of one part of nitric acid in 24,000 of water. Instead of sulphate of iron a solution of sulphate of aniline may be used, and then the tint is of a brilliant red. With a little practice all these tests may be made available in determining approximatively the proportion of nitric acid in water; but if we desire to know exactly the amount other processes must be followed. That which is recommended by Dr. Miller is a modification of Dr. Pugh's. The water is first deprived of its ammonia by distillation with caustic baryta (baryta water). It is then evaporated to about one-fiftieth of its volume, and transferred to a strong glass tube with a known quantity of an acid solution of protochloride of tin. The air of the tube is displaced by carbonic acid evolved from a small piece of marble dropped into the acid liquid; it is then sealed and exposed for about twenty minutes, in an air bath, to a temperature of 340° Fahr., by which means the nitric acid is reduced and the protochloride of tin converted into a persalt. The proportion of chloride thus acted on is estimated by transferring the contents of the tube to a beaker, and diluting with an ounce of water and a fluid drachm of muriatic acid, to which are then added a little starch paste and a few drops of iodide of potassium. A standard solution of bichromate of potash (7·3 grains of the salt in 1000 of water) are then dropped in from a burette until the starch just indicates by its blue colour the presence of free iodine. Having treated the same quantity of the original chloride of tin in the same manner, it is easy to determine the amount used in the deoxidation of the nitric acid, and thus to determine the proportion of the acid.

Another process, recommended by Dr. Frankland, is a modification of Mr. Walter Crum's. It depends on the action of concentrated nitric acid on mercury. A decigallon of water is evaporated to a small volume, and filtered; the chlorides are then precipitated with a solution of sulphate of silver, and separated by filtration. After evaporating the solution to a small bulk, it is transferred to a glass tube filled with mercury, and standing in the mercurial trough. Pure and concentrated sulphuric acid is then added to it in somewhat greater volume than the solution. The tube is provided with a funnel-shaped top and glass stop-cock, so that, with a little dexterity, the liquids may be introduced without admitting atmospheric air, although this is easily displaced by opening the stop-cock and depressing the tube in the mercury. When this is done the tube is closed at its lower end by the thumb, and violently shaken, keeping the tube in a vertical position, so that the mercury at the bottom of the tube may protect the thumb from the action of the oil of vitriol. After the mercury has been divided by the agitation into small globules, which have been diffused through the liquid, the formation of nitric oxide gas is soon felt by the strong pressure of the mercury upon the thumb. This may be relieved by opening the tube under the mercury. Again it is to be shaken, and again, until, after the lapse of from three to five minutes, the whole of the nitric acid is converted into nitric oxide gas. This may be measured in the tube by opening it under water, and cooling it, or it may be transferred to a suitable measuring apparatus over water or mercury. The volume of gas divided by 2 represents the volume of nitrogen, and this multiplied by 0·3 represents the amount of it in grains.

We have had considerable practice in both of these processes, but they are tedious, and to some extent dangerous, and therefore I have sought anxiously for a better and easier means of discovering the proportion of nitrogen as nitrous and nitric acid. This, I think, we have found in a modification of Schulze's as proposed by Professor Wanklyn and Mr. Chapman. It depends on the action of metallic aluminium upon an alkaline solution, whereby hydrogen gas is disengaged, and the effect of that hydrogen, while in a nascent state, on the nitrates and nitrites present in the solution. A twentieth part of a gallon of water is rendered alkaline with a little pure caustic soda, and it is distilled or evaporated to about one-fourth of its volume. It is then put into a tube about eighteen inches in length and half an inch in diameter, packed to the depth of six or seven inches with pieces of sheet aluminium. The tube is provided with a glass stop-cock at its lower end, and, having been well corked, the stop-cock is opened. Hydrogen gas in minute bubbles is immediately evolved, and, as it collects at the upper part of the tube, it displaces and forces out the alkaline solution, thus bringing the whole of the solution into contact with the metal and the hydrogen evolved from its surface. When the liquid is entirely forced out, it is again poured into the tube, and the operation repeated a second or third time. The liquid is then filtered, divided into two parts, and tested by Nessler's process for ammonia, the ammonia being produced by the action of the nascent hydrogen on the nitrates and nitrites in the alkaline solution. This process gives very accurate results when the nitrates are not in great excess, and when organic matter has been disposed of.

7. *The estimation of the nitrogen of organic matter* is a difficult and uncertain operation. Messrs. Wanklyn and Chapman have proposed to effect it by first distilling a known quantity—say the twentieth of a gallon—of the water with carbonate of soda, in order to remove the ammoniacal salts, and then to continue the distillation, after adding about an ounce and a half of a solution of 3000 grains of solid caustic potash and 120 grains of the crystals of permanganate of potash in the fifth of a gallon of water. The alkali and permanganate of this solution break up the organic matter, and convert the nitrogen into ammonia, which distils over. The distillation is, therefore, to be carried on as long as ammonia appears, fresh distilled water being added to the contents of the retort when necessary. The process is a very simple one, and but for the circumstance that we hardly know when to stop the distillation, it is a very useful

one. I believe, indeed, that as far as concerns the common nitrogenous organic matter of water it is a very reliable one, and that many, if not most, of the objections that have been raised against it are hypercritical, and are founded on results which are not likely to occur in practice.

The process which has recently been proposed by Dr. Frankland is very complicated, and requires an amount of manipulative skill which few are possessed of. As soon as possible after the collection of the water, a portion of it—say half a gallon—is put into a stoppered bottle and treated with about two fluid ounces of a saturated solution of recently prepared sulphurous acid. This has the effect of arresting the putrefaction and oxidation of any putrescible or oxidisable organic matter that may be present. Half of this water is boiled for two or three minutes in a vessel with a vertical condenser that will retain ammonia or volatile organic matter. This is especially needful when water is charged with recent sewage. During the boiling about eight grains of sulphite of soda are added to secure the saturation of the sulphuric acid which will be formed during the subsequent evaporation of the water, and to secure the expulsion of all the nitrogen existing as nitrates or nitrites, it has been found necessary to add a couple of drops of a solution of chloride of iron. The water is then evaporated to dryness in a glass capsule covered with a disc of filter paper stretched upon a light cane hoop. This is absolutely necessary to exclude dust, and the utmost care must be taken that no ammonia is diffused in the atmosphere of the laboratory. The dry residue is next mixed with five or six times its volume of pure powdered and recently fused chromate of lead, and it is transferred to a combustion tube about 16 inches long and sealed at one end. The capsule is rinsed two or three times with chromate of lead, which is put into the tube. It is then charged in the usual way with granulated oxide of copper, and, lastly, filled up for a distance of about 3 inches with bright copper turnings. The open end of the tube is then drawn out by means of the blowpipe, and having been put in a combustion furnace, it is attached by means of india-rubber tubing to the tube of a Sprengel pump—care being taken that the glass tubes touch each other and that the joint is perfectly tight—it being immersed in a small trough of water. The Sprengel pump is then put into action, and is worked for five or six minutes, so as to effect a perfect exhaustion of the tube. The tube is then gradually heated in the furnace, and the combustion made in the ordinary way. It is necessary, however, that the organic matter should burn very slowly to prevent the formation of carbonic oxide, and the process should last for about three-quarters of an hour, when the pump is again put into action, and the products of the combustion transferred to a tube over mercury. The gases consist of carbonic acid and nitrogen with a little nitric oxide, and these are to be measured and estimated in the usual way.

It is evident that the process requires for its success unusual precautions. It is necessary, for example, that every trace of dust and all ammonia in the laboratory should be excluded during the evaporation; that there should be no free sulphuric acid produced by the oxidation of the sulphurous; that all ammoniacal salts contained in the water should be completely retained; that the nitrites and nitrates of the water should be completely destroyed and their nitrogen removed; that the chromate of lead and oxide of copper should be perfectly pure; that the combustion should be carried on in such a manner as to prevent the formation of carbonic oxide; that the vacuum of the apparatus should be perfect, so as to exclude all traces of atmospheric nitrogen; that the gases should be completely collected; and that there should be an accurate examination and estimation of them. All these are formidable difficulties, and therefore, to say nothing of the tediousness of the operation, it is extremely uncertain. Already, in the hands of skilful operators, it has furnished discordant results. My lecture colleague, Dr. Tidy, has worked it extensively, and with known organic substances, but the discrepancies of the results have been serious. The same fact has been noticed by Messrs. Wanklyn and Chapman, who say of it that the range of possible error is greater than the range of possible truth.

This, however, is the process on which Dr. Frankland relies, and has relied for more than two years, in his estimation of nitrogen in the London waters, and for the application of his theory as to "previous sewage contamination," the degree of contamination being expressed in proportions of London sewage, on the assumption that every 100,000 parts of sewage contain ten of combined nitrogen. Certain allowances are made for the nitrogen which exists as ammonia, nitrite of ammonia, and nitrate of ammonia in rain, which is the primary source of all water. According to Messrs. Lawes and Gilbert and Professor Way, the amount of nitrogen in these forms in the rain of the open country is 0·0985 of a part in 100,000 of water. To use the language of Dr. Frankland, this represents 985 parts of previous sewage contamination—more, in fact, than is found during some of the hottest months of summer in the water of the East London Company, that receives the sewage of many thousand people. At first Dr. Frankland was in the habit of deducting this quantity from the hypothetical amount in the London waters, but lately he has thought proper to make a smaller deduction, because in the examination of the waters of Wales and Cumberland, where evaporation and vegetation are constantly removing the ammonia, he has found but 0·008 of a part of ammonia in 100,000 of water, and this, with the amount of nitrogen in rain, 0·024 per 100,000 parts, gives us the proportion of combined nitrogen in water derived from aerial sources as 0·032 per 100,000—a quantity that represents 320 parts of previous sewage contamination. And thus month after month, with a process of analysis that is faulty in the extreme, and with speculations that admit of no proof, we are either frightened or amused with a statement, upon which the Registrar-General considerably improves, to the effect that the solid impurity of such and such a water contained so many pounds of *combined* nitrogen—showing that such water, after its descent to the earth as rain, had been contaminated with sewage or manure matter equivalent to so many hundred parts of average filtered London sewage. Gentlemen, if this were not put forth in the garb of science, and, moreover, in a semi-official form, it would be regarded as a burlesque, and would excite nothing but ridicule. We, however, must deal with it solemnly, and first I would ask what are the possible sources of this nitrogen other than sewage or manure matter? Dr. Frankland himself has told us that the rain may contain, nay, actually does contain, three times as much nitrogen as he allows for. This is the case with the rain in the open country, but in the vicinity of our large towns it contains ten times as much. At the East-end of London it is not at all an uncommon thing to find three-tenths of a grain of ammonia in 100,000 parts of rain, and this would represent just 3 per cent. of London sewage in the London rain; but there is more than this, for the nitrates are very abundant in the rain, and would necessarily furnish their nitrogen to the London waters.

Another source of nitrogen is the buried remains of extinct animals circulating for ages in the earth, and appearing in the very deepest waters as nitrates. All the waters of the chalk formation, and even of the greensand sand which is below it, contain large proportions of nitrates which we have no reason for believing have a sewage origin. As much as from 0·24 to 1·33 parts of nitrogen in this form are found in the deepest waters, which probably have not been upon the surface of the ground for ages, and which, as far as we know, could have had no sewage contamination; and yet, in the vocabulary of Dr. Frankland, they would be said to have been contaminated with from 2400 to 13,300 parts of sewage or manure matter.

I have been at some pains to test the accuracy of Dr. Frankland's conclusions in respect of the London waters, and it is surprising to me that he does not perceive the fallacy of his own reasoning. In the months of July, August, and September of last year, Dr. Frankland reported to the Registrar-General that the amounts of previous sewage contamination in the Kent water were 3660, 3660, and 3550 parts per 100,000 of water, while that of the East London was 0, 0, and 20. Now it happens that the Kent Company derives its supply from very deep chalk wells, which are exactly of the character of the chalk wells in the open country, and have no possible source of sewage contamination, whereas the East London water is derived from a river which is notoriously charged in its upper tributaries with sewage; and yet the latter is reported as having no previous sewage contamination, while the former is the very worst of all the London waters. The same thing was reported of the water of Grays, as fine a water as regards organic impregnation as is to be found in the world, and yet, according to Dr. Frankland, it has been frightfully polluted; and here I may mention an instance which in my mind throws considerable doubt over the accuracy of Dr. Frankland's processes of analysis. In the month of December of 1867, Dr. Frankland reported to the Registrar-General that "the results of the analysis of the Kent Company's water collected this month at Bromley show that it is of an entirely different character from that delivered by the same Company at Deptford. Not only," he says, "is the previous sewage contamination of the Bromley water very high, but the presence of a large amount of ammonia shows the contamination to have occurred very shortly before the water was delivered to consumers;" and he further adds that "the use of the water for domestic purposes is very undesirable." This report appeared in the

public papers on the authority of the Registrar-General, and it naturally created a good deal of alarm at Bromley, where the water was drunk. At once the Company consulted me on the subject, and an alarmed inhabitant forwarded a sample of the water from his own tap to Dr. Odling. I visited the works, which are in the open country, and found that the water was taken from a well 250 feet deep, guarded by double cylinders from the entrance of surface-water. The analysis of the water by both Dr. Odling and myself—made quite independently, for I was not aware that he was consulted in the matter—showed that it was remarkably free from nitrogenous matter. Samples of the water were then taken by the local Board of Health, of which Dr. Farr, of the Registrar-General's office, was a member, and they were forwarded to Dr. Frankland, Professor Williamson, and myself, and again it was ascertained that there was little or no organic matter in the water, and that the ammonia in it was only a trace, not above 0·002 of a grain in a gallon. Dr. Farr was a member of the local board, and might have had something to do with the sending of the water; but I have never heard how the discrepancies arose. They show, however, the necessity for caution in thus reporting of the quality of a water.

I have already referred to other sources of nitrogen in water other than sewage or manure matters: but even if it all came from sewage, it is not a proper way of expressing it; for the public, who are the intended recipients of this information, do not understand that running water, and water which traverses the deep porous strata of the earth, is quickly purified by oxidation, and that the previous sewage contamination, as it is termed, is only a representative fancy, for the whole of the nitrogenous matter has been as completely changed, and rendered innocuous, as if it had been converted into corn or wine. It would, in fact, be just as much to the purpose to say that the nitrogen which we find in bread or fruit is the product of a previous sewage or manure contamination.

But this is not all. It suits the Registrar-General to represent these fancies in the most alarming language. It is not enough to say, as Dr. Frankland does, that there are so many parts or pounds in 100,000 of water—he must express it in tons. In fact, no sooner did Dr. Frankland commence with his previous sewage reports than Dr. Farr magnified them into tons. In the return for April, 1867, he states that the London waters contained in 100,000 tons about 29 tons of extraneous matter of various kinds—the proportions ranging from 26 tons (New River) to 40 tons (Kent); and that the proportions of carbon and nitrogen in the waters were equivalent to that supplied by quantities of sewage ranging from 1945 tons to 3155 tons in every 100,000 tons of water. He adds, however, with a sort of sneer at chemistry, that it is gratifying to learn that, as far as chemistry can determine, the original sewage contamination had been converted before delivery into comparatively innocuous compounds. In the month following he makes a like reference to the subject, saying, with an unwarrantable inference, that the waters were much purer in May than in April, and this was followed by an evident improvement in the public health. Two months after this the extraneous matter is spoken of as stuff of various kinds—his words being that the Kent water contained 40 tons of stuff of various kinds; and this is the sort of language which he uses month after month, varying it a little to suit particular occasions and to convey to the public mind a notion of the bad quality of the London waters, and the excellence of the supply in such places as Liverpool, Manchester, and Glasgow. It is fortunate that the mortality returns of these several places do not afford a help to his speculations, or we should assuredly be informed of them. With a perversity that must be astonishing to the soft water zealots, the towns of England supplied with hard water are more healthy than those supplied with soft. Bristol, Birmingham, London, and Newcastle-upon-Tyne, with waters that contain from 20 to 38 grains of solid matter per gallon, with frightful amounts of previous sewage contamination, will obstinately continue to be healthy as compared with Sheffield, Leeds, Liverpool, Glasgow, Salford, and Manchester, where the proportion of solid matter in the water ranges from only 2 grains to 14 in the gallon. In the former places the death-rates are from 23 to 25 in the 1000, whereas in the latter they are from 27 to 32.

I do not for a moment pretend to say that the water has anything to do with these results, although it is a remarkable fact throughout the kingdom that the mortality of places with a water of more than ten degrees of hardness is less than those with softer water; but I do insist that there is no evidence whatever of any injury done to the public health by the use of water containing what Dr. Frankland and the Registrar-General are pleased to call the remains of a previous sewage contamination.

I will not discuss the question of the right of the Registrar-General to use his office in creating unnecessary alarm in the public mind, but I protest against the adoption of sensational language in the record of scientific facts. "It lies deep in our habits," as Mr. Carlyle says in his account of the stump-orator, "to consider human talent as best of all evincing itself in eloquent speech," but the false speech of the sensational orator is a curse. "I reckon it," he says, "the saddest of all the curses that now lie heavy upon us."

ORIGINAL COMMUNICATIONS.

NEURALGIA: ITS PATHOLOGY AND TREATMENT.

By JOHN CHAPMAN, M.D., M.R.C.P., etc.

(*Continued from page 329.*)

Division or Excision of Nerves, and Amputation, have been practised for the cure of neuralgia, but with results very far from encouraging a recourse to any one of these expedients, even as a last resort. Dr. Downing mentions three cases which he had seen in which division of the nerve had been practised, and observes: "The fact that the patients were then suffering from the same pain is proof sufficient that they had derived no essential benefit." Dr. Anstie supposes that the excision of a piece of a nerve "may be occasionally justifiable;" but "nothing," he says, "either in the two cases of its use which I have seen, or in the record of similar operations, would lead me to recommend it in any case." In this conclusion I entirely concur. As Romberg wisely observes, "The value of this method is at once determined by the neuro-physiological law of eccentricity; according to which the central end of the divided nerve, if only the hundredth part of an inch in length, when irritated, causes the pain to be felt down to its extreme cutaneous distribution." If this doctrine be true, neither excision nor amputation can ever prove effectual in annulling neuralgia. Romberg cites a case related by Mayo, in which, in consequence of intense pain in the knee of a woman, amputation of the thigh was performed: it proved useless—the pains continued. And Sir Charles Bell narrates an extraordinary case, in which a young woman, at Middlesex Hospital, had a like operation performed on account of pain seated in the knee and extending down to the heel. "On the healing of the stump, the same pain was felt still as if in the knee and heel and side of the foot." The extremity of the bone and cicatrix were then cut off, but without relieving the severe paroxysms of pain. The popliteal nerve in the back part of the stump was next divided: the pain, however, continued. Finally the limb was taken off at the hip-joint! Sir Charles Bell, who was consulted at each step of the mutilation of this woman, opposed it, except in respect to the cutting off "the extremity of the bone and cicatrix." He protested, in writing, against taking off the limb at the hip-joint, and says: "As to the cure of the pain, who in reading these cases can have hopes of benefit?"

In the foregoing summary review of the chief remedies hitherto used in the treatment of neuralgia, I have endeavoured, with due reference to the often differing evidence tendered respecting the merits of each of them, to arrive at and express an impartial judgment concerning them. If in this attempt I have made a fair approach to success, it clearly appears that, while the pathology of neuralgia is still an arena for the conflict of not only diverse but diametrically opposite doctrines, the therapy of this disease is extremely chaotic and deplorably impotent. There is, therefore, ample scope for any one intent on increasing our therapeutical influence over the malady, and, with this conviction, I feel no need to do more than refer to the above review as my apology for inviting the attention of the Profession to a new remedy for neuralgia.

I am profoundly convinced that but little satisfactory progress in the treatment of this disease can be made until we ascertain, beyond the possibility of dispute, what is the precise nature of its proximate cause; for only then shall we be in a position to determine the direction in which we may hope to descry the principle and method of treating it which will be at once scientific and successful. I have already expounded what I believe to be the proximate cause; and the logical conclusion from that exposition is, that the only

scientific method of treating neuralgia consists in lessening the afflux of blood in the nervous centres which are directly related to the painful nerve. This object can, I affirm, be achieved, in the great majority of cases, by modifying the temperature of some part or parts of the spinal region. In so far, therefore, as my method of treating neuralgia is supplementary to, or differs from, the methods practised, it reposes on two propositions first, that the pathology of neuralgia which I have sketched is true; and second, that the circulation of the blood in the nervous centres along the back, including the spinal cord and the sympathetic ganglia, can be increased or lessened by the application of heat in the one case and of cold in the other along the spinal region. I freely recognise that, according to the truth or falsity of these propositions, the method of treatment which I am about to explain and exemplify must stand or fall. The three—the two propositions and the method in question—are logically related and coherent, and if the first and second can be proved untenable, I shall readily abandon the third. I feel not less sure, however, of my own existence than I do of these two assumptions, and of the efficacy of the method of treating neuralgia directly developed from them; and I hope that an examination of the facts described in the narratives of the cases hereafter given will enforce attention from Medical men, will induce them to consider, apart from the influence of preconceived opinions, what is the character of the evidence here adduced in support of the pathology in question, what is the cogency of the reasoning by which that evidence is shown to conduce to the conclusion arrived at, and what are the facts which I have reported elsewhere justifying the assertion that the circulation of the blood in the nervous centres can be modified by the application of cold and heat along the spine. If, as I am fully persuaded will be the case, such an unprejudiced examination should result in convincing inquirers of the truth of the doctrines in question, they will find that between that conviction and the method of treating neuralgia here proposed there is but a step, and one which they will not hesitate to take.

The nervous centre related to the nerve in which neuralgia is felt may be secondarily and not primarily affected; and though the malady may be annulled by the sedative influence of cold on that centre, the treatment which consists in applying that influence over the central region within which the morbid excitement is first operative, is most rational and likely to be most effective. If, for example, facial neuralgia should originate in some irremovable source of irritation seated within the abdominal or the pelvic cavity, the irritating impressions will probably impinge on some part of the lower half of the spinal cord, will then, by reflex action of the nerve cells which receive them, be shot up the cord to the roots of the fifth nerve, producing there a morbid nutrition, the proximate cause of the pain which is referred to some one or more of the terminal branches of that nerve. Now it is obvious that in such a case the chances of a permanent cure would be greatest were the morbid impressions counteracted at the point where they first impinge. If the remedial influence were exerted only at the point of their secondary incidence, and the pain were subdued, the malady would merely be kept in check in so far as concerns the fifth and other nerves emerging from the topmost part of the spinal axis, and the irritation might easily be reflected along other tracts, thus causing neuralgia in some other part of the body. This principle should especially be borne in mind by the Physician when he proceeds to treat by means of the spine-bag cases of neuralgia associated with pregnancy, with disease of the womb, or with any displacement of that organ. Of course, the neuralgia may coexist with any of these states without any causative relation to them. The formation of a correct judgment on this point will be aided by exact knowledge of the condition of the several segments of the spinal cord in respect to the amount of tenderness evinced when pressure is made on each in succession. When the focus of the neuralgia has existed at one spot for a considerable time, there is almost sure to be spinal tenderness at the point corresponding to the central end of the affected nerve; and if, at the same time, there be tenderness at the points corresponding to the central ends of the nerves ramifying in the organs in which irritating impressions productive of the neuralgia may, there is reason to think, originate, the probability that they actually do so will be great. Indeed, even in cases in which no such tenderness is discoverable, the results of treatment often justify the application of the principle here indicated; for, having regard to all the conditions of the patient, I have frequently been led to infer the existence of the cause of the malady at a point remote from that of its manifestation, have treated it accordingly, and generally with success. Cases of this kind, especially of facial neuralgia associated with oppressive headache, and which are capable of being completely cured by the application of cold along the lower segments of the spine, may be frequently met with in women, especially when they are arriving at the second climacteric. In these cases, however, the curative influence is exerted not merely in lessening the afflux of blood in, and the reflex action of, those segments of the spinal cord operated upon, but also in increasing the circulation of the blood throughout the lower half of the body by the vaso-motor agency of the sympathetic ganglia influenced by the ice. In some cases of facial neuralgia, not apparently referable to any cause at a great distance from it, and associated with inflammatory symptoms over the seat of pain, heat may be applied by the double-column spinal water-bag over the cilio-spinal region. The eight-inch bag is the most suitable for this purpose; its upper end should not be brought higher than about the fourth cervical vertebra. The water in the bag should be at about 115°—never higher than 120°—Fahrenheit, and should be renewed from time to time when it becomes cool.

If, in order to treat neuralgia by means of the spinal ice-bag, it were only necessary to determine where is the central seat of the malady or where is the central point at which the exciting cause first operates, and then to apply the sedative power of cold at one or both of these points, the practice of the therapeutical principle here advocated would be beautifully simple: but, in fact, the conditions of the living organism are so complex, they differ so remarkably in different persons and in the same person at different times, that heat or cold applied, along the spine, like medicines taken internally, produce effects in one person widely different from those they may produce in another, and in like manner the effects produced in the same person will differ greatly at different times. In healthy persons the "tolerance" of ice along the spine is very different in different cases, but in diseased persons this difference is much greater, and is mainly due to the fact that the circulation of the blood in them—or, in other words, the movements of the arteries—owing to disturbances in the nervous system, is already irregular, especially at the seats of disease; and whereas ice applied along the spine of a healthy person during some hours may produce no appreciable effects, if it be applied along the spine of a diseased person, even for a short time, the diseased structures might experience such a sudden and copious afflux of blood as seriously to augment their morbid condition. Hence it happens that in cases of neuralgia complicated with other diseases or with tendencies to other diseases, the simple principles of treatment indicated above cannot be applied without many and various qualifications. If a person were suffering from brachial neuralgia, and at the same time were peculiarly liable to hyperæmic headache, it is probable that this would be increased by the treatment which should be adopted for this form of neuralgia when unassociated with any such tendency. Again, in a case of intercostal neuralgia associated with tubercle in the lungs or with a tendency to pulmonary hæmorrhage, the treatment which could otherwise be adopted with perfect safety might be painful, and would certainly be dangerous; in the one case inflammation around the tubercular deposit might be lighted up, or if pre-existing might be increased; in the other the area within which hæmorrhage has previously occurred might be so flooded with blood that another attack of so-called pulmonary apoplexy would ensue. Gentlemen who on *à priori* grounds deny the possibility of producing these results by the application of the spinal ice-bag will consult at once their own reputation and the welfare of their patients by refusing to permit themselves to be so far misled by their seemingly scientific but really prejudiced scepticism as recklessly to apply ice along the dorsal spine in cases of this kind. Again in cases of neuralgia of the lower extremities associated with hæmorrhoids or menorrhagia, it would be dangerous to apply ice in the lumbar region only, for in each of these cases by doing so the hæmorrhage would probably be augmented. Difficulties of the kind just adduced are precisely those which tax the insight, judgment, and ingenuity of the Physician, and in proportion as he overcomes them does he distinguish himself from those whose lives are spent in what is miscalled a "safe routine practice."

It is impossible, within the limits here assigned to me, to enter into an explanation of all the expedients which may be resorted to in order by means of spine-bags to treat successfully complicated cases of neuralgia of the kind just mentioned. I may observe, however, that what cannot be achieved by direct action may often be achieved indirectly or by derivation; that the action of cold may be limited to one

part of the spine by the application of heat immediately above or below it; and that peripheral effects of an undesirable kind may in some cases be guarded against by the application of cold to the part in question. In concluding these general remarks I must state emphatically that before any one can be qualified to treat neuralgia, or, indeed, any other disease, by means of spine-bags, he must thoroughly acquaint himself with those general principles of neuro-physiology and pathology on which the practice reposes, and must think out for himself what is the best way in which its doctrines may be applied in different cases, especially in those in which the disease he is called upon to treat is associated with other morbid conditions.

(To be continued.)

DESCRIPTION OF A TUBULAR PRESSE-ARTÈRE FOR THE IMMEDIATE COMPRESSION OF ARTERIES.

By B. WILLS RICHARDSON, F.R.C.S.I.,
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MANY instruments have been invented for the immediate compression of arteries, and all have fallen into disuse chiefly, according to my mind, in consequence of the amount of space they occupied when an attempt was made to use them, whether in accidental wounds, in those which were the result of Surgical operation, or when required to arrest the flow of blood through an artery the subject of aneurism.

Time alone will decide if acupressure is destined to supplant the ligature. It is quite certain, however, that the ligature too often acts as a seton, maintaining suppuration, and thereby prolonging the patient's risk of blood-poisoning — a most serious objection, if, as Sédillot maintains, pus upon cut surfaces has great influence in the development of the so-called pyæmia.

The *presse-artère* delineated in this communication, being suitable only for immediate compression, has not so wide a range of usefulness as acupressure, but I think has a very decided advantage over the ligature, more especially when used upon a large artery, inasmuch as no structure is compressed except the wall of the vessel.

I used recently this tubular *presse-artère* in an amputation of the forearm, and found that it answered admirably. But two vessels, however, required compression—namely, the radial and anterior interosseal. A *presse-artère* was left on each of these arteries for forty-eight hours, and then removed without the occurrence of any bleeding.

Before describing the *presse-artère* I now submit to the Profession, I should mention that I borrowed the idea of it from one of the instruments in use for the removal of small calculi from the urethra and bladder.

Description of the Tubular Presse-artère.—It is composed of—

(1.) A fine silver or a fine German silver tube. To the upper end of this tube a small milled button is soldered. The button facilitates the turning or screwing of the tube by the fingers of the Surgeon. A female screw is formed upon the upper half of the inside of the tube.

(2.) A steel stem having two jaws at its lower end. These jaws are perfectly smooth on their opposed as well as on their outer surfaces, and free from any cutting edge. They are so arranged as to open and close parallel to each other. At the upper end of the stem, as seen in the illustration, there is a handle nut. It is represented hexagonal only in shape; but, for recognition in wounds, the handle nut of the *presse-artère* intended for large arteries should have some other form when more than one instrument is in use. The nut is fitted to the stem by means of a square mortise to prevent it from turning on the stem during the screwing or unscrewing of the tube. The handle nut is secured in its position by a smaller but screw nut (Fig.). The upper half of the stem has a male screw cut upon it, and is adapted to the female screw on the inside of the tube. It is not essential that the tube should have the female screw, for it can be arranged so as to slide on the stem, being pushed home by a separate nut made to play between it and the larger handle nut. I prefer the first-described arrangement, as with it there is less risk of the vessel being unnecessarily disturbed during the removal of the compressor.

The length of the *presse-artère* varies according to the size of the limb the vessels of which it is intended to compress.

In conclusion, let me observe that when I applied the *presse-artère* in the amputation of the forearm, I imitated, to a certain extent, the method of acupressure by the twist, as it is called by Dr. Pirrie.(a) the *presse-artère* having been substituted for the pin. Thus, a *presse-artère* having been placed on each of the arteries, it, with its vessel, was made to go through a half rotation, a moderate amount of torsion being thereby ensured.

The following advantages may be claimed for the tubular *presse-artère*:—

1. The smallness of the space occupied by it.
2. Facility of application and removal.
3. Accurate graduation of the compression by means of the fine screw arrangement.

ON THE PATHOLOGY OF TYPHUS,

AND ITS CONNEXION WITH LESION OF THE CERVICAL PORTION OF THE GREAT SYMPATHETIC NERVE.

By Dr. R. BEVERIDGE,
Physician to the Royal Infirmary, Aberdeen.

So little has been ascertained of the alterations by disease of the great sympathetic or ganglionic system of nerves, that it can hardly be said to have a pathological history at all; yet it is scarcely conceivable that so extensively distributed a part of the nervous system can be exempt from disease, while the cerebro-spinal centres are so liable to it, and while so-called functional disorders of the parts supplied by this system are so common—disorders which, being usually unattended with post-mortem appearances of any local lesion, seem to invite us to look elsewhere for their explanation, and in no direction more hopefully than to that system of nervous centres which distributes its ramifications to the coats of the blood-vessels, and which experiment has shown exercises a powerful influence over the circulation. Still, however much theory might lead us to infer the possibility of lesion in these centres, actual observation has gone but a very small way towards demonstrating its existence. With the exception of a few cases that have been published, most examinations of this system of nerves have failed in eliciting any definite or uniform lesion in connexion with any special form of disease. In a case of exophthalmic goitre, which occurred in the Aberdeen Infirmary, under the care of Dr. Reith, and of which the particulars were published in the *Medical Times and Gazette* of Nov. 11, 1865, I demonstrated the existence of extensive enlargement of the cervical ganglia of the sympathetic, and from that case was led to examine the condition of the nerve in typhus, with the result of finding in every case alteration of structure there to a greater or less extent.

From 1863 to 1865 an epidemic of typhus prevailed in Aberdeen, and during that period upwards of 1700 cases were treated in the Infirmary, and of these about 230 died. Post-mortem examination of these fatal cases was made as often as permission could be obtained from the relatives (which unfortunately was most frequently refused), but for the first eighteen months without any definite result being obtained. All the important organs of the body were examined, but especially the intestines, lungs, and brain; and in none was any constant lesion found. The intestines were usually found natural; sometimes, though rarely, with slight appearances of congestion here and there—never with ulceration. The lungs never presented any trace of deposit; they were usually natural, or with merely passive congestion behind, the result probably of position; sometimes this last was found to drift into low pneumonia. The brain usually presented the appearance of congestion, but without any effusion, and without any alteration in texture of the cerebral substance or of the membranes. It was not, however, till the sympathetic nerve was made the

(a) Acupressure. By William Pirrie, C.M., M.D., A.M., F.R.S.E., and William Keith, M.R.C.S.E., M.D. London: John Churchill and Sons. 1867.

subject of examination that any definite result was obtained. When attention was directed to this, it was found to present lesion in the form of enlargement caused by granular deposit of some of the cervical ganglia, in every case examined.

The extent to which this lesion went, and its chief situations, will be best shown by the following short summary of a few cases :—

Case 1.—A. M., aged 60; almost moribund when admitted; eruption well marked; died next day. The temperature of the two sides of the body was observed to be different. Post-mortem examination showed the cervical ganglia of both sides to be affected, but to a greater extent on the left than on the right side. The following are the measurements, which, however, fail to convey a very good idea of the amounts of enlargement:—Superior cervical—right, 1·24 × 0·25 in.; left, 1·1 × 0·25; nearly natural. Middle cervical—right, 0·5 × 0·15; left, 0·5 × 0·18; both enlarged. Lower cervical—right, 0·25 × 0·1; left, 0·25 × 0·2; right nearly natural, left enlarged.

This was the first case observed, but as measurement alone failed to bring out clearly the changes, the weights are given in the remaining cases. It may be premised that in weighing them the connecting cords were cut in the centre and weighed with the ganglia, while the branches were cut short; the weights of the ganglia therefore include half the cords connecting them with the adjacent ones. The natural weights may be taken to be—Superior, about 3 gr.; middle, ½ gr.; lower 1 gr.

Case 2.—A. A., aged 66; only two days in Hospital; eruption well marked. Enlargement of the ganglia of both sides, but especially of the upper and middle, thus:—Superior—right, 1·41 × 0·26 in.; weight, 3·5 gr.; left, 1·32 × 0·26 in.; weight, 5·2 gr.; both enlarged. Middle—right, 0·53 × 0·16 in.; weight, 2 gr.; left, 0·56 × 0·2 in.; weight, 2·5 gr.; both much enlarged, especially the left. Inferior—right, 0·31 × 0·12 in.; weight, 1·1 gr.; left, 0·31 × 0·15 in.; weight, 1·2 gr.; both slightly enlarged.

Case 3.—J. S., aged 26; fourteen days in Hospital; eruption faded, fever almost gone; died from pneumonic complication. Superior and middle ganglia natural; inferior on right side natural; on left enlarged thus: Measurement, 0·48 × 0·23 in.; weight, 5·2 gr.

Case 4.—A. R., aged 24; four days in Hospital; head symptoms exceedingly well marked. Considerable enlargement of sympathetic, but very unequally distributed. On the right side the affection seemed limited to the middle ganglion, which, however, was very much affected, measuring 0·65 × 0·2 in., and weighing 2·8 gr. On the left side the affection was more diffused, and was not limited to the ganglia, but extended to the connecting cords, so that the former were not so abruptly defined as usual. Superior, 1·1 × 0·21 in.; weight, 3·6 gr.; middle, 1·1 × 0·145 in.; weight, 1·5 gr.—the limits here being exceedingly ill marked—inferior, 0·54 × 0·2 in.; weight, 2·2 gr.

Case 5.—A. D., aged 50; ten days in Hospital, disease disappearing. Sympathetic of right side healthy; of left slightly enlarged, thus:—Superior, 1·0 × 0·2 in.; weight, 4·3 gr.; middle either wanting or coalesced with inferior, probably the latter, there being at the lower part of the neck but one ganglion measuring 0·44 × 0·175 in., and weighing 1·5 gr.; the middle and inferior ganglia of the opposite side weighing together 1 gr.

It will be noticed that the superficial measurements did not form so good a criterion as did the weights of an amount of enlargement which at once struck the eye as considerable. The cause of the enlargement seemed to be the presence of a granular amorphous matter scattered in the substance of the ganglia, and rendering them not only larger but firmer and harder than usual. The total number of cases examined was ten, all of which presented similar appearances. The epidemic having been on the decline before my attention was directed to this part of the body as the seat of a possible lesion, these constitute the whole number of cases which I have had the opportunity of examining since the lesion was first noted; but the uniformity of its occurrence leads to the supposition that it has a definite connexion with the symptoms of the disease. In this view, the pathology of typhus and its connexion with typhoid or enteric fever may be supposed to stand thus:—Both are blood diseases accompanied or characterised by a tendency to the formation of granular amorphous deposits, which after a time are removed, but which by their presence produce to a certain extent a localisation of the symptoms. In typhoid fever these deposits are chiefly in the sub-mucous tissues of the small intestine; hence the local symptoms there refer chiefly to the abdomen, and the head is but little affected. In typhus, again, the deposit would seem to take place in the cervical ganglia of the sympathetic; the function of these is therefore interrupted; the great vessels of the neck, being in part paralysed in their muscular coat, dilate, producing interference with the circulation of the brain—*i.e.*, a larger supply of blood with diminished flow—hence a tendency to accumulation of blood in, and an impaired function of, that organ. The local symptoms of typhus refer chiefly to the brain, and all indicate partial suspension of the function of its different parts; impaired action of the mental faculties, as indicated by confusion of ideas, delirium, etc.; impaired perception, by dulness of all the senses; impaired volition, by inactivity of the voluntary muscles. Lastly, such an affection of the cervical ganglia would explain the weak action of the heart, and the connexion between this weakness (as indicated by the rapidity of the pulse) and the intensity of the delirium, and other cerebral symptoms. If the pulse remains under 100, it is not usual for the delirium to run high; but if the pulse becomes very quick, it almost invariably occurs that the head symptoms are severe. The cervical ganglia supply the main nerves to the heart as well as to the vessels of the brain; and therefore, if these two sets of symptoms owe their origin to the one cause—lesion of these ganglia—it is evident that in their intensity they will rise and fall together.

I freely admit that the cases observed are too few to render this anything more at present than a possible explanation, but the field thus opened up is an interesting one, and as I have not at present an opportunity of prosecuting it further (the typhus epidemic here having died out), I publish these results in the hope that they may lead to further investigation of the subject.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASE OF CHRONIC ULCER OF THE STOMACH LEADING TO CANCEROUS DISEASE OF THE PERITONEUM AND ASCITES, WITH OBSTRUCTION OF RECTUM BY A SHARP BEND IN ITS COURSE.

(Under the care of Dr. OWEN REES.)

The case was that of a woman aged 30, who was admitted to Guy's Hospital under Dr. Rees's care, March 6, for ascites and symptoms of partial obstruction of bowel. She had had pain in the abdomen for three years, which was worse after eating; for twelve months she had vomited her food soon after each meal. Three weeks before admission abdomen began to swell, the gastric disturbance still continuing. She, on admission, complained of great pain in passing her motions. This had troubled her for some time. It began some three years before in costiveness. She described her motions as containing pus. Examination per rectum showed an obstruction about three inches up the passage, the finger being prevented going further, but no disease of mucous surface was found. Per vaginam and per rectum a solid mass was felt to the left and back part of the pelvis. The bowels were not moved after admission, and, as she suffered from great pain, the operation of colotomy was proposed. She would not, however, submit to that. She sank and died, vomiting continuing to trouble her to the last.

On inspection Dr. Moxon found a very large quantity of liquid in the peritoneal cavity, and this was in such a state of tension that, when a puncture was made, a jet rose more than eighteen inches, and continued to spurt with force for some minutes. The peritoneum was everywhere singularly tense, thickened, and indurated from having in its substance a hard white gristly formation which was distributed so that while no square inch was free, the chief amount was under the diaphragm. This was covered with the growth which here rose in low elevations (generally it projected very little above the surface). The next greatest quantity was in the peritoneal lining of the flanks, next on the pelvic wall, and least on the viscera except the omentum, which was gathered up to form a gristly cord of one inch diameter along and below the edge of the stomach and above the colon. The effect of this formation on the peritoneum was everywhere to contract it, so that all the movable parts were drawn together, the traction being greatest where the formation was in considerable amount, so that the patches of it had a curious scar-like or keloid appearance.

But on raising the peritoneum the tissue beneath was most perfect, being a lax delicate cellulosity, as is natural, the duodenum and the gall-bladder rising up as if from under severe compression when the thick peritoneum was taken off their surface. This being the general state of the peritoneum, the condition of the stomach then drew attention, as it was very small and as hard as cartilage. The peritoneal growth, however, did not seem to thrive especially over it, but came over the stomach from the lesser and greater omenta, and then ceased gradually after one inch spread, ceasing by convex-growing margins. On opening the stomach, its walls were in the pyloric three-fourths about half an inch thick, the cardiac fourth being about a quarter of an inch thick. The thickness of the pyloric part was not uniform, but was by far greatest in the lesser curvature, where there was an old ulcer two inches in diameter with a callous base and round edges, the ulcer cutting through the submucous and muscular coats, and having its base in the thickened subperitoneal coat. The thickness of the muscular wall was very remarkable; it measured a quarter of an inch. The mucous surface was raised in low lobed elevations; it was highly congested, the other coats being anæmic. The cause of the obstruction in the rectum was found to be this, that the peritoneum and subperitoneal tissues of the recto-uterine pouch were dense and contracted, so as to give the rectum a sharp bend; there was no constriction of the bowel. The ovaries were firmly fixed to this thick peritoneal mass, especially the left, but they had resisted the disease, and were quite healthy. The Fallopian tubes were so contracted by the formation that they were like little thin pipes, ending in a short tassel. There was no sign of secondary disease in any of the viscera, nor were the glands affected. Microscopic examination of the growth in the peritoneum showed a texture of fibrils with numerous small nuclei that belonged to small cells whose walls were connected with the fibrils. The cells were not easily made out, the appearance being as though the nuclei were naked among the fibrils, which had a disposition to wave, like ordinary areolar tissue. The submucous tissue of the stomach, where it was a third of an inch thick, yet only showed common areolar tissue. The mucous membrane was in a state of remarkable degeneration, the gastric tubules being about one-fourth to one-third their natural size and without epithelium, containing only granules. Between them was a quantity of areolar tissue.

Dr. Moxon remarked on this case as important, as it seemed to be an example of simple ulcer of the stomach of old date, leading, by its approach to the peritoneum, to a disease of that membrane which has much of the nature of malignant or cancerous growth. The ulcer probably dated from the time when, twelve months ago, she vomited her food. The formation in the peritoneum was much more recent, though he believed it must have been longer growing than six weeks, during which her abdomen was swollen. It was difficult to find a name for the disease of the peritoneum. The words malignant or cancerous certainly were not well suited, but no word that he knew would meet the difficulty. What we want to express is an independently progressive, formative, and organising disease of the membrane of the nature of tumour, but the word tumour is scarcely applicable to such slight elevations on a surface, and again, unfortunately, that word suggests swelling, whereas the peritoneum had contracted rather than swollen under its growth, until the contraction had produced two remarkable results—first, it bent the rectum so as to cause obstruction of its channel, while the channel was as capacious as ever if only unbent; and, second, by opposing the ascitic swelling, it created such a tension within the cavity that on making an incision the liquid jetted out with great force. The word tumour, again, will not give a good adjective; "tumorous" seems impossible. In calling it cancerous he used the word in a loose clinical signification, for which he thought it was best adapted certainly. The microscopic structure was not at all that of scirrhus, to which some would limit the name cancer; indeed, its minute structure was rather that of a slowly-growing sarcoma, little more active than mere fibrous formation. It was rather by the direct appearance and the distribution of the formation that its tumour nature appeared. The round-growing edges of the patches and the vascularity around them, together with the fact that it was chiefly found on the diaphragm and flanks, made the case correspond with undoubtedly malignant formations. Dr. Moxon had observed this distribution nearly constantly in peritoneal cancer. It was remarkable that the ovaries had escaped, as they are very liable to participate in peritoneal growths. The stomach ulcer had all the characters of an old simple ulcer of the lesser curvature—Cruveilhier's ulcer—and the probability that this had set up the peritoneal disease made the case unusually interesting.

THE INFIRMARY FOR EPILEPSY AND PARALYSIS.

ON THE USE OF GALVANISM IN THE TREATMENT OF CERTAIN FORMS OF EPILEPSY.

(Under the care of Dr. ALTHAUS.)

Galvanic and Faradic electricity are extensively used at this institution in cases under the care of Dr. Althaus and Dr. Meryon. For faradisation machines constructed on Stöhrer's principle are chiefly employed, while for galvanisation a modification of Daniell's battery is preferred, which furnishes a constant current always ready to act, and which only requires cleaning every three or four months. By means of an ingenious contrivance put into practice at the Infirmary, the continuous current can be used in different parts of the building, so that it is not necessary to carry paralytics into the electrical room, as is the case in other institutions. The battery, which is of somewhat considerable size, is enclosed in a cupboard in the consulting-room, and each set of cells is connected, not with one (as is usually the case), but with several telegraph-wires. One set of these wires is conducted straight to a pole-board fixed on the wall over a couch, upon which patients can sit or lie down while being galvanised. The cells are arranged in sets from five to five, and the different points of contact are marked by numbers, so that it is only necessary to put the conducting-wires into one or another of the several perforated knobs in order to have at once a weak or powerful current *ad libitum*. The direction of the current is likewise marked on the pole-board. Another set of telegraph wires, enclosed in an india-rubber casing, is carried up through the ceiling into the first floor, where a pole-board, similar to the one just described, is fixed on the wall between two beds, and where the current may be had with the same convenience as downstairs, it being, of course, requisite that the battery should only be used at one place at a time. This novel arrangement, which is found to work extremely well in practice, has been suggested by Dr. Althaus, and carried out by Mr. Foveaux, of the firm of Weiss and Son. An excellent gymnasium, constructed by Messrs. Snoxell and Spencer, is placed in the out-patients' room, where it is eagerly used by both in- and out-patients.

We will to-day give some details of a new application of electricity, which Dr. Althaus has successfully adopted during the last few years in the treatment of certain forms of epilepsy which resist other modes of cure. It should be understood that only the continuous current, such as produced by a constant battery of uniform strength, can be expected to be of service in that disease, as it is the only form of electricity which (in the opinion of Dr. Althaus) has a decided action on the nervous centres, and is able to produce a profound modification in the finer processes of nutrition carried on in those parts. The induced current has no effect on the nervous centres, and no, or only a very slight, catalytic action on the peripheral tissues. It is therefore, as a rule, useless in the treatment of epilepsy; indeed, the only cases of that disease in which it has been of service have been those where the menstrual function was dormant or irregular, and where it occasionally proved valuable as an emmenagogue.

The mode of galvanisation is either "central" or "peripheral," while in certain cases both methods are combined. It may be described as follows:—(1) The current is sent through the head, the positive electrode being placed to the forehead and the negative to the occiput, or one electrode to the left and the other to the right mastoid process. (2) It is directed to the cervical sympathetic, the positive electrode being placed to the transverse processes of the cervical vertebræ, while the negative is alternately applied to the ganglion cervicale superius in the stylo-mastoid fossa, or to the ganglion inferius near the manubrium sterni, at the internal edge of the sterno-mastoid muscle; and finally (3) the current is applied to those peripheral nerves in the domain of which an aura is frequently or occasionally exhibited. Where the aura starts from a mucous membrane, the negative electrode is applied to it, the positive being at the same time placed in such a position as to facilitate the transmission of the galvanic influence right through the nervous district which appears to be deranged; but where the aura starts from the skin the position of the poles is reversed. In certain cases it has been found useful to apply two, or even all three, of these proceedings together.

It is indispensable, in putting this treatment into practice

that the electricity used should be of low tension, and that the application should be very short. For the brain and the sympathetic nerve Dr. Althaus rarely goes beyond one minute, and for the peripheral application not beyond four or five minutes; while the number of cells used for central galvanisation varies from five to fifteen, and that for peripheral application seldom exceeds twenty. Long and strong operations interfere so powerfully with nervous function that they do more harm than good, the chief symptoms observed under such circumstances being sickness, giddiness, headache, faintness, and increase of morbid action. In patients where the mastoid processes are thickly covered with hair, of course a more powerful current is required to overcome the considerable resistance which is offered to its passage by that badly conducting substance. Where the hair was very thick, from thirty to forty cells have sometimes been used. The proper test in such cases is the sensation experienced by the patient, which should be distinct, but not in the least painful. As a rule, patients describe these applications as pleasant, and only very few seem to dislike them.

We now proceed to give, as concisely as possible, a few cases illustrative of this treatment, which is not set forth as a specific for every case, but as a useful adjuvant, which, under certain circumstances, helps to turn the balance in favour of recovery, where apparently nothing else would do so.

Case 1.—*Convulsive Fits and Attacks of Petit Mal—Galvanisation of Medulla Oblongata and Cervical Sympathetic.*

Mary B., aged 16, one of fifteen children of the same mother, was admitted an out-patient on February 5, 1867. Mother says that none of her other children have had fits, but that she had a succession of frights while she was in the family-way with this girl. The patient herself had her first fits after a fright, some other children having "played at ghost" with her in a cellar. This was when she was 5 years of age. Some years afterwards she had another fright, by a woman coming up to her while she was playing in the street, and swearing at her. After this she has never been quite free from fits. The convulsive seizures are well marked, commencing with a scream; the head is turned to the side, there is foam at the mouth, the tongue is bitten, the urine often passed involuntarily. The convulsion lasts four or five minutes, during which there is complete loss of consciousness. After the fit the patient sleeps for half an hour or an hour, and then awakes with a bad headache, and speaks slowly and thickly for some time. There is no aura with these fits, which occur at intervals of two or three weeks. Sometimes she has a succession of five or six in the same day; at others only one or two at a time. The attacks of petit mal are much more frequent, as she has sometimes thirty or forty such seizures in one day, and rarely goes two or three days without any. They are as follows:—She suddenly stops in the middle of saying or doing something, stares vacantly, and remains fixed for about a minute, after which a flush spreads over her face, she gives a deep sigh, and then resumes her previous occupation. Intellect dull, memory bad; she seems indifferent to everything; has no power of application; is very irritable and difficult to manage; appetite ravenous; general health satisfactory. Not yet menstruated. Ordered potass. brom. gr. xv. ter die.

March 12.—Has now taken the bromide rather more than a month, and is decidedly better. Has had only three convulsive attacks, which were not so severe as usual; and recovered better from them. Speech improved; looks brighter, and takes more interest in things. Attacks of petit mal the same. Has lately complained much of pain at the back of the head. Ordered to go on with the bromide; empl. lyttæ to nape of neck.

April 5.—No convulsive attacks during the month, but "loses herself" constantly. Continue bromide, gr. ¼ of argenti nitr., night and morning.

May 10.—No convulsive seizures; petit mal as bad as ever. Continue bromide, gr. ss. of argenti nitr. bis die.

June 14.—Same report. Galvanisation through both mastoid processes and of cervical sympathetic twice a week. Discontinue argenti nitr.; continue bromide.

July 9.—Much better in every respect. Since galvanism was commenced, has only on three occasions had fits of petit mal, and then only four or five where she had thirty before. Mental health considerably improved.

November 12.—Has had altogether ten applications of galvanism. Had last attack of petit mal early in August; last convulsive attack on March 3. Apparently well. Ceased attendance.

(*To be continued.*)

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Medical Times and Gazette.

SATURDAY, APRIL 24, 1869.

BREACH OF THE VACCINATION ACT.—THE SHORTCOMINGS OF THAT STATUTE.

A case of some importance under the Vaccination Act came before the Leeds magistrates last week. A chemist of the name of Toulson was summoned by the Leeds Board of Guardians for non-compliance with the provisions of the Vaccination Act. It appeared that the defendant had a child nine months old, which he refused to have vaccinated. The defendant told the Inspector of Vaccination that he had a very great dislike to that proceeding, and would rather submit to be fined than allow a child of his to undergo the operation. Mr. Toulson, in reply to the charge, stated that "during his extensive Medical (!) experience he had seen so many evils arising from the vaccination of children that he could not really comply with the Act. There was no positive proof that vaccination had ever saved a child from small-pox, and therefore it was very unjust to enforce such a law." The Court said they were not there to make laws, but simply to carry out their provisions. They would, however, remand the case for a week to give the defendant an opportunity of complying with the law. Mr. Toulson said a remand would lead to no satisfactory result, as he should not submit to the law. Mr. Lampeu, who appeared for the prosecution, wished it to be clearly understood that the payment of a fine would not exempt Mr. Toulson, as the guardians had the power to summon him under other clauses of the Vaccination Act, and this they would do. Mr. Toulson persisted in his refusal, and a fine of 20s. and costs were paid by Dr. J. P. Payne on behalf of the Leeds branch of the London Anti-compulsory Vaccination League.

This case gives rise to serious reflections as to the value of the Act in question. It is evidently useless to argue or to advance facts against the opinions held by such persons as Mr. Toulson. They refuse to listen to reason or to profit by experience. Moreover, if Mr. Toulson be further prosecuted under the Vaccination Act, he will be able to fall back upon the Anti-compulsory Vaccination League, and escape without any personal sacrifice? Here let us say that it becomes a grave question how far a "league" formed for the avowed and especial purpose of defeating the operation of an Act of Parliament is within the law. Is such a combination different from any other combination which has an illegal object in view? Are the members of such a "league" exempt from penalties? Are they, or are they not, liable to be prosecuted for conspiracy? This is more a question for the lawyers than ourselves, but it is one that, if the present organised system

against vaccination be persevered in, must, sooner or later, occupy the attention of the Legislature. If the Vaccination Act cannot effectually reach offenders against its clauses, either it must be made more stringent, or proceedings under it must be dropped; for it will never do to have controversies in every small town with "anti-vaccination leagues," and vaccination "martyrs" coming off victoriously in their conflict with law. Clearly, fines are inoperative. Singularly enough, in the very columns of the *Leeds Times* which records the recalcitrant conduct of Mr. Toulson, there is the account of a contractor who, having been repeatedly fined for cruelty to his horses, was, on this occasion, sent to the House of Correction for six weeks. In any future amendment of the Vaccination Act a clause might be inserted that would empower a board of magistrates to inflict imprisonment upon men weak or foolish enough to repeatedly ignore the statute. To Mr. Toulson and his friends we would recommend the perusal of one of the most graphic chapters of "Henry Esmond," by the late W. M. Thackeray. That chapter refers to the terrors and miseries which resulted in times gone by from the outbreak of small-pox as an epidemic in one of the rural districts of England. No one who knew him will accuse Thackeray of illiterate opinions or of narrow views; he was essentially a large-hearted man. If Mr. Toulson, after reading the chapter referred to, still maintains the opinion respecting vaccination which he enunciated before the Leeds magistrates, it is hopeless to expect that he will ever rise to the point of viewing vaccination as it appears to all sensible and thoughtful men.

DR. LETHEBY ON THE SEWAGE CONTAMINATION OF POTABLE WATERS.

The highly interesting paper which Dr. Letheby read last Saturday at the meeting of the Metropolitan Association of Medical Officers of Health led, as might naturally have been expected, to so warm and eager a discussion that it was found necessary to adjourn the meeting for a fortnight in order to allow time for its completion. We are glad that this course was adopted, for the controversy is of such great public importance that no time bestowed upon it is wasted: and the Medical Profession has a right to insist that it shall not be suffered to drop until from amongst the mass of contradictory statements with which it is encumbered, some definite conclusions shall have been evolved.

The discussion the other evening was somewhat hurried, and was carried on almost entirely by those who shared the views of Dr. Letheby, and the questions at issue being therefore still *sub judice*, we shall in the following remarks abstain as carefully as possible from expressing an opinion on one side or the other, our object being rather to assist our readers in following the course of the arguments than to tempt them to adopt any cut-and-dried conclusions.

The circumstances which have awakened the controversy in its present form—for in one form or another it has been waged for many years—may be thus briefly stated. When a few years ago Dr. Hofmann resigned the task of analysing the London waters, Dr. Frankland was warmly pressed to accept the office, and he, having regard to its great public importance, felt himself bound, somewhat reluctantly, to give his consent. It cannot be doubted that his decision was a right one, although, as scientific men, we cannot help regretting deeply the interruption which it involved to the splendid train of discoveries with which at that time he was enriching science. On a careful scrutiny of the methods then in use for the analysis of water, he found that not one of them could be said to give trustworthy positive, or even comparative, results. All were liable to some fatal objection, and although an idea of the character of the water might often be obtained by a comparison of the results yielded by several of them, it was, to use an old metaphor, like taking the time from the mean indication of a number of clocks all known to be wrong, instead of trusting to one good chronometer. As a substitute for these rough processes, Dr. Frankland about a year ago published, in conjunction with Mr. Armstrong, a new method, which, for ingenuity and delicacy, is a perfect marvel. By the aid of this method, analyses of water of a character different to any which had been published before were soon multiplied, and it became necessary to adopt some generally intelligible means of interpreting their results. This interpretation had become the more important from the circumstances of grave suspicion which had attached to a portion of the metropolitan water supply during the cholera epidemic of 1866. The events of that year will be fresh in the memory of every one of our readers. The sudden and mysterious localisation in East London, the rapidly organised and carefully conducted inquiries, and the conclusion so steadily maintained by the Government officials and so strenuously denied, not only by the supporters of the water companies, but by independent chemists and observers, that choleraic pollution of the water was the main cause of the explosion—all these are familiar to every Medical man. Incited by these circumstances and by his own belief of the Registrar-General's theory, Dr. Frankland proceeded to the interpretation of his analyses. Firmly convinced that, after making a small deduction for the amount contributed by rain, the whole of the nitrogen found in our English river and well waters arises from the present or previous presence of animal exuviæ in the water, he sought about for a means not only of recording the quantity of nitrogen, but of exhibiting the amount of contamination to which this nitrogen found by analysis might be supposed to correspond. It is obvious that any arbitrary standard might have been selected. The quantity of human excrement, of urea, or even of average farmyard dung, which would contain one part of nitrogen, might have been used as a measure. Average London sewage was selected as the standard, and from the results of numerous previously recorded analyses, every one part of nitrogen was taken as equal to 10,000 parts of sewage contamination. So the "sewage contamination" of the water is calculated, and this contamination is recorded as "previous" or "present," according as the nitrogen is found in the oxidised or the unoxidised condition. If another standard had been employed, we might have had "previous excrement contamination," "previous urea contamination," or "previous dung contamination" instead.

It was to the criticism of these calculations, as well as to that of the method on which they are founded, that Dr. Letheby's able address was devoted. He commenced by a short sketch of the history of the subject, in which he pointed out the great improvement which had been effected by the water companies in the quality of their water during the last few years, and declaimed in strong terms against the vague fears which had of late been unnecessarily excited by persons holding a "pseudo-official" position in regard to the present quality of those waters. While admitting the hurtfulness of excretal pollutions of water, he expatiated with great force on the self-purifying power which running water possesses, maintaining that sewage when diluted with twenty times its volume of water is completely oxidised during a run of ten or twelve miles down a stream. He then described, with the skill of a practised lecturer, the various modes which had been suggested for effecting the analysis of water, and showed experiments in illustration of many of them. The old ignition process was, he remarked, no longer used, the fact being that it was completely demolished by Frankland and Armstrong in their before-named paper. In describing the permanganate of potash process he alluded to the objections which had been made against it, but contended that the most important kinds of organic matter were destroyed by it. Of Frankland and Armstrong's method he said that it was difficult, expensive, and liable to many sources of error. It was faulty in the extreme, and its indications were entirely untrustworthy. He next alluded to the sources of the nitrogen of natural water, attributing a very much larger proportion to

rain-water than that assigned by Dr. Frankland, and argued that the nitric acid so often found in the water of chalk wells could not have arisen from sewage. In conclusion, he inveighed strongly against the use of a term so calculated to produce alarm as "sewage contamination," and remarked that the Registrar-General was not satisfied even with the strong language of Dr. Frankland, but described the pollution as "tons of stuff in 100,000 tons."

Dr. Frankland, in reply, after alluding to the circumstances under which he accepted his present position, urged that his process was not nearly so difficult as had been alleged; that, in fact, it was constantly performed with perfect accuracy, even in first trials, by students in the Royal College of Chemistry; and that it was far more accurate than any other which had ever been employed. He stated his belief, founded on many observations and experiments, that the self-purifying power of running water was not nearly so great as Dr. Letheby supposed; that, in fact, the amount of oxygen present in solution in water was not sufficient to oxidise more than a small fraction of the organic matter often present; and that the run of ten or twelve miles assumed by Dr. Letheby would produce very little effect on sewage-contaminated water. He could not conceive how any one could doubt of the origin of the nitric acid so often found in chalk wells. The rock was very porous, the water of the wells was derived from surface drainage, and the land above was constantly manured with the excreta of animals. Moreover, it mattered very little whether the nitrogenous matter was of recent or prehistoric date. Pasteur had shown that putrefaction was a process involving the co-operation of low forms of life, and the putrefaction of an animal which had been buried in the earth for ages was as likely to communicate noxious properties to water as that of a dog which died a few weeks ago.

For the remarks made by the other speakers we must refer to our report in another column, merely observing that Mr. Hawkesley appeared, in his zealous advocacy of Dr. Letheby's views, to have misunderstood one of Dr. Frankland's statements. He, and to a certain extent Professor Ansted also, spoke on the supposition that Dr. Frankland denied that *any* oxidation took place in running water, whereas, if we understood the statement correctly, he only assigned to the process a less rapid action than Dr. Letheby had fixed.

We must conclude by repeating our satisfaction that a further discussion is to take place on this interesting subject, for it must not be forgotten that some of the most important points in the case have not as yet been touched upon.

THE WEEK.

TOPICS OF THE DAY.

The subject of pauper emigration, introduced for the consideration of the House of Lords on Friday last, was discussed by that august assembly in a manner which, however serious, scarcely rose to the requirements of the situation. Lord Overstone and Lord Grey repeated the story of our wonderful national prosperity, the amount of money we save annually, the high rate of wages, and argued that with such a state of things it was simply impossible that there could be any necessity for sending to other fields of labour our able-bodied countrymen. We may be allowed to doubt with Lord Houghton whether the capital of the country has increased in the last three years to the extent stated, but the reasoning of Lords Overstone and Grey utterly fails to convince when placed side by side with the statistics published by the Poor-law Board. It is useless to say that there is no necessity for providing for a pauper population which is increasing at a rate of 5 per cent. per annum, or for able-bodied poor whose numbers increase at the rate of 7 per cent. annually, because capital is accumulating in the hands of a few, and we have not yet got over the commercial panic. According to this reasoning, the ratepayer is to keep the pauper until in the course of years the capitalist has struck out a new line of industry in which he can be employed, and of which ultimately the capitalist will reap the principal benefit. In the meanwhile, the action of certain great natural laws is kept out of sight, such as, first, the natural increase of the population; secondly, the inherent power of pauperism to produce paupers; and thirdly, the enormous consumption of capital represented by the maintenance of a million of people who take their all from, and add nothing to, the national wealth. We are very glad to obtain from Lord Granville the assurance that the question of pauper emigration is already before the Government, and that Mr. Goschen has now under his consideration measures for an improvement in the existing regulations for promoting emigration. The subject is an Imperial one, but it is one on which Medical men, through their contact with all classes of society, are well qualified to give an opinion. And we believe that few of us who are acquainted with the congested condition of our great centres of population would hesitate to prescribe active derivation.

On Saturday last Dr. Brewer, M.P., the President of the Metropolitan District Asylums Board, laid the first stone of the asylum to be erected at Caterham for the imbecile poor at the cost of £129,000. The Leavesden Asylum is to cost £1000 less. Each will accommodate 1500 imbecile patients. The buildings of both asylums will be on the block principle, the blocks to communicate by corridors. For a charity nothing can be more excellent; but what do small struggling tradespeople and artisan ratepayers, with imbecile mothers and idiot children depending on them, think of the blocks and corridors—to say nothing of the "sumptuous *déjeuner*," "excellent in all its details," "supplied by Messrs. Staples, of the Albion and London Tavern Company" (*vide Times* report), which was served to the 200 gentlemen who came to witness the ceremony, doubtless out of compassion to the imbecile paupers?

In the late contest for the Assessorship in the University of St. Andrews 960 graduates voted. Of them 514 voted for Dr. Richardson and 446 for Dr. Cleghorn, giving to the former a majority of 68. The whole constituency of graduates numbers 1228, and that 960 should have voted proves at least that the great body of graduates, scattered as they are, value, and will use, the privileges which the constitution of the University gives. This is the first time a poll has taken place in an election of Assessor.

Dr. J. Thompson Dickson, a Medical graduate of the University of Cambridge, and Member of the Royal College of Physicians, has been elected to the Medical Superintendentship of St. Luke's Hospital. We hope that some steps will soon be taken to bring this Hospital to nearer accord with modern ideas, and that one of the first steps will be to make the Resident Medical Officer a superintendent in reality as well as in name.

The principle of Mr. Wheelhouse's Bill for exempting public Hospitals and Infirmaries from liability to rating can hardly be asserted on grounds of justice. Were it proposed to grant the privilege of exemption to certain Hospitals and Infirmaries throughout the kingdom, on the authorities of these Hospitals furnishing evidence that a specified amount of benefit was conferred upon the population of the counties and towns in which the Hospitals and Infirmaries are situated, such an exemption would probably meet with the assent of the majority. But to give a right of exemption to all special Hospitals, Infirmaries, and Dispensaries, to Dispensaries for Diseases of the Bladder and Diseases of the Heart, to Cancer Hospitals, Dental Hospitals, and Epileptic Infirmaries, to Dispensaries for the cure of Venereal Diseases, Ulcerations, and Diseases of the Womb—all of which, and many more, are specified in the schedule of the Bill—would be a monstrous injustice to the ratepayers, would forward no end of real charity, and would offer a premium for the increase of

a system which tends to foster quackery in the place of legitimate Medicine, demoralises the population, and injures alike the status and material prosperity of the Medical Profession. To occupy a large portion of the rateable area of a parish for such purposes is to lay an additional tax upon every ratepayer—an imposition which is contrary to all principles of justice, and cannot even be excused on a plea of charity.

The Bill introduced by Mr. Dixon for amending the Adulteration of Food Act of 1860, and for extending its provisions to drugs, appears to be an excellent practical measure. Adulterators of food, drink, and drugs may be fined fifty pounds for the first offence, and for a repetition be imprisoned for six months with hard labour. Sellers of adult rated articles may be fined twenty pounds, and for a second offence their names are to be published in the newspapers. Analysts and commissioners are to be appointed; and in any town or district where there is an analyst a purchaser of food, drink, or drugs may demand to have any article he buys analysed on payment to the inspector appointed under the Act a sum not less than one shilling or exceeding five shillings. Of course such a measure will be opposed by the trading interest, headed by their champion, Mr. Bright. But if Parliament is really in earnest in promoting the physical and moral well-being of the people, and wishes to put a stop to a system which is injurious, dishonest, and disgraceful, it can hardly pass a more practical measure than the one prepared and brought in by Messrs. Dixon, Kinnaird, and Goldney.

As usual, the list of candidates for election into the Royal Society is largely composed of Medical men. That Medicine is, *par excellence*, the scientific Profession might be shown from the large proportion of Fellows of the Royal Society which our Profession has furnished since the institution of the Society in the reign of Charles II. The following are the names of Medical men in this year's list of candidates:—Dr. J. J. Bigsby, Mr. Frank T. Buckland, Mr. George W. Callender, Dr. Walter Dickson, Dr. Alexander Fleming, Dr. E. Headlam Greenhow, Dr. William W. Gull, Dr. G. B. Halford, Mr. Edmund T. Higgins, Dr. James Jago, Dr. George Johnson, Mr. Oliver Pemberton, Dr. Charles Bland Radcliffe, Dr. William Henry Ransom, Dr. J. Russell Reynolds, Dr. George Charles Wallich, and Dr. Samuel Wilks.

The irrepressible young ladies who are desirous of attending Medical classes with young gentlemen have lately attempted to obtain that privilege in the University of Edinburgh. A Miss Jex Blake advanced so far in the matter as actually to obtain from the University Senatus a resolution that she should be admitted to certain of the Medical classes during the present summer session. We are glad to say that this resolution has been met with determined resistance on the part of the students and certain of the Professors. The Medical students petitioned the University Court on the subject, and appeals were sent to the same body by the Professors. As a result the Court have adopted the following resolution:—

"The Court, considering the difficulties at present standing in the way of carrying out the resolution of the Senatus as a temporary arrangement in the interest of one lady, and not being prepared to adjudicate finally on the question whether women should be educated in the Medical classes of the University, sustain the appeals and recall the resolution of the Senatus."

There may be two opinions on the propriety of women studying and practising the science and art of Medicine, but there can be no two opinions, we should think, on the impropriety of young men and young women attending together lectures on Medical and the allied sciences. If women are determined to become Medical Practitioners, they are at perfect liberty to do so, but it is only consistent with decency that they should have their own special schools for instruction and examining boards. If the authorities of the University of Edinburgh do not wish to alienate the goodwill of the larger proportion of their Medical graduates, and wish still to attract students to the Edinburgh school, they will restrict the privilege of attending the Medical classes of the University to one sex only.

It is to be sincerely hoped that the effort which is being made to obtain pensions for the Irish Poor-law Medical officers after a certain period of service will be successful. We were glad to see that this was one of the points urged by the deputation who recently waited on the Lord Lieutenant on the subject of Irish Poor-law reform. A resolution in favour of superannuation for Medical officers was also carried at a conference of Poor-law guardians held in Dublin on Wednesday last week.

Tuesday's *Gazette* announces that a Royal Commission has been appointed to inquire into the operation of the sanitary laws in the towns, villages, and rural districts of Great Britain and Ireland. We are sorry to see in the list of members that the names of several leading sanitarians are conspicuous by their absence.

A report that Dr. Livingstone had arrived at Zanzibar in January last has arrived from the Cape of Good Hope. We regret to add, however, that Sir Roderick Murchison considers the intelligence erroneous.

We may hope for an interesting practical discussion next Tuesday at the "Medico-Chi.," for Mr. Wm. Smith is to read a paper on the treatment of renal calculi by nephrotomy, and Mr. Spencer Wells makes use of his large experience in ovariotomy to criticise the practice of tapping ovarian cysts, and to ascertain the true value of the palliative treatment and its influence upon subsequent attempts to attain a radical cure.

THE INFLUENCE OF THE ARMY ON THE PUBLIC HEALTH.

This subject was treated of by Dr. C. A. Gordon, C.B., Deputy Inspector-General of Army Hospitals, Principal Medical Officer of the South-western District, in a long and most interesting paper read before the Portsea Island Society for the Culture of Science and Literature. We regret that we have space for only very limited extracts; a full report appears in the *Hampshire Telegraph* of the 17th inst. On the subject of rejections of recruits, Dr. Gordon draws conclusions which, although at variance with opinions which we have elsewhere expressed, coming from such a high authority, deserve full attention.

"The proportion of rejections was from 1817 to 1819 as 273 to 1000; in 1835 to 1857, 310; 1854 to 1856, 243; in 1857 to 1859, 242; and in 1864 to 1866, 420. The teachings of these ratios are, I think, very important, and at the same time very sad. They unmistakably indicate, I fear, that the rejections among recruits on account of physical disability are much more numerous nowadays than they were in the long interval of peace that separated the Peninsular War from the Crimean. There is nothing to lead us to suppose that greater care has of late years been bestowed on the inspection of candidates for the ranks of the army than was practised then. We must, therefore, only conclude that the health standard of the masses has decreased."

Dr. Gordon goes on to state that the greatest rate of mortality among soldiers over civilians occurs in the earlier years of military service. He illustrates this statement by referring to the immense mortality among the 1,200,000 lads of 17 or 18 whom Napoleon had to enrol in his army after the disastrous retreat from Moscow; also to the fact that, during the last 3½ years of the Peninsular war, in our own armies the daily percentage of sick was 22½, owing to the want of physical strength in the recruits. Such facts, however, only prove that young lads are incapable of enduring the hardships of war, and we have the authority of the returns of the Army Medical Department for stating that during seven years of peace in the United Kingdom from 1860 till 1866, if depôts be excepted, the mortality of soldiers below the age of 30 has generally been below that of the civil population of even the most healthy districts of England and Wales at the same ages. Immense improvements have of course been effected in the sanitary conditions of our troops since the dates referred to by Dr. Gordon, and it appears now to be tolerably well esta-

blished that it is in the later periods of life that the rate of mortality among soldiers exceeds that among civilians. In speaking of soldiers discharged from the army for disease, Dr. Gordon remarks that during the three years from 1864 till 1866, 15,108 diseased and infirm men were cast upon society from this one source. "We can readily form some idea of the extent to which, a similar stream flowing year after year, the standard of public health becomes thus affected. Year after year this current, like the continuous dropping of water upon stone, affects the stream of public health. Ill-health leads to poverty; poverty to crime in one set of persons—to actual disease and death in others. In either case, wives and children, deprived of the means of obtaining necessary food and clothing, are reduced to like conditions, and all finally serve to fill our poorhouses, our Hospitals, our gaols." Diseases of various sorts have been spread by the army among the civil population. For instance—"Measles and small-pox are believed to have been introduced into Europe by the Moorish armies. The brother of Montezuma died of the latter, which by the Spaniards, under Narvaez, was introduced into Mexico, and the returning crusaders are usually believed to have brought with them leprosy and plague, as well as other diseases, the result of filth and vice." Dr. Gordon next mentions the epidemic of typhus fever, which attacked the civil population of Portsmouth and its neighbourhood on the return of the remnants of Sir John Moore's army in 1809. In some cases, however, the compliment has been returned.

"In all cases that I am aware of, the troops have received cholera from the people, so they have of late years scarlatina, measles, and several other diseases, for one class of which soldiers are entirely indebted to the civil population of our garrison towns as represented by 'soiled doves,' 'the social evil,' or any other euphonious term that best may suit ears polite."

Although a very large amount of disease among soldiers is due directly or indirectly to drunkenness, Dr. Gordon is of opinion that very exaggerated views are sometimes held as to the prevalence of that vice in the army, and that such impressions are in some measure fostered by the very manner in which statistics of it are preserved. Thus individual instances of intoxication are represented in numerical statements in such a manner as to give the impression that the figures really represent men. On the subject of marriage among soldiers, Dr. Gordon states that married soldiers, compared with bachelors, perform a larger proportion of work as 3 is to 2, and that the same rule applies to officers, and that not only are unmarried soldiers thus the faster worn out and cast back upon civil life as invalids, but the greater becomes the drain on civil life to furnish recruits to take their places. The position of soldiers' wives and families is one much deserving attention with a view to amelioration, and much consideration is now being directed to the solution of the problem. Dr. Gordon strongly advocates the employment of soldiers on the construction and repair of their barracks and other military buildings, on the grounds both of preserving their own health and of the saving of public money:

"It is by the employment of hygienic measures that officers in command are enabled so to administer that command as to occasion the *minimum* of injury to the well-being of the men. By judicious consideration to sites of barracks, accommodation, food, clothing, and exercise, much may be effected to mitigate the influence of pernicious climates; by well-directed measures of removal, seclusion, and others of hygienic management, epidemics of cholera and of yellow fever may in certain cases be much modified; and by the successful application of curative science, so important may the results be to the army and to the political condition of the country that battles may be won and doubtful campaigns brought to triumphant ends. A few examples will illustrate this. When in the 16th century the troops of Charles V. besieged Metz, those of France in that fortress had become so reduced in numbers by death, wounds, and sickness, that they determined to capitulate. At this point Paré, a well-known army Surgeon, appeared among them, and by his very presence imparted confidence to the whole garrison. 'We fear not wounds,' said the soldiers, 'now that Paré is among us;' all thoughts of capitulation were thrown to the winds, and those who had been ready to surrender, receiving fresh courage, resisted until their besiegers died by pestilence beneath the walls of the city. Metz was saved to France. Coming down to more recent times, we learn that when, before the battle of Vittoria, Wellington was hard pressed for troops, Sir James M'Gregor was able to discharge between five and six thousand recovered men from the Hospitals of the army, and that these increasing the forces at the disposal of that great commander, enabled him to gain that victory, which without them, according to the historian of the Peninsular war, it was more than doubtful if he, with all his transcendent talent, could have otherwise secured. And to come down to our own day, we have it recorded by several competent authorities, that were it not for the exertions of Dr. Currie, and the Medical officers under him, not only should we have had no heroes from Abyssinia to reward for their wonderful endurance and toil, but the expedition would have melted away by sickness and death; Magdala have been still standing; Theodore reigning uncontrolled, and England's honour been unvindicated. Doubt lessoperations would ultimately be brought to a successful end; but it were now a profitless and unnecessary task to speculate upon the cost of human life and expenditure of the soldier-yielding part of our population at which this would have had to be attained."

The extent and variety of the subjects treated by Dr. Gordon in his paper may be estimated from the above extracts. He has compressed an immense amount of information within the limits of an hour's address, which we consider to deserve preservation in a more permanent form than a newspaper report.

CEREBRO-SPINAL MENINGITIS AT PORTSMOUTH.

A CORRESPONDENT informs us that a well-marked case of this disease occurred at Portsmouth during the past week. The patient was, as usual, a young soldier in the Royal Artillery quartered at Hilsea, and was removed to the General Hospital at Portsmouth. The disease ran its usual course, proving fatal on the fourth day. Sore-throat was one of the early symptoms, and we understand that in some other cases in the Hospital at Hilsea unhealthy inflammation of the throat has latterly been observed.

THE EXTENSION OF THE CONTAGIOUS DISEASES ACT OF 1866.

THE Marquis Townshend has undertaken to introduce to the House of Lords a draft Bill providing for the extension of the Contagious Diseases Act of 1866 to the civil population of the metropolis and provincial boroughs. It is unnecessary for us to enter into the details of the proposed Bill, but we trust that the high character for benevolence of the nobleman who is about to bring it forward will secure for the question a calm and serious consideration, free from the acrimony with which discussions involving religious and moral feelings are only too frequently alloyed.

REPORT OF THE NORFOLK AND NORWICH HOSPITAL, 1868.

THE authorities of this Hospital have issued their annual report, which contains in short compass a statement of their whole position, financial, economical, and Medical. The total number of in-patients was 1150, amongst whom were 125 cases of wounds, 46 contusions, 142 diseases of bones and joints, 19 burns and scalds, 6 wounds of arteries, 10 gunshot wounds, 143 fractures and dislocations: 2 cases of cancer of bone, 4 of the breast; 9 of "lupus," 11 of epithelioma, 2 of rodent ulcer, 5 of cancer of the stomach, 2 of the œsophagus, 2 of the rectum, are found in different divisions. The classification, like all others, betrays the inherent insurmountable difficulty arising from a double basis of arrangement, some diseases being catalogued *secundum genus* and others *secundum locum*; whereas all nosologies ought to show both if such a thing were possible. The total deaths were 63, of which 20 were from injuries. The operations were 70 minor and 240 major, with 10 deaths. The cases of stone in the bladder, which are always looked for with great interest in a Norwich Hospital report, were 22

amongst men and 2 amongst women. The operations, 8 lateral lithotomy, with one death from pyæmia; 3 median, 5 lithotrity, one removal from female bladder, and 2 from urethra. The daily average of in-patients was 120; number of days in Hospital, 39. The out-patients were 1887; total receipts, £4772 14s. 2d.; total income, £5351 15s. 10d. The rise in the cost of provisions of late years is very noticeable.

DR. CRANE'S REPORT ON THE HEALTH OF LEICESTER, 1868.

DR. CRANE reports an increase of mortality in Leicester during 1868, so that the deaths were 2507 out of an estimated population of 90,000, and the death rate for the year 27·855. The mortality of Leicester appears high, having fluctuated from 23·4 to 31·17 during the last six years, the explanation of which must be sought in the large number of births, and the consequent large proportion of inhabitants at the least viable age. The number of births has steadily risen in the last six years from 3015 to 3589, and out of the reserve of young children so formed in Leicester 1434 under 5 years of age died in 1868. The causes of this excessive infant mortality were twofold—measles, which is credited with 249 deaths, and diarrhœa with 328, both of children under 5. Dr. Crane's remarks on these points are anything but comforting. Of measles he remarks that it is the result of imported infection, and that from its own infectiousness and from the susceptibility of the population few if any persons reach adult age without having an attack. He casts doubt on the idea that persons may have measles twice, and in this doubt, by the bye, he goes against reason and experience—against reason, because scarlet-fever, small-pox, vaccinia, and hooping-cough may be taken twice, and there are no *à priori* grounds for denying the same occurrence in measles; and against experience, because second attacks of measles have been noted by observers whose skill in diagnosis is unquestionable. There were 63 deaths from enteric fever, regarding which Dr. Crane observes that waterclosets and general sewage systems without *extraordinary* precautions against sewer vapours are delusive and dangerous. The summer diarrhœa he ascribes to the heat acting on the feeble children of the debilitated population of a closely packed town. But what a revelation it is of the ordinary conditions of life in a manufacturing town, that epidemics are irresistible, and that infants must die of diarrhœa in hot weather! Dr. Crane makes an extraordinary attempt to show "that the inference that the large mortality from measles and diarrhœa has arisen from the impurity of the air of the town is incorrect," and he does this by showing that if the mortality under 5 be deducted, the deaths per 1000 of the population above that age are only 12·1. Yet there is evidence enough of open privies, damp houses, and impure water. We should like to know what sort of milk the 1434 tender babies who died were nursed upon. Dr. Crane's report is defective, inasmuch as it contains no reference to sickness, as such, but only to mortality.

ARMY MEDICAL AFFAIRS IN PARLIAMENT.

WE are glad to see, from the following extracts from the notices of motions in Parliamentary proceedings, that the opinions which we have from time to time expressed on the matters referred to, are likely soon to find an exponent in the House of Commons. It is to be hoped that the Ministerial explanation on both points will be so definite and clear as either to show that the numerous complaints which we have received from correspondents are without foundation, or to announce the intended discontinuance of the grievances which they represented. In either case Mr. Kirk will have done good service to public interests:—

"*Notices of Motions for which no Days have been fixed.*

"In Committee of Supply:—

"Mr. Kirk, on Army Estimates, vote 6, to ask the Secretary of State for War why no allowance appears for the Medical officer of the military prison at Dublin, the duties appearing to be performed by an officer of the Medical staff?

"Whether Surgeon Major Tuffnell, the Medical officer performing those duties, has not completed nearly twenty-seven years' military Medical service, nearly all in Dublin, on the full pay of his rank?

"Is he not the only Medical officer on full pay in charge of a military prison?

"Does he not hold civil appointments in Dublin, and is he not also extensively engaged in private practice in that city?

"Is there any reason affecting the interests of the service rendering it desirable that he should continue to enjoy such exceptional privileges?

"And does his retention on full pay in charge of a military prison stop promotion among other Medical men and the employment of a half-pay Medical officer in the prison at Dublin? . . . .

"Mr. Kirk, on Army Estimates, vote 17, page 85, letter E, Army Sanitary Committee, to ask the Secretary of State for War—Are there two civilian members of the Army Sanitary Committee? and, if so, to which of them is this sum—'Allowance of £3 3s. a day, when employed, to one civilian member; travelling expenses of the Committee, £1200'—paid?

"And are the duties of Dr. John Sutherland on the Army Sanitary Committee of such a character as not to be capable of being performed by a military Medical officer?"

FROM ABROAD.—INJECTION OF ERGOT OF RYE IN ANEURISM—PASSAGE OF AN IRON SHAFT THROUGH THE SKULL—PROFESSOR BILLROTH—PROFESSOR BRÜHL ON A POPULAR ANATOMICAL MUSEUM.

IN a paper read at the Berlin Medical Society (and since published in No. 12 of the *Wochenschrift*), Geh. Rath von Langenbeck gave an account of a case of subclavian aneurism which he had treated by subcutaneous injection of ergot of rye. The patient, 45 years of age, came under his notice as far back as 1864, and, an operation not being deemed advisable, four of Jacobson's moxas were, between October and December, applied over the tumour, so as to give rise to prolonged suppuration. Considerable improvement followed, at least as regards the severe pains in the limb from which the patient had suffered, and he was able to return to his home. From January, 1865, to the summer of 1868 he was able to pursue his calling. The aneurism, though smaller and causing no suffering, had continued pulsating. During the heats of last summer, the tumour increased in size, the pulsation became stronger, and the pains returned; and in January, 1869, he came again under Professor von Langenbeck's care. The aneurism then projected as large as a fist above the clavicle, and so strong was the pulsation that, on embracing the tumour, it gave the sensation of being about to immediately burst, and the pulsation was also sensible beneath the clavicle. The patient had been deprived of sleep for some months by the pain in his arm, and was obliged to keep the sitting posture in bed, with his body inclined to the right. Owing to the weakness of his hand, he had been unable to write for some months, and it had fallen into a state of great muscular atrophy.

On January 6, owing to its known action on the organic muscular fibre, the author performed an injection of 0·03 gramme of the aqueous extract of secale cornutum under the skin covering the aneurism. A speedy result was the great abatement of the pain, so that, after a day or two, the patient was able to sleep quietly. Between January 6 and February 17, and, as a rule, at three days' interval, the injections were continued, so that at the end of that time 2 grammes of ergotine, in doses of from 0·03 to 0·018, had been thrown in, and up to this time improvement has continued. The patient from being unable to hold a pen is now able to write a long letter. The aneurism still pulsates very distinctly, although much more feebly, and has considerably diminished in size. No general effects on the system were observed, although sometimes as much as 0·018 gramme was injected. The formula employed was Bonjean's extract 2·5, spirit of wine and glycerine of each 7·5.

After adverting to the employment of the secale in the arrest of various hæmorrhages, Prof. von Langenbeck communicates in a postscript an account of another case of aneurism in which

he has resorted to the same means, and in which a single injection of 0·15 of the extract sufficed to entirely disperse an aneurism of the radial artery of the size of a hazel nut. A carpenter, 42 years of age, was admitted into the Clinic February 16, having two days before received a wound of the left elbow. In order to examine whether the knife had entered the joint, he was put under the influence of chloroform, and during the examination an aneurism of the right radial artery was detected at about three centimetres above the wrist-joint. It was at first thought to be a tumour beneath the artery, but a more complete examination established beyond doubt the existence of an aneurismal sac formed of the lower or posterior wall of the artery, the superior or anterior wall remaining unchanged. The patient declared that the aneurism had appeared about twenty years before without any known cause, pulsating from the first. Though very small then, it gradually increased to its present size without causing pain or preventing him from working. For the last two years it has not increased in size. On February 17, 0·15 gramme of the above solution was injected between the skin and the aneurism, and next morning all traces of the tumour were gone; and a most careful examination made on March 18 (twenty-nine days after the injection) found the radial artery in an entirely normal condition in the region where the aneurism had existed, and strong flexion of the fingers, which formerly caused great projection of the tumour, was now followed by no such result. The right arm has indeed been used for all purposes during the healing of the wound in the left elbow. The justness of the indication which originally led Professor von Langenbeck to employ secale in the treatment of the first case of aneurism—viz., the power it possesses of exciting contraction of the plain muscular tissue—is confirmed by his great success in the second case, since arteries of the calibre of the radial possess a much richer development of the plain muscular tissue than the subclavian artery does.

The *Boston Medical and Surgical Journal* for March 18 gives an account of a case of injury to the head which is unique, and would be incredible were it not as well authenticated as it is. On September 13, 1848, by the accidental explosion of a charge of blasting-powder, an iron bar, resembling a crowbar in form and size, was completely driven through the head of a man, entering at the vertex and passing out at the base. The "tamping-iron" in question measured 3 feet 7 inches in length, and 1¼ at its greatest diameter, while its weight was 13¼ lbs. The man perfectly recovered, and lived till 1861. Dr. Bigelow took great pains, on the original announcement of the case, in examining into its authenticity, and having succeeded in completely establishing this, he published an account of it in the *American Journal of Medical Science*, July, 1850. Since the man's death, Dr. Harlow, his original Medical attendant, has been fortunate enough to obtain the iron bar and the cranium of the patient, both of which he has presented to the Museum of the Medical Department of Harvard University. He also laid before the Massachusetts Medical Society a detailed account of the case with illustrations, which he has since published as a pamphlet.

Professor Billroth has just been made the victim of a very unpleasant cock-and-bull story, which for a few days created its "sensation" in the Austrian capital. One of the Medical journals of Vienna reported that during an ovariotomy operation the Professor had the misfortune to forget a sponge in the cavity of the wound, and had closed up the wound without removing it; and that, the patient dying a few days afterwards, Professor Rokitanski, as one of the results of the autopsy, found the missing sponge. It turns out that the whole story is a pure fiction from beginning to end, for Professor Billroth has never yet performed ovariotomy at the Clinic where the occurrence is said to have happened. Indeed, he has only executed this operation five times—one of the cases being at Zurich, prior to his translation to Vienna, and the four at Dr. Eder's private Hospital, Vienna. Of these five cases, all but one have recovered, which must be admitted to be a very successful beginning. The statement having been copied into the public prints, the Professor has written to them, denying its veracity, and stating that he has commenced legal proceedings against its author. We may notice that, at the termination of his winter course of clinical lectures, Professor Billroth congratulated his class upon the great improvements that had taken place in the arrangements for the clinical service, and which, indeed, he had made a condition of his retaining the chair. The number of patients, he says, is now ample for all the purposes of instruction, and they exhibit the variety of affections that ought to be expected in a town like Vienna. The results to the patients also have been most satisfactory. No complications have disturbed the course of traumatic injuries until lately, when a few cases of erysipelas have occurred, and fortunately no opportunity of illustrating the course of hospital gangrene has occurred.

Professor Brühl, whose gratuitous Sunday evening lectures on scientific subjects have created quite a *furore* in Vienna, recently devoted two of them to an exposition of his scheme for the creation of an anatomical museum "for the people by the people." It is no mere "popular" establishment, in the ordinary sense of the word, which he has in view, but "a most complete collection of anatomical, zoological, anthropological, and ethnological objects and natural preparations, which shall exhibit the entire organism of man and animals with a completeness and order at least equal to what is observed in the Paris *Jardin des Plantes* or the London Hunterian Museum." To this is to be attached a spacious library with collections of engravings, two well-warmed and lighted *conversationssäle*, besides appropriate localities for preparations, etc., where facilities will be given for drawing, demonstration, lecturing, and, in fact, the complete exhibition of the entire range of the animal kingdom. Members of this "Vienna Popular Anatomical Museum" are to have daily unlimited access to its valuable contents, and gratuitous evening lectures are to be delivered illustrative of these by Professor Brühl and any other *savants* who may co-operate with him. All this is offered to those who declare their intention of becoming members for a year at a payment of five kreuzers, or something like twopence, per week. For such a sum to be of any avail, of course it must be subscribed by multitudes, and these, Professor Brühl seems sanguine enough to anticipate, will answer to his call. If, he observes, each member of his Sunday evening audiences of 500 persons will only obtain ten subscribers, and these ten induce another ten to join, the matter is settled, for the 50,000 at five kreuzers each so obtained will yield a gross sum of 130,000 florins per annum—a dotation which no other institution can boast of. The money is to be expended under the supervision of a committee, and the scientific direction of the institution is to be entirely in Professor Brühl's hands. To start the concern 30,000 subscribers for three months will suffice, and before 20,000 such are announced no payments will be taken. On perusing such a document, one must admit that the age of enthusiastic projectors has not yet passed away.

PARLIAMENTARY.—KENSINGTON SICK ASYLUM DISTRICT—CROSS-CUTTING IN THE ARMY—IMBECILE POOR ASYLUM.

On Thursday, April 15, in the House of Commons,

Mr. J. Talbot asked the President of the Poor-law Board whether it was his intention to recommend the dissolution of the Kensington Sick Asylum District; and if not, how soon it was likely that the plans for that asylum, which were submitted to the Poor-law Board for their approval in December last, would be approved.

Mr. Goschen said, with respect to the first part of the question, he might state that at present the Poor-law Board could not dissolve a sick asylum district, and they would not be enabled to do so unless the present Metropolitan Poor Amendment Bill should become law. With respect to the approval of the plans he found when he came into office that a site had been

purchased for the proposed sick asylum for £15,500, which appeared to him a considerable sum, and he had since ascertained that a further outlay would be required for draining and fencing the land. Representations had been made to him against the site, and also against the expense of the asylum proposed to be built, by the managers and the guardians of the two parishes forming the district, requesting him to stay action in the matter. It had been also represented to him that the existing workhouses of the two parishes, with the adjacent sites, might be so far utilised as to render one of them available for the sick asylum, an opinion in which he was disposed to concur. He had been pressing the guardians to suggest a plan by which this arrangement might be carried into effect, but hitherto, he regretted to say, without success. He had, however, been promised communications from the guardians on the subject, and the further consideration of the plans was reserved in order that he might previously ascertain whether the guardians would co-operate in the arrangement proposed.

On Monday,

Mr. W. Allen asked whether the following rumour was correct, that "a soldier suffering from consumption or any other disease whereby he was incapacitated from continuing in her Majesty's service, cannot be discharged till he has been subjected to the operation of cross-cupping," or branding.

Mr. Cardwell said the statement was not correct; he found, as he had anticipated, on making inquiries, that cupping was never resorted to in the army except as a remedy for disease.

On Tuesday,

Mr. M'Cullagh Torrens gave notice that on Thursday next he would ask the President of the Poor-law Board whether his attention had been called to the proceedings which had occurred on Saturday last at laying the foundation-stone of a lunatic asylum at Caterham; whether those proceedings had the sanction of the Government; and whether what the *Times* newspaper represented as a sumptuous banquet partaken of by 200 guests on that occasion was to be defrayed out of the metropolitan rates, the civil contingencies, or how otherwise.

MEDICATED CHOCOLATE.

From an interesting article on cacao and chocolate, by M. Marchand, in a recent volume of one of the great French Medical dictionaries (a) now in course of publication, we learn that chocolate is much more largely used in France than in this country as an agreeable basis for the administration of various active medicinal agents. Combined with iodide of iron, carbonate of iron, or reduced iron, the medicated chocolate becomes an active tonic, while if associated with Iceland moss it is a useful pectoral medicine. There are vermifuge chocolates containing Corsican moss, fern-root, bark of the root of the pomegranate, etc. In intermittent fever *chocolat à la quinine*, and in dyspepsia chocolates combined with extract of cinchona, of calumba, of gentian, etc., are often prescribed. Purgative chocolates, containing grey powder, jalap, etc., are in common use, and other combinations might be noticed. Of all the medicated chocolates the most important seems to be chocolate with cod-liver oil. For this preparation the Profession is indebted to M. E. Allais, of Rouen. The *Société de Médecine de la Seine-Inférieure* strongly recommends it, and M. Duménil, who, at their request, drew up a report on its claims to consideration, concludes in these terms:—"*Le chocolat à l'huile de foie de morue* is a preparation likely to be of great service to Medicine, and deserves to be most strongly encouraged; it conceals as much as need be desired the disagreeable taste of the oil, and facilitates its absorption, as we can now give it in fractional doses."

We have applied to several of the leading London chemists who deal in foreign preparations for M. Allais' medicated chocolate, but our applications were in vain; it seems to be utterly unknown in this country.

The Internal Use of Carbolic Acid in Skin Disease.—At the Vienna Medical Society, Dr. Kohn gave an account of the internal employment of carbolic acid by Professor Hebra. The most remarkable effects were produced, hyperæmia disappearing, and the irritation being relieved. Trials have as yet only been made in psoriasis, prurigo, pityriasis, and pruritus cutaneus. It is best administered in the form of pills, increased from six grains to twenty grains per diem. The solution is repulsive to most patients.—*Wiener Med. Woch.*

(a) *Nouveau Dictionnaire de Médecine et de Chirurgie*, tome vi. Paris: Baillière et Fils; London: H. Baillière, and Williams and Norgate.

REVIEWS.

Clinical Lectures on Diseases of the Urinary Organs. Delivered at University College Hospital by Sir Henry Thompson, Surgeon-Extraordinary to H.M. the King of the Belgians; Professor of Clinical Surgery and Surgeon to University College Hospital. London: John Churchill and Sons. 1868. Pp. 180.

Very few words of ours are necessary to recommend these lectures to the Profession. There is no subject on which Sir Henry Thompson speaks with more authority than that in which he has specially gathered his laurels; in addition to this, the conversational style of instruction, which is retained in these printed lectures, gives them an attractiveness which a systematic treatise can never possess. We shall content ourselves, therefore, by transcribing some few extracts, by the aid of which our readers may be able to judge of the style of the book. The first will relate to the use of the "endoscope," which has been employed for some years in the exploration of the urethra as well as of other cavities in the body. Sir Henry Thompson's opinion is thus given:—"I may tell you at once that if a man has a good and a tolerably practised hand, with a fair share of intelligence, I do not think he will gain a great deal by the endoscope; and if he has not, I think it will be of no use at all. There are some few cases in which he may find it of value; but do not expect that the endoscope is going to work any marvels in the diagnosis of Surgical diseases of the urinary organs. In nineteen cases out of twenty you ought to be able to arrive at the necessary information without it; and it is not the easiest thing in the world to apply. As already remarked, a man should not be put unnecessarily to the pain and inconvenience of a sound or a catheter; but examination by the endoscope is a somewhat more irritating and tedious process. In certain exceptional cases, in which you are unable to arrive at a conclusion without it, you may employ it to some advantage." (P. 17.) As to "spasmodic stricture," the author writes thus:—"We only speak of stricture of the œsophagus or gullet in reference to a condition which is organic, when by some deposit the passage is permanently narrowed, and we never speak of stricture there under any other circumstances. So with regard to spasm. The urethra may be narrowed to a certain extent by spasm—that is to say, the water may be prevented from passing outwards from the bladder because there is some irregular action of the muscles around it. But it is only temporary; it does not imply any organic change, although sometimes its occurrence depends on the existence of organic change, yet the spasm is not stricture of the canal. I will tell you what spasmodic stricture is. It is exceedingly useful as an excuse for the failure of instruments. It is a 'refuge for incompetence.' When you cannot pass a catheter, when you find it exceedingly difficult to get anything in, and, in fact, wish to desist, it is a convenient thing, and has always been so recognised, for the doctor to say, 'there is spasm.' Indeed, I believe he often 'lays the flattering unction to his soul' that it does exist, although, in my opinion, it does not, or at least very rarely. 'There is spasm,' says he, 'now in the muscles, and it will be prudent at present to desist from further attempts to pass an instrument.' And no doubt when that is said it is so. Now, I do not think that you ought ever to fail in passing an instrument because there is spasm. Spasm may prevent the urine from going outwards: I do not know that it ever prevents the instrument from going in. In most cases it is failure of the hand, not spasm of the urethra." (P. 21.) The following passage as to the relative value of solid and flexible instruments in the treatment of urethral stricture, coming from such a man as Sir Henry Thompson, we transfer to our pages on account of the moral lesson it teaches:—"And this leads me to the question of the difference between solid and flexible instruments. Beyond all question, the flexible instrument is the best—if only you know how to use it—for the treatment of stricture, and for all maladies of the canal whenever it is available. I am so certain of this, that I have no hesitation in saying that a great part of the success of any man who has much to do with the subject will depend upon his use of flexible instruments, as against solid. No patient will ever allow a Surgeon to pass for him a solid instrument if you have passed for him a flexible one as easily as you are bound to do. I have said this because I know that so much might be quoted from what I held fifteen years ago in contradiction of what I am now saying. If I did not state this, you might ask me why, having said so much in favour of the silver instruments, do I now say so much in favour of the other. You have my reason;

it is simply that I have learned better." (P. 30.) In a further place he adds, "In cases of difficulty a small gum instrument is often not of great service. I have been advocating gum elastic instruments as the rule; but if you have to deal with a very tight stricture and fail to pass the flexible catheter after one or two trials, you must use a small silver instrument. . . . Under no circumstances whatever should force be used in the introduction of an instrument through a stricture or into the bladder." (P. 42.) We have marked other passages, but space requires us to hold our hand. We shall therefore only copy further a few lines relating to the use of chloroform in lithotrity:—"Some operators prefer it. Now, first of all, I think the operation ought not to be sufficiently painful to make chloroform necessary. If it was like extracting a tooth, I should give chloroform. But there is a better reason than that for not giving chloroform; without it you can better judge of the susceptibilities of the patient at the time. On some occasions the bladder is more irritable than on others, and if the patient suffers much you do not have so long a sitting. If he scarcely suffers at all, you go on 'making hay while the sun shines,' and crush three or four times. On ordinary occasions two separate introductions of the lithotrite suffice. Too much lithotrity, when the bladder is irritable and painful, is usually equivalent to doing the patient some mischief. This is a point as to which you cannot judge if chloroform is administered. It has been said that chloroform should not be given because, if the patient is not under its influence, he will call out if you seize the coats of the bladder in mistake for the stone. This is altogether an error. The coats of the bladder should never be injured, and with proper instruments it can scarcely happen." (P. 126.)

FOREIGN CORRESPONDENCE.

FRANCE.

Paris, April 12.

Many of the young English Surgeons who come over to our city for the purpose of visiting the Hospitals pay more particular attention to those situated in the centre of the Latin quarter, such as the old Hotel-Dieu and La Charité; but the eccentric Hospitals, where urgent Surgery can be seen, are left aside. It is true, the Pitié, the Beaujon, and the Lariboisière are quite a distance from the Quarter, and require three-quarters of an hour to reach; but this loss of time, if loss it may be called, is well repaid by the Surgical advantages which these establishments offer. There, as stated above, we meet with active Surgery, such as requires a prompt decision on the part of the Surgeon. In the Hospitals of the centre it is otherwise. Here, nearly every other bed is occupied by a patient suffering from a chronic ulcer or the like affection, which do not call for immediate action.

The reason why the Hospitals situated upon the outer margins of the city offer more accidents to treat is simply because those parts of Paris are inhabited by labourers. New buildings are being erected, new boulevarts pierced, and there, too, are all the larger factories; consequently it is there where exist the field of accidents and the harvest for the Surgeon. Of all our Paris Hospitals, in this respect none is so well located as the Pitié, none so cleanly kept and well arranged, and, I will add, none has a more capable Surgeon in charge than Professor Verneuil, who, of our Paris Surgeons, certainly ranks first. His chair at the Faculty is that of Surgical Pathology; consequently he does not deliver clinical lectures, but he gives what perhaps is more profitable to the student, besides explanations upon all interesting cases; and these so profitable *causeries* draw to his wards, especially on Wednesdays, which day is set aside for all operations not of an urgent character, numerous students—students in the real sense of the word, those who are desirous to improve themselves, and who do not consider the distance of the Hospital an obstacle. It is here, as I said before, that English representatives are not so numerous as in other Hospitals. The loss is their own. Verneuil marches onwards. Matter coming from abroad, if found useful, is accepted, and in this particular we might say he differs from some of his fellow Surgeons. I have noticed in his wards a most successful treatment of complicated fractures by immediate occlusion with collodion, over which is placed a sheet of banderuche (gold-beaters' skin). One case in particular—that of a woman, aged 51, who entered the Hospital with a luxation of the astragalus forwards and outwards and protrusion of the head through the teguments—struck me as being remarkable in its lucky termination. As reduction was impossible, the wound, together with a large portion of the foot and leg, were covered with a sheet of collodion and banderuche. The limb was then placed in a gutter, and kept immovable. Owing to the occlusion of air so effectively produced by this procedure, the patient recovered without the slightest accident. Of seven cases of complicated fractures of the lower extremities where the skin had been pierced by spicula of bone, and which I have seen treated in this manner, all were cured. In two cases the banderuche was left *in situ* until perfect consolidation of bone and a healing of the wound had taken place. Erysipelas and purulent affection, two diseases frequent in our Hospitals, especially if treated by the eternal cataplasm, are hereby lessened, if not altogether prevented. Certainly no treatment can be more simple, for it does not prevent the application of any bandage or particular aparatus. Those of the Profession who will give this method of treating fractures a trial will, I am confident, not be disappointed with the result.

A very interesting operation not frequently resorted to, though not altogether new, is that of lithotomy for irritable bladder, which Verneuil practised not long since. A man, aged 40, frequently exposed to wet weather, began to complain of pain in the region of anus and neck of bladder about six months ago. The patient soon found himself obliged to urinate every two or three hours, causing great tenesmus and suffering. These spasms rapidly increased in violence and frequency, so that latterly he had to urinate every ten or fifteen minutes, although but a small quantity of a limpid fluid was voided. He entered the Hospital about the middle of February last. In the meantime, every possible means to alleviate his sufferings had been tried. Baths, medicaments administered internally or by anus or injected into the bladder, were of no avail. The urine contained pus, albumen in small quantity, and of late a few drops of blood had been passed at the end of each micturition. The canal was perfectly free from any stricture; an ordinary-sized catheter could be easily introduced, and had been left in place for some length of time. There were no prostatic lesions; the kidneys were healthy; there was no foreign body in the bladder. The hypogastric and anal regions were tender upon pressure. Bromide of potassium, which had not been tried by the former Medical attendant, aggravated the symptoms. Opium, camphor, turpentine, colchicum, copaiva, quinine, aconite, mineral waters, etc., etc., had been tried, but gave no relief. Injections of Seltzer water were not tolerated. Seeing the patient's health fast failing, Verneuil decided to incise the neck of the bladder, and accordingly operated on March 15, 1869. A median incision of about an inch and a half in length, is made, and by the double lithotome the prostatic gland is incised bilaterally. Scarcely a drop of blood was lost. A caoutchouc tube is placed in the wound. The remarkable part of the case is the complete cessation of the pains and the spasmodic contractions of the bladder. The patient, whom we saw this morning (twenty-eight days after the operation), has quite regained his strength, and does not suffer in the least, except from the inconvenience of the tube which is still left in place until the inflammatory action of the mucous membrane of the bladder may have ceased. The urine, although not yet quite normal, has much improved, and in all we may record the case as a perfect success. Certainly without this heroic treatment the patient would have succumbed to his horrible sufferings ere this.

Another case which may be of interest to your readers is the following(a):—

Uterine Polypus—Rupture of an Ovarian Cyst—Autopsy.

A woman, aged 34, entered Verneuil's service on February 18, 1869. A polypus uteri had been diagnosticated by her Physician previous to her entry into the Hospital. The patient, in apparent excellent health, has been married eleven years; she has had no children, no miscarriage, and has always been regular. She has often complained of pains in the right loin, which of late have so much increased as to render sexual intercourse extremely painful.

The initiative symptoms of her present disease only date back three months. At that period the menstrual flow became very abundant and irregular, lasting from ten to twelve days, and reappearing at short intervals. The general health, however, has not suffered; her cheeks are flushed, a sign to which Verneuil tells us Koeberlé, of Strasbourg, attaches some importance in the diagnosis of uterine tumours. On February 3 (fifteen days before her entry into the Hospital) the pains in the pubic region and right loin suddenly augmented, and were

(a) The notes were given me by M. Nepveu, the obliging interne of the service.

followed by two or three chills, much thirst, vomiting, and high fever.

On February 19 (one day after entry into the Hospital) Verneuil explored the parts, and found that the finger encountered, about four centimetres from the vulva, a tumour of the size of an orange, which seemed to fill the vagina. The os uteri can only be reached with great difficulty; the pedicle of the tumour occupies the entire canal of the neck; the os is dilated to about the size of a five-franc piece, its lips are thin and membranous, embracing tightly the pedicle, so that the finger cannot enter the cavity of the uterus. The examination has caused some suffering to the patient; the discharge from the vagina has a slight odour. Verneuil decides upon expectation. Not knowing the exact insertion of the pedicle, it would be difficult to apply the écraseur. Moreover, it is Verneuil's custom never to operate where expectation is possible, so as to first acclimatise the patient to the air of the Hospital. Ergot of rye is prescribed.

On February 23 (five days after entry) the patient is suddenly seized with violent pains; these are followed by several chills and vomiting of bilious matter. Pulse 115; opium, acidulated drinks, poultice.

On the 24th peritonitis declared itself. Verneuil thinks this might possibly be due to the explorations of the tumour. (Up to this time the patient had been examined five times: twice by Verneuil, twice by M. Nepveu, the interne of the service, and once by the Physician who had recommended her entry into the Hospital.) A large bath is ordered, mercurial ointment, and large cataplasms upon abdomen.

On February 25 retention of urine from pressure of tumour upon the neck of bladder. Catheterism is practised twice daily, but with great difficulty, owing to the tumefaction of the parts and a deviation of the meatus.

26th, 27th, and 28th.—Aggravation of symptoms.

March 1.—Death.

Autopsy, twenty-four hours after death, is practised with greatest care. I will omit the organs not in immediate connexion with the case, and only note the abdominal and pelvic cavities. The abdomen contains from 300 to 400 grammes of purulent matter, and the ordinary signs of peritonitis are present. The pelvis is filled with pus. The right ovary, indurated and much enlarged, contains numerous serous cysts. The right Fallopian tube is dilated, especially at one point, where it forms a cyst filled with serosity. The left Fallopian tube is of normal dimensions, but full of pus. To its extremity is attached a large tumour of the size of a goose egg, presenting upon its outer surface vascular arborisations. This tumour appears to be the remnant of the right ovary changed into a cyst, the contents of which have escaped into the pelvic cavity. Upon opening the same with the bistoury, a large opening is found near its outer margin, which has given outlet to the purulent contents; its walls are soft and friable. There also exist two ulcerated surfaces near the point of union of the broad ligament with the uterus, very nearly perforated. The uterus is hypertrophied, and bathed in pus. The polypus fills nearly the whole cavity of the vagina; its pedicle is inserted upon the inner anterior surface of the uterus, near the union of body and neck. The pedicle has a length of six centimetres, and at its insertion a diameter of two and a half centimetres. A microscopic examination of the polypus shows the ordinary characters of a myoma.

This case, as Verneuil very correctly remarked to us, offers more points than one of interest. In private practice, where autopsies cannot always be practised, the cause of the fatal issue might have given rise to great error. Peritonitis from digital explorations of vagina and uterus, though rare, have been known to occur; and had the necropsy not proved quite a different, and certainly very different, cause of death, the case might have been recorded as death from the brutal examinations of the Surgeon. Or, again, had the Surgeon, instead of expectation, decided upon an operation, the statistician would not have failed to attribute the unfortunate result to the operation, and so add one more to the list of deaths from Surgical intervention.

Death of Professor Nicklès.—M. Nicklès, Professor of Chemistry at the Faculty of Sciences at Nancy, and well known to all cultivators of physical and chemical science, has just died at the early age of 49. He is said to have died consequently on an affection of the lungs contracted in his laboratory while pursuing his investigations on the isolation of fluor.

GENERAL CORRESPONDENCE.

AN ATTEMPT TO REMOVE AN IMPORTANT OBJECTION AGAINST DARWINISM.

Letter from Dr. F. A. de Hartsen, of Cannes.

[To the Editor of the Medical Times and Gazette.]

Sir,—The investigations of Charles Darwin are so intimately connected with physiology, that some remarks on the subject may not be misplaced in this paper.

Among the many objections made against Darwin's hypothesis on origin of species, there is but one which seems to me really embarrassing. But this one, indeed, is very embarrassing. This objection has lately again been brought forward by Professor Pfaff(a) and by M. de Quatrefages.(b) It consists in this, that the geologic system of fossils show lacunæ—a fact which could hardly have been possible if the now living species had been formed by gradual variation. Professor Pfaff goes even so far as as to conclude from this fact that the improbability of Darwinism stands to its probability as 1 stands to a number consisting of 1 with a hundred zeros to it. To admit that the intermediate forms which ought to fill up the lacunæ should have really existed in a developed state, but should entirely have disappeared—this is, according to very good geologists, almost impossible.

What, now, is to be done? Is Darwinism to be rejected? I do not think so. *Tout au plus*, it seems to me that a modification must be made to it. As this modification I propose the following:—The intermediate forms which we seek in vain—so I suppose—have existed, only they have not existed as independent beings; they have only existed in an embryonal state; this is the reason why they are lost. I can think it possible, indeed, that an individual of a species at once gives birth to an individual of a new but slightly different species. A *saltus naturæ* for this is not required; for we know that the ovules of nearly related species do not differ from each other in a notable way. In consequence, an ovule needs only to develope itself in a direction a little different from the ordinary way, and the new species will be formed. If this supposition be just, the two chief points of Darwinism will be saved, even if the remainder of the intermediate forms between the fossils never be found, for those chief points of Darwinism are these:—1. The actual forms of organism are all descended from a few progenitors (*one* progenitor only?). 2. Their formation has taken place by the way of gradual variation.

Some readers will object that perhaps no example is known to us of an organism having given birth to an individual of a new species. The fact may be true, but we have no reason to admit that such an event, although very rare, does never occur—at least that it has not occurred in earlier ages; on the contrary, we observe every day that a child deviates in some way, even greatly, from his parents, and, once deviation possible, we cannot tell how far this, under favourable circumstances, can go. I am, &c. F. A. de Hartsen.

NOTE ON THE USE OF THE BULBOUS STEEL SOUND FOR STRICTURE.

Letter from Mr. D. W. Crompton, F.R.C.S.

[To the Editor of the Medical Times and Gazette.]

Sir,—While there are already so many varieties of instruments invented for the treatment of stricture of the urethra, it may seem superfluous to mention one more that I have used with much satisfaction to myself and one of my patients. At any rate, we now know the exact state of the urethra, which before, for some time, we have only been able to guess at. I have been in the habit of passing No. 1, 2, 3, and 4 elastic catheters into my patient's bladder with more or less difficulty, according as there was more or less gouty irritation of the parts, for he has long been a martyr to gout. During the whole of this time I have felt my catheters arrested, and then firmly held by the strictured part, the length or breadth of which, or whether there was more than one strictured part, I was unable to ascertain, for my catheter, though in the bladder, was never released from being held tight by the stricture, and some considerable irritation was always produced on withdrawing the instrument.

(a) "Die neuesten Forschungen und Theorien auf dem Gebiete der Schöpfungsgeschichte."

(b) *Revue des deux Mondes*, March, 1869.

It struck me that an adoption of the plan of the French bulbous elastic bougie in well made, highly polished steel, would be an advantage. I therefore wrote to Messrs. Weiss to send me a series of steel sounds of "Brodie's curve," the bulbous end of each being "a size" less than the shaft of the instrument, beginning at No. 1, and going on to No. 8 or 9, the thin neck of each being from about an inch to an inch and a half in length, then gradually expanding to the first size above that of the bulb. On trying these sounds, I found out without difficulty that my patient's strictures—for there are two—were each not more than an eighth of an inch broad: in fact, the bulb seems only to "hitch" on the lower surface of the urethra, and then pass on to another strictured portion, about an inch beyond, of a similar kind. Nevertheless, though these strictures are so narrow as to breadth, they hold the shaft of the sound tight, and do not release it; but the feeling of release to the instrument as soon as the bulb is through is very satisfactory, giving me perfect confidence that I have not passed out of the urethra into any false passage. Where that is the case I apprehend we should never experience the feeling of release of the bulb, but that the instrument would continue to be held as the common bougie is, no matter how far we push it towards the bladder, even when it is in the right passage. This form of sound would be improved if a scale of inches and eighths of inches were finely marked round the end near to the handle, say for the first six inches (the handles are better roughed than smooth). We could then, with a finger-nail placed at the mouth of the urethra, read off the distance from the bulb when first in contact with the stricture; and then again, pushing the instrument on, read off the distance traversed before it is freed and passed into the urethra beyond the stricture. Thus we should be prepared to use these sounds as dilators, or we should be instructed as to where exactly to use the cutting or ruptruring instruments invented by others. I should not have troubled you with this note had I not heard from Mr. Weiss that he has not previously been requested to adapt the bulbed bougie to polished steel sounds. I hope some one will take the trouble to try this plan, for every one knows who has much to do with strictures, how frequently we must "become intimately acquainted with" a stricture before we can manage its obstinacy.

It would be well, perhaps, to have each set of sounds plated, so as to preserve them from rust, for the polish is of importance to the ease of our patient in the use of the instrument.

If I were asked to give a motto for using a steel bougie, or, in fact, any other instrument for the urethra, I should say, "A light hand, and a lively sense of the danger of a false passage!" I am, &c.

Birmingham. D. W. Crompton, F.R.C.S.

REPORTS OF SOCIETIES.

STATISTICAL SOCIETY.

Tuesday, April 20.

W. Newmarch, Esq., F.R.S., in the Chair.

Dr. Guy read a paper

ON INSANITY AND CRIME, AND ON THE PLEA OF INSANITY IN CRIMINAL CASES.

After referring to the growing tendency of opinion, especially among those who have experience of the insane, to attribute many acts of cruelty, violence, and fraud to unsoundness of mind—and, alluding to the extreme views of some who attribute all crime to madness, and of others who would see without regret or misgiving the sane murderer and the insane homicide hanging side by side on the same gallows—Dr. Guy expressed his opinion that it might be possible to discover some facts, couched in figures and amenable to the numerical method, which would go far to establish the truth; and he thought that the truth would be found to confer freedom from the exaggerations which hang about the path of a special study, as well as from the panic fears of those who make the safety of the state and the protection of the innocent against violence and fraud their supreme law. After some further preliminary observations on his qualifications for the treatment of this subject and the preconceived opinions which might bias him in the choice and treatment of his facts—mentioning under the first head his experience as Medical Superintendent of a convict prison, and under the second his sympathy with the victims rather than with the perpetrators of crime, his preference of the lash and the gallows in the limited class of offences to which they are now applied to any punishments which have been proposed as substitutes for them—his satisfaction when he could trace acts of revolting cruelty to madness rather than when he was obliged to set them down to the corruption of human nature, and his little fear of the consequences to which truth would lead us, whether in science, morals, or government—the author proceeded to divide his subject in accordance with the title of his paper under the two heads of "Insanity and Crime" and "The Plea of Insanity in Criminal Cases." Under the first head of "Insanity and Crime," he treated the three distinct questions of (1) the ratio of insane to sane criminals; (2) whether this ratio is higher than among the rest of the community, and, if so, to what extent; and (3) the crimes to which insane criminals are especially addicted.

In examining the ratio of insane to sane criminals, Dr. Guy made use, in the first place, of the successive volumes of "Judicial Statistics," which give the number of criminals tried for all offences as well as the numbers acquitted as insane, or subsequently found or declared insane, and then of a census of the convict population taken under his superintendence in 1862. From the first source (the "Judicial Statistics"), the author showed that, while the less serious offences yield the low ratio of 6 in 10,000, the more serious ones give the much higher ratio of 5½ per 1000, and the most serious of all (murders) 14½ per 100, or more than 1 in 7; and he thought that this high ratio of 1 in 7 exhibited the extreme result which we are likely to attain in the case of any one class of criminals; for, in this case, the strongest motive exists in the death-punishment to establish insanity at the trial, while after it the mind, acted on, in some cases, by remorse, and in all by the incidents of a trial recently undergone and imprisonment just commenced, would be likely to display itself in its true colours to the experienced persons in charge of this class of prisoners. By means of elaborate calculations, it was shown that the acquittals on the ground of insanity are, as a rule, proportionally more numerous as the crimes are more serious—a result doubtless compounded of the actual state of the culprit's mind and of the strength of the motive offered at the trial to establish his insanity. After showing that the information to be obtained from the "Judicial Statistics" was not satisfactory, as not showing the true and full relation of insanity to crime, Dr. Guy passed on to the returns relating to our convict prisons, alleging that, what with the remote prospect of release and the prolonged opportunity afforded for observation, there was every reason why insanity should display itself and be recognised. And, by adding to the cases so recognised the acquittals on the ground of insanity, it was clear that we should learn, what we are most interested in knowing, the ratio of insane to sane among the worst class of criminals. The census of the inmates of the several convict prisons on March 31, 1862, embodied much interesting information relative to the sex and age of the convicts, to the fitness or unfitness of the men for labour, to the mental and bodily condition of men and women, and to the crimes for which they were undergoing punishment, which has already been embodied in a paper read at a meeting of the Social Science Association held in London in that year. That paper had placed on record the ages of the convict population male and female, their state of mind and body, the crimes with which those states had become associated, the mortality to which they were subject from pulmonary consumption and from all causes, and the relation of that mortality to the deaths occurring from the same causes in England, in London, and in the parts of London most likely to be inhabited by the destitute and criminal classes. On the day of the census (March 31, 1862) there were in all the convict prisons 5952 male and 1218 female prisoners, out of which numbers 243 men and 29 women were returned as of weak mind, insane, or epileptic; and if all these are classed as of unsound mind, we obtain the respective ratios of 41, 24, and 38 per 1000 for men, women, and men and women taken together. But as the whole body of prisoners in the convict establishments on March 31, 1862, must be considered as the residue of criminals brought to trial during some years preceding, of whom a certain number had been acquitted on the ground of insanity, and a still larger number had been found insane by the Medical officers of the several prisons and sent to lunatic asylums—an addition not exceeding 16 for men and 8 for women being made for acquittals on the ground of insanity, and a further addition for subsequent certificates of lunacy and consequent removal to asylums which the author estimated at 100, being 11 for women, and 89 for men—the ratio of insane male convicts was raised to 61 per 1000, of insane female

convicts to 40 per 1000, and of the two sexes taken together to 57 per 1000. These figures might be taken to represent the extreme ratio of insane to sane among the worst class of English criminals. Dr. Guy believed them to be greatly in excess of the truth, but was unable to say by how much they went beyond it.

In comparing insanity among criminals with that which prevails among other classes of society, Dr. Guy combined the data furnished by the Commissioners in Lunacy, the Poor-law Board, and the Census of Convict Prisons, with the insane criminals in the county and borough gaols, estimated at 200, and he obtained the following approximation :—

Insane other than paupers (Report of Commissioners in Lunacy. Summary, p. 106)	5,919
Insane paupers (lunatics and idiots) (Report of the Poor-law Board, p. 12)	41,276
Weak-minded, insane, and epileptic (as in the Census of Convict Prisons, 1862)	272
In county and borough gaols	200
Total	47,667

This total of nearly 48,000 (being the aggregate of lunatics and idiots) was found to yield nearly 38,000 (35,758) cases comparable with the census of convicts; and as the estimated population of England and Wales for the year 1867 amounted to 21,429,508, the number of insane distinguished as lunatics would be 1·67 per 1000 of the population, while the proportion of the same class among the population of convicts, being 57 per 1000, would be thirty-four times as great; or, if half the population were taken to represent the adults which supply the convict prisons, we should still have the criminal lunatics among the convict population in excess in the high proportion of 17 to 1. But as the convict population does not admit of being thus compared with the general population, inasmuch as the mass of the insane convict population consists of imbeciles retained in confinement till the expiration of their sentences, while the lunatics of the general population consist of the slow accumulation of men and women—the survivors of those who, for years previously, had been discharged cured, or had died early—all that can be safely said on this head is that the disproportion between the ratio of insane to sane convicts and the ratio of "lunatics" to the general population is so large as to justify the assertion that the criminal population is much more liable to insanity than the community at large. Passing now from the general population of the country to the population of paupers, concerning whose liability to insanity we possess very accurate information, we obtain some instruction of the same general character—interesting, but necessarily inexact. The pauper community, like a morass which holds the stagnant waters from running streams, is made up of the children of vice or misfortune, of able-bodied adults who cannot find work or will not exert themselves to obtain it; of all the sick from all classes of society who have failed or refused to make any provision for the future; and of aged worn-out culprits, mixed with a few victims of misfortune. This strange community naturally attracts to itself the idiot, the imbecile, and the lunatic, and becomes the temporary resort of all of these who are too poor to defray the charges of the private asylum. Now, out of a population of 963,200 paupers in receipt of out-door and in-door relief on January 1, 1867, no less than 30,905 were lunatics, as distinguished from idiots (10,371 in number). This gives us the ratio of 32 per 1000, or somewhat in excess of half the ratio (57 per 1000) obtaining among the convict population. But as of the in-door pauper population only one-fifth are of the ages (20 to 45) of the mass of the convict population, the ratio borne by "lunatic" paupers to the pauper population of these ages will be found to rise to no less than 160 per 1000, or nearly three times the ratio prevailing among convicts. If these figures, then, are adopted as a rough approximation to the truth, it follows that convicts, though much more liable to insanity than the general population of which they form a part, are much less liable to it than the young and middle-aged adults among the inmates of our workhouses.

In illustration of the crimes of insane convicts, Dr. Guy made free use of the returns from the convict prisons which had furnished the materials for the census of 1862. The 5952 male convicts to whom attention was first directed comprised 217 military offenders, and these being eliminated as having been guilty of crimes not strictly comparable with those committed by the other convicts, there remained 5735 civilians. On comparing these two groups, and reducing them to a common standard of 1000, the weak-minded, insane, and epileptic were found to be as 41 and 37; the subjects of scrofula and chronic disease as 115 and 32; the subjects of deformity or defect, original or acquired, as 251 and 92; and those not suffering from disease, infirmity, or defect as 593 and 839—figures which show that the process of recruiting which transforms the civilian into a soldier, though it eliminates a large proportion of the subjects of bodily disease and defect, does not shut out any appreciable proportion of those who suffer from disorders of the mind and nervous system. This instructive fact was placed in a still clearer light by resolving the figures for the weak-minded, insane, and epileptic into their constituent parts. This being done, the weak-minded among the two classes were found to be in exactly the same ratio of 28 per 1000, while the insane figured for 2 and 5, and the epileptic for 16 and 5 respectively. From this comparison it may be inferred that there are to be found among the population which supplies us both with criminals and soldiers about 28 in the 1000 of men of weak mind not yet recognised as proper objects for the lunatic asylum. Some of these men, characterised in the picturesque language of the mendicant-thief community as "half-sharps," are, to the author's knowledge, very hard to understand. They are a puzzle to doctors, magistrates, and recruiting officers alike; plausible beggars, adroit thieves, extremely dangerous and costly members of the community. In dealing with the residue of male convicts, Dr. Guy, by certain necessary eliminations, reduced the number to 5598, whose mental and bodily condition in connexion with the crimes for which they were undergoing punishment was set forth in elaborate tables, from one of which it appeared that convicts suffering from diseases of the mind and nervous system are specially addicted to sexual offences, to arson, and to acts of violence other than burglary, also in a less marked degree to cattle-stealing; while they take the lowest rank only in burglary and in fraudulent offences which may be presumed to require the maximum of forethought and contrivance; and from another table that it is to the weakminded members of this mixed class that we are to attribute in a special manner the sexual offences, the fire-raisings, and the burglaries, to the epileptic the crimes of violence, to the insane the cattle-stealings, to the insane and epileptic nearly equally the group of fraudulent offences. By placing the weakminded, which form the great majority, by themselves, and arranging each class of criminals in the order of the figures which represent their crimes, the following instructive results were obtained:—Sexual offences: weakminded, 95; deformed, etc., 35; healthy, 24; scrofulous, etc., 19. Arson: weakminded, 70; scrofulous, etc., and healthy, each 20; deformed, etc., 15. Cattle-stealing: weakminded, 38; healthy, 35; deformed, etc., 33; scrofulous, etc., 19. Homicidal and violent acts: weakminded, 108; healthy, 100; deformed, etc., 90; scrofulous, etc., 85. Burglary: healthy, 201; scrofulous, etc., 197; weakminded, 177; deformed, etc., 164. Fraudulent offences: deformed, etc., 663; scrofulous, etc., 660; healthy, 620; weakminded, 513. So that in four out of six groups the weakminded head the lists, and are shown to be addicted to sexual offences by comparison with the healthy in the ratio of 4 to 1, to arson in the ratio of $3\frac{1}{2}$ to 1, to cattle-stealing in the ratio of 38 to 35, to acts of violence in the ratio of 108 to 100, while in the crime of burglary the weakminded approach the healthy as 177 approximates to 201.

Commenting on these facts, Dr. Guy hazarded the opinion that the criminal reputed sound in mind and body often associates the weakminded with himself in the crimes of burglary and cattle-stealing, and in such fraudulent offences as passing bad coin. In treating of the crimes of female convicts, reduced to 1210 in number, Dr. Guy pointed out some coincidences and some divergences. The female convicts mentally affected were shown to be, like the males, specially addicted to the dangerous and destructive crime of arson, and to fraudulent offences in exactly the same order as the men, but, like them, in a slighter degree than the healthy. On the other hand, women of this class are found to rank high as burglars and house-breakers, probably because, as housekeepers, they become associated with burglars of the other sex. Again, women subject to bodily disease were shown to be most addicted to crimes of violence, in this respect taking the place of the mentally affected among the male convicts. To this class of crimes healthy women are least, and the diseased and deformed most addicted. Of the two sexes when compared with each other it was stated that fraudulent offences are in excess among women as compared with the same class among men, in about the proportion of 3 to 2; that the ratio is inverted in the case of the crime of arson; while crimes attended with violence (not comprising burglary) count as 10 to 7 in the case of men and women.

Dr. Guy brought this part of his paper to a close

by gathering into a brief summary the results which he had adduced from a series of tabular statements and calculations, and which were illustrated in part by large tables and coloured plans and curves suspended on the walls. 1. That the ratio of insane to sane criminals, when estimated by the number acquitted on the ground of insanity or found or declared insane soon after trial, ranges from 56 to 14, 520 per 100.000; the high proportion of 14½ per cent., or about 1 in 7, being attained in trials for murder. 2. That the higher ratios obtain in the case of murder; attempts to murder and maim; arson, and other malicious offences against property, and assaults; these offences being placed in the order of the liability to insanity. On the other hand, the crimes which show the lowest ratio (these, too, being placed in the same order) are forgery, etc., offences against property without violence, and offences against property with violence. 3. That among those acquitted on the ground of insanity the higher ratios prevail in the case of assaults, murder, arson, and malicious offences against property, and attempts to murder, maim, etc.; these also in the order of their frequency. 4. That, according to a very liberal estimate based on a census of convict prisons taken in 1862, the ratio of insane to sane does not probably exceed 61 per 1000 in the case of male convicts, 40 per 1000 in the case of female convicts, and 57 per 1000 for the two sexes taken together, or, approximatively, 6, 4, and 6 per cent. 5. That the ratio of insane to sane convicts is so large as compared with the ratio of insane to sane among the general population as to justify the statement that the criminal population contains a much larger proportion of insane members than the community at large. 6. That convicts, though much more liable to insanity than the general population of which they form a part, are much less liable to it than the young and middle-aged adults among the inmates of our workhouses. 7. That the ratio of weak-minded to other convicts is exactly the same in the case of soldiers and civilians. 8. That among male convicts the weak-minded are found specially addicted to sexual offences and arson, and, in a less degree, to cattle-stealing and offences attended by violence. 8. That, among female convicts, the insane are also specially addicted to arson. 9. That the weak-minded and insane, both among male and female convicts, are less given to crimes marked by fraud. 10. That, on comparing men with women, women are found to be addicted to fraudulent offences in the proportion of 3 to 2, while men are more given to arson in the ratio also of 3 to 2, and to crimes attended with violence in the proportion of 10 to 7. It is with regret that we postpone our notice of the remainder of this paper, which treats of "the Plea of Insanity in Criminal Cases," to a future issue. But we may so far anticipate the more complete exposition of Dr. Guy's views as to state that he found no reason for the belief, which seems so prevalent among lawyers and the public at large, that to entertain the plea of insanity in criminal cases is to encourage crime. The figures brought forward certainly seemed to lead to a directly opposite conclusion.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

SATURDAY, APRIL 17, 1869.

DR. DRUITT, President, in the Chair.

A DISCUSSION was opened by Mr. LIDDLE on the class of houses which ought to come under the Artisans' Dwelling Act, and on the difficulty of getting local boards to move in the matter, even after both Medical officer and surveyor had made condemnatory reports.

Dr. BALLARD thought that where houses inhabited by the labouring class were damp, badly lighted, and built closely in, it was better to bring the houses under Mr. Torrens' Act than under the Nuisances' Removal Act. Dr. Ballard proceeded to relate how far he had put the new Act in force in his district of Islington, and gave it as his opinion that although there was great dilatoriness on the part of the local authorities, the mere fact of holding the Act over the heads of landlords had a very salutary effect.

Dr. TRIPE detailed what he had done in Hackney. Three houses had been pulled down, and three others had been ordered to be pulled down. He found it a good plan to take the surveyor with him to see the premises, and point out to him on the spot the defects complained of. Dr. Tripe also referred to the Adulteration Bill just brought into Parliament. As the Bill stood, the local authorities were empowered to appoint salaried officers to carry out the Acts; but Dr. Tripe thought that unless this power was vested in the Metropolitan Board, it was most likely that extra work would be thrown upon the Medical Officers of Health, without any corresponding remuneration.

Mr. LIDDLE agreed with Dr. Tripe that representations should be made to the promoters of the Bill and to the Home Secretary, and this suggestion was generally concurred in.

Dr. LETHEBY then read a paper on "The Method of estimating Nitrogenous Matter in Potable Waters, and on the Value of the Phrase 'Previous Sewage Contamination,' as used by the Registrar-General in his Monthly Report of the Metropolitan Waters." A full report will be found in another page.

Dr. FRANKLAND said that the position he occupied was not one of his own seeking. When Dr. Hofmann vacated the office he was requested to undertake it. He found the incineration and permanganate process then in use to be utterly fallacious. Finding a general belief existed that the presence of impurities in water led to the spread of disease, he devoted a considerable time to finding out some reliable process; and after making innumerable analyses, he had acquired entire confidence in the results obtained by his present process. In reference to the purification of water by the flow of rivers he had made very careful observations on the Darwen, Irwell, and Mersey, and he found, as Sir Benjamin Brodie had predicted, that no perceptible destruction of organic matter took place in a flow of ten miles. It was not until after deep consideration and a long series of experiments that he adopted the expression "previous sewage contamination" to intimate the presence of organic animal in contradistinction with vegetable matter. He had never found nitrates in streams containing only vegetable matter. He had carefully examined the Cumberland lakes, and he had only found the nitrates present in one of them, that one being Windermere, which received the sewage of Ambleside. He concluded, therefore, that the presence of the nitrates in water convicted it of contact with decomposing animal matter. He could not see how drainage water sinking into the soil should not carry with it manure or sewage matter. After careful research, he could only arrive at the conclusion that the nitrates proceed from the decay of recent animal matters, and he saw no evidence to the contrary in Dr. Letheby's paper.

Mr. HAWKESLEY said that he knew almost every inch of the rivers mentioned, and that there were constant accretions to them; in fact, there was hardly 100 yards without some accretion of water. Such being the case, the mode of investigation pursued by Dr. Frankland must be fallacious. Along these rivers there were numerous towns, villages, and factories discharging vast quantities of organic matter into these streams: how, then, could Dr. Frankland pronounce that there was exactly the same amount of organic matter in one part as there was in another ten miles distant? Or, presuming such were the case, how could this happen except by as much contamination having been got rid of as was received? Mr. Hawkesley traced the course of the Irwell, the Mersey, and especially the Trent, and showed how at various points immense quantities of sewage were poured in, and yet a few miles further on the water was drinkable. Comparing the quantity of water in the Trent and the quantity of sewage poured into it, he proved that one-sixth of the whole would be sewage unless decomposition took place on a very large scale.

Dr. CARPENTER, of Croydon, asked Dr. Frankland in reference to the alleged sewage contamination of the water of a deep chalk well at Croydon, which apparently showed more traces of contamination than the sewage water of Croydon after passing over a field.

Dr. FRANKLAND replied that he had analysed a quantity of the water in question, and he found that it contained nitrates, and therefore previous sewage contamination.

Professor ANSTED said that the very fact of the nitrates being there showed that water lost its previous contamination by passing through the earth and by other means. The water in rivers must in course of time have undergone contamination of various kinds, and if, after passing some distance, it did not become fit for use by some natural process, he did not see how mankind could exist. He therefore objected to the term "previous sewage contamination" as implying too much. The arguments and the experience of Mr. Hawkesley he considered quite irrefutable.

Professor WANKLYN likewise assailed Dr. Frankland's basis of investigation, which seemed to make no account of the oxygen supplied by plants at the botton of rivers.

Dr. ODLING was loth to disagree with Dr. Frankland. He

would much rather have called attention to the great services rendered by that gentleman in water analysis, but he could not but object with Dr. Letheby to the term "previous sewage contamination" being used in official reports, even while admitting the fact to some extent. He could not admit that the presence of nitrates in water ought to be regarded as a proof of previous sewage contamination.

As the proceedings had lasted more than three hours, the President rose to sum up the discussion before calling on Dr. Letheby for his reply, but an adjournment was proposed and carried, and the debate will be resumed on Saturday, May 1, at the same hour and place.

MEDICAL SOCIETY OF LONDON.

MONDAY, APRIL 5, 1869.

PETER MARSHALL, Esq., President, in the Chair.

DR. A. E. SANSOM read a paper

ON FERMENTATION WITHIN THE LIVING BODY, AND ON THE ACTION AND USE OF THE SULPHO-CARBOLATES.

The author gave a sketch of the history of the theory of fermentation in its relation with zymotic disease. The analogy between fevers and fermentation has been taught since the earliest days of Physic. Hippocrates believed fevers to be due to the concretion in the blood of a *materies morbi* derived from without. In 1702 Dr. Mead clearly stated the analogy, and prefigured the theory advanced by Liebig in 1840. In the present day it is taught not only by the ablest Physicians, but is incorporated with the reports of the chiefs of the sanitary departments of nearly all nations. The investigation of the real nature of fermentation has thrown much light on the subject. That living molecules were the prime causes of the process, though long foreshadowed, was first distinctly declared by Schultze and Schwann. The author considered that the potential energy of the morbific molecule as well as of the ferment could be stored up in no inorganic material—this must possess power of vitality. He divided the germs of disease into two classes, according as they multiply (*a*) in the blood, (*b*) in the intestinal canal. He showed by experiment that fermentation can take place in the gastro-intestinal tract of mice. He then discussed the means of destroying these germs, and considered that the most powerful agent with which we are acquainted is carbolic acid. He described the salts of sulpho-carbolic acid which have the advantage of being capable of the most ready administration. His experience, fortified by that of others, was that they relieved dyspepsia, checked pus-formation, and seemed to diminish the intensity of the symptoms of zymotic disease.

ARMY MEDICO-CHIRURGICAL SOCIETY OF PORTSMOUTH.

WEDNESDAY, APRIL 7.

Deputy-Inspector General Dr. C. A. GORDON, C.B., in the Chair.

DR. STONE, R.N., read a paper on Medicine and Surgery in Japan, in the course of which the principal diseases of that country were briefly discussed. Small-pox, which is very prevalent there, has decreased considerably in several districts since vaccination came to be practised, the general mortality of these places having sensibly diminished since its introduction. Syphilis, which is very rife, has been endemic for several centuries. Of late a system of periodical Medical examination of prostitutes has been instituted at the chief open ports by the native Government; keepers of houses of resort are licensed and taxed. The girls are usually sold by needy parents for definite periods to the proprietors of these places, and on the completion of their period of service return to their homes, no social slur attaching to them on account of their previous lives. Within the last eighteen months the services of an English Naval Surgeon have been secured at Yokohama in connexion with a system of Lock Hospitals. Rheumatism, scabies, elephantiasis, pulmonary diseases, and an intractable native affection called the "stomach pain," probably a species of ulceration, were also enumerated. The evidently European origin of their present ideas of Medical practice, and the Dutch instrumentality by which this was brought about, were commented upon. Mention was also made of the Medical School at Nagasaki under the superintendence of Dr. Baudwin, a Dutch Military Surgeon. One unfortunate circumstance which acts as a bar to the acquirement of sound knowledge amongst the Japanese students is the prohibition of dissections; Dr. Baudwin, however, endeavours to make up for this by the use of elaborate plates. The universal use in Japan of our chief medicines, as iodide of potassium, sulphate of quinine, mercury, etc., is an interesting fact.

DR. O'LEARY, Honorary Secretary, then read a paper giving the details of three cases of Aneurism which came under the observation of Staff Assistant-Surgeon Lamb while on service in New Zealand and Tasmania. The first case was that of a man of the Army Hospital Corps, who presented himself at the General Hospital, Auckland, one morning, stating he had a bubo in his right groin. On examination, the swelling proved to be an aneurism (about the size of an orange) just under Poupart's ligament, and constricted by it. At this time a bruit was audible to any person standing by the patient's bed. His statement was that about ten days previously, while lifting a large case, he felt something give way in his groin. Pressure was applied at the distal side of the tumour, and he was put on low diet, the result of which was that the pulsation diminished in force, and the tumour became solid, but increased in size, and continued to do so till it affected the respiration by its pressure on the diaphragm. He gradually became worse, and eventually died. The post-mortem disclosed an enormous aneurism extending from about six inches below Poupart's ligament up to the diaphragm, occupying the entire right side of the abdomen, pushing the liver and kidney in front of it, and to the other side. The original opening in the artery was just under Poupart's ligament, and was directed backwards against the brim of the pelvis, which was partly absorbed by the pressure. It had then forced its way under the peritoneum upwards on the psoas and iliacus muscles. Across the anterior surface of the tumour passed the external iliac artery. All the muscles between the tuberosity of the ischium and the lesser trochanter were disintegrated, and there was a cavity containing about a quart of semifluid blood. The next case was that of a gentleman who had sold out of the army and settled in New Zealand, a robust, healthy-looking, and temperate man. He suddenly slipped off his chair while sitting in the drawing-room, and died. The post-mortem disclosed the pericardium full of blood, which had escaped from the rupture of a very small aneurism about half an inch above the right coronary artery; the sac was just large enough to admit the top of the little finger. The third case was that of a private in the 2nd Batt. 14th Regiment who was admitted into Hospital with symptoms of lumbago, soon followed by intense pain down the left thigh, and particularly referred to one spot just above the patella. The most careful examination failed to detect any tumour or bruit, though one was suspected in the abdomen, probably pressing on the anterior crural nerve. He died rather suddenly. The post-mortem showed a large quantity of fluid blood in the left side of the abdomen, and lying on the psoas muscle was a large pyriform aneurism of the abdominal aorta opposite the cartilage between the first and second lumbar vertebræ, the bodies of which were almost entirely absorbed, the intervening cartilage being unaffected. Across the anterior suface of the aneurism passed the anterior crural nerve, stretched and flattened out, and its fibres separated; the kidney on that side had almost disappeared. The point of interest in this case was the existence of so large an aneurism receiving its current of blood from the aorta and issuing at a right angle to the course of that vessel, without any bruit being audible, or any other physical sign to establish the true nature of the disease.

A paper by Surgeon PORTER, 97th Regiment, followed on a case of Popliteal Aneurism cured by Compression. This man was admitted into Hospital complaining of pain in his left knee, with numbness and stiffness of the joint, and attacks of cramp in the calf. On examination a pulsating tumour about the size of a hen's egg was found on the outside of the median line of the popliteal space; there was a loud rough bruit which disappeared on pressure being applied to the femoral artery. Signoroni's tourniquet was applied at intervals, extending over a period of six days, and making in all seventy-five hours of actual compression, when complete solidification of the tumour was produced. All uneasiness disappeared, and the man was discharged to his duty cured in exactly one month from the date of his admission.

OBITUARY.

ROBLEY DUNGLISON, M.D.

On April 1, at Philadelphia, died, at the age of 71, Robley Dunglison. He was chiefly known in England by his Medical Dictionary, one of the most valuable and learned works ever produced. He was, however, the author of several volumes on Medical subjects. Dr. Dunglison was born at Keswick, Cumberland, England, was educated in London, and practised there for a short time. At the request of President Jefferson he emigrated to the United States in 1824, and accepted a Professorship in the University of Virginia. In 1836 he removed to Philadelphia and occupied one of the chairs in Jefferson College. He retired from active life a few years since, but occupied himself in instructing the blind, for whose use he published a dictionary. He was deservedly highly esteemed both by his Professional brethren and the public.

MEDICAL NEWS.

University of Aberdeen. — At the late Medical graduation term, the following candidates, after the usual examinations, received degrees in Medicine and Surgery :—

The Degree of M.D.

Lyle, William Vacy, M.R.C.S., London.

At the same time, the following gentlemen received promotion to the Degree of M.D. :—

Carter, Richard, M.B., Bath.
Forbes, Alexander, M.B., C.M., Peterhead.
Taylor, Henry Shinglewood, M.B., C.M., Alton, Hants.
Young, David, M.B., C.M., Malabar, Bombay.

The Degree of M.B.

Arbuckle, Hugh White, L.F.P.S.G., L.R.C.P.E., Kilmarnock.
Brown, Richard G., New Deer.
Cruickshank, Brodie, M.A., Mortlach.
Flint, Frederic, M.R.C.S.E., Canterbury.
Gillies, John, Skye.
Grant, Charles Duncan, Inverness-shire.
Hutchison, George Wright, Banchory-Ternan.
Jefferson, Thomas Jewison, M.R.C.S.E. and L.S.A., Market-Weighton, Yorkshire.
Lawrence, Alexander, M.A., Cullen.
Mackintosh, William, Moy.
M'Calman, Robert G., Caithness.
Mitchell, Patrick, Old Rain.
Nicol, Patrick, M.A., Aberdeen.
Sinclair, David, Peterculter.
Thomson, John Wm., Aberdeen.

The Degree of C.M.

Brown, Richard G.	M'Calman, Robert G.
Cruickshank, Brodie.	Mackintosh, William.
Flint, Frederic.	Mitchell, Patrick.
Grant, Charles D.	Nicol, Patrick.
Hutchison, George W.	Sinclair, David.
Lawrence, Alex.	Thomson, John W.

Of the above-mentioned candidates, Brodie Cruickshank and Patrick Nicol received their Degrees in Medicine and Surgery with highest academical honours, Thomas Jewison Jefferson his Degree in Medicine with academical honours, and George Wright Hutchison his Degree in Surgery with academical honours. At the same time, Robert Reid Alexander, George Skene Duff, Patrick Letters, and Patrick Blaikie Smith were certified as having passed all the examinations, and are entitled to receive Degrees on their attaining the necessary age; that in the case of Patrick Blaikie Smith the Degrees should be conferred with highest academical honours; and the following were declared to have passed part of their examinations :—

Anderson, Alexander.	Manson, David.
Bernard, Francis R.	Matheson, John.
Carless, Edward N.	Merson, John.
Catto, Robert.	Munro, Alex. B.
Connor, Louis R.	Norton, John A.
Creighton, Charles.	Orchard, Thomas N.
Crombie, Charles M.	Ostlere, Robert.
Cullen, James.	Raitt, Thomas.
Davidson, Charles.	Richardson, Andrew.
Davidson, John.	Rosser, Walter.
Dickson, Matthew.	Ruxton, John.
Ellis, Henry V.	Shirres, David.
Farquharson, Patrick D.	Thomson, George.
Gordon, John.	Walker, Alexander.
Grant, James.	Walter, Clement C.
Hay, Peter G.	Waterworth, Edward A.
Hilder, Ridley Thomas.	Welford, George E.
Lawrence, Nathaniel.	Williams, Alfred H.
Lowson, David.	Wintle, Henry.
M'Connell, James F. P.	Yeats, William.
Mair, Edward.	

The next Professional Examination for Degrees in Medicine commences on Saturday, July 24, 1869.

Royal College of Surgeons of England.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 15th inst., and, when eligible, will be admitted to the pass examination :—

Bartlett, Edward, of St. Mary's Hospital.
Briggs, G. C., of King's College.
Burmood, T. W., of University College.
Carr, W. W., of University College.
Clarke, J. S., of the Liverpool School.
Clark, H. E., of the Glasgow School.
Cornelius, W. B., of University College.
Dudley, W. H., of the Glasgow School.
Edger, E. R., of University College.
Epps, Washington, of University College.
Godrich, Alfred, of St. George's Hospital.
Groom, C. F., of University College.
Hollinshead, Francis, of the Birmingham School.
Holmes, Charles, of the Manchester School.
Hopper, A. R., of the Liverpool School.
Lang, J. A. T., of the London Hospital.
Morris, W. J., of the Glasgow School.
O'Connor, Charles, of University College.
Pink, Thomas, of Guy's Hospital.
Pitts, H. Y., of the Liverpool School.
Read, Charles, of St. Bartholomew's Hospital.
Roberts, G. M., of Guy's Hospital.
Settle, John, of the Glasgow School.
Skinner, R. A., of University College.
Walker, A. T., of the Birmingham School.
Welsh, W. K. B., of St. Mary's Hospital.
West, J. G. U., of University College.
Yate, Edward, of St. Bartholomew's Hospital.
Young, John, of the Birmingham School.

The following gentlemen, having undergone the necessary examinations, were admitted Members of the College on the 20th inst. :—

Atkinson, Robert, L.S.A., Coniston, Ambleside, of the Leeds School.
Barton, Edwin William, L.R.C.P. Lond., Market Rasen, of St. Mary's Hospital.
Cameron, James Spottiswoode, M.B. Edin., Mirfield, Yorkshire, of the Edinburgh School.
Collier, John Lister, Manchester, of the Manchester School.
Cox, William, Dorchester, Wallingford, of St. Mary's Hospital.
Gabbett, Poole Robert Dalton, Woolwich, of St. Mary's Hospital.
Grant, Frederick, Kibworth, Leicestershire, of St. Bartholomew's Hospital.
Hardyman, Charles Edward, Norwich, of St. Thomas's Hospital.
Haynes, Horace Eyre, Evesham, Worcestershire, of St. Bartholomew's Hospital.
Hutchins, William Daniell, Bristol, of the Bristol School.
Jukes, Andrew, Tiverton, of St. Bartholomew's Hospital.
Kidd, John Kinloch, York, of the Charing-cross Hospital.
Parker, Rushton, Liverpool, of University College.
Pocock, Edward William, Brixton, of St. Thomas's Hospital.
Roberts, John Dungey, L.S.A., St. Austell, of Guy's Hospital.
Saunders, Henry William, Oxford-street, of St. Thomas's Hospital.
Skelton, Henry, L.R.C.P. Edin., Tooting, of the Charing-cross Hospital.
Skrimshire, Charles Parnham, Holt, Norfolk, of St. Bartholomew's Hospital.
Thompson, Edwin, Liverpool, of the Edinburgh School.
Turner, Frederick Harry, High Wycombe, of St. Bartholomew's Hospital.

The following gentlemen were admitted Members on the 21st inst. :—

Abbott, George, L.S.A., Nottingham, of Guy's Hospital.
Crowther, Richard, M.B. Edin., Crackpett, Yorkshire, of the Edinburgh School.
Davison, William John, Newcastle, of the Newcastle School.
Dessé, Ethelrid, Kensington Gardens-square, of University College.
Duncan, Alexander Shuter, Brompton, of St. George's Hospital.
Hodges, Francis Henry, L.R.C.P. Edin., Bristol, of the Edinburgh School.
Hopkins, John, L.S.A., Llantrissant, Glamorganshire, of St. Mary's Hospital.
Morris, David William, Capel Dewi, Carmarthenshire, of the Middlesex Hospital.
Oakeshott, John, L.S.A., Highgate, of University College.
Whitmore, William Beach, Sloane-street, of King's College.

It is stated that five candidates out of the thirty-nine examined failed to acquit themselves to the satisfaction of the Court of Examiners.

Apothecaries' Hall. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, April 15, 1869 :—

Baker, Henry Francis, Andover, Hants.
Browne, Thomas Llewelyn, Great Berkhampstead.
Boulton, George Sutton, Albrighton, Wolverhampton.
Gillingham, Alfred, Forest-hill, Kent.
Guest, John, Commercial-road East.
Hendley, Thomas Holbein, Charlton.
Lovell, William Day, Croydon.
Mason, William Inglis, Sudbury.
Patton, Edward Kenny, Quebec, Canada.
Rowlands, Daniel George, Carmarthen.
Wearne, Walter, Helston, Cornwall.

The following gentlemen also, on the same day, passed their First Examination :—

Chambers, John Louis, London Hospital.
Crocker, James, Leeds Hospital.
Holman, Robert Colgate, Guy's Hospital.
Thorpe, George Elisha Knight, Guy's Hospital.

As Assistants in compounding and dispensing medicines:—
Heslop, John, Edgeware-road, W.
Warrior, Charles, Northallerton, Yorkshire.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Bell, William, M.R.C.S. Eng., L.S.A.—Acting Medical Officer to the Wirral Hospital and Dispensary for Sick Children.

Braidwood, P. M., M.D., L.R.C.S. Edin.—Acting Medical Officer to the Wirral Hospital and Dispensary for Sick Children.

Dickson, J. Thompson, B.A. and M.B. Cantab., M.R.C.P. Lond.—Medical Superintendent to St. Luke's Hospital for Lunatics.

Duke, Dr. A.—Honorary Surgeon to the Dover Hospital, *vice* J. C. Ottoway, Esq., resigned.

Forbes, David, M.D., L.R.C.S. Edin.—Acting Medical Officer to the Wirral Hospital and Dispensary for Sick Children.

Higgins, Charles H., M.D., M.R.C.P. Lond., F.R.C.S. Eng.—Consulting Medical Officer to the Wirral Hospital and Dispensary for Sick Children.

Hill, John D., F.R.C.S. Eng. (Exam.), Surgeon to the Royal Free Hospital—Assistant-Surgeon to the Royal Orthopædic Hospital, Oxford-street.

Nourse, W. E. C., F.R.C.S. Eng.—Surgeon to the Brighton Hospital for Sick Children.

Stevenson, John F., M.D., L.R.C.S. Edin., M.R.C.P. Lond., M.R.C.S. Eng., L.S.A.—Consulting Medical Officer to the Wirral Hospital and Dispensary for Sick Children.

NAVAL AND MILITARY APPOINTMENTS.

Admiralty.—The following appointments have been made:—Constantine Keenan, Surgeon, to the *Scylla;* Robert F. Smyth, Assistant-Surgeon, Additional, to the *Royal Adelaide*, for the *Revenge;* John Whyte, Acting Assistant-Surgeon, to the *Scylla;* Dr. John Cotton, Staff Surgeon, Additional, to the *Royal Adelaide*, for the *Revenge:* Dr. Belgrave Minnis, Assistant-Surgeon, Additional, to the *Royal Adelaide*, for the *Revenge;* Dr. Alfred G. Delmege, Acting Assistant-Surgeon, Additional, to the *Royal Adelaide*, for the *Revenge*.

Brevet.—The undermentioned Officer, who has retired upon full pay, to have a step of honorary rank as follows:—Surgeon-Major William Campbell, Bombay Establishment, to be Deputy Inspector-General of Hospitals.

Medical Department.—Staff Surgeon Grahame Auchinleck, M.D., having completed twenty years' full pay service, to be Staff Surgeon-Major under the provisions of the Royal Warrant of April 1, 1867. Staff Assistant-Surgeon John H. Webb has been permitted to resign his commission.

75th Foot.—The second Christian name of Surgeon M'Master is "Munbee," and not "Mumbee," as stated in the *Gazette* of March 5.

BIRTHS.

Braid.—On April 7, at the Grove, Burgess-hill, Sussex, the wife of James Braid, M.D., of a daughter.

Earle.—On April 14, at Brentford, the wife of E. S. Earle, F.R.C.S., of a daughter.

England.—On April 18, at Winchester, the wife of Dr. England, of a son.

Hamilton.—On April 20, at Dalry, Ayrshire, the wife of W. B. Hamilton, M.D., of a son.

King.—On April 14, at Camberwell, the wife of T. W. King, M.D., of a son.

Miskin.—On April 18, at 162, York-road, Lambeth, the wife of Dr. G. A. Miskin, of a son.

Shillitoe.—On April 20, at Birch Mount, Sydenham-hill, the wife of Buxton Shillitoe, F.R.C.S., of a son.

Spooner.—On April 15, at 10, Guilford-place, the wife of W. Spooner, L.R.C.P. Lond., of a daughter.

Strange.—On April 17, at 4, Belsize-avenue, Belsize-park, the wife of W. Heath Strange, Esq., M.D., of a son.

Sykes.—On April 17, at 38, Queen's-road, Dalston, the wife of Dr. George Sykes, Surgeon to the Queen's Own Light Infantry Militia, of a daughter.

Wallis.—On April 10, at Gibraltar, the wife of W. B. Wallis, Surgeon of the 74th Regiment, of a son.

MARRIAGES.

Atkinson—M'Kenna.—On March 20, at Fort St. George, Madras, Lieut. S. E. Atkinson, Adjutant 19th M.N.I., eldest son of General E. Atkinson, Madras Army, to Janey Jannette M'Kenna, youngest daughter of John M'Kenna, Esq., M.D., Inspector-General of Hospitals, Madras Army.

Birch—Youlin.—On April 5, at St. Thomas's Church, New York, John Bagot, eldest son of William Birch, Esq., of Barton-under-Needwood, Staffordshire, to Mary Brower, eldest daughter of J. J. Youlin, M.D., of Jersey City, U.S.A.

Gilbertson—Todd.—On April 14, at Broughton, near Preston, Lancashire, J. B. Gilbertson, M.D., Preston, to Mary, daughter of the late George Todd, solicitor, of Preston.

Loch—Campbell.—On April 20, at St. John's Church, Notting-hill, James Henry Loch, M.D., Bengal Medical Service, to Helen Maria, eldest daughter of Dr. A. Campbell, late Superintendent of Darjeeling.

Moore—Gibson.—On April 20, at East Woodhay, Hants, the Rev. Denis Times Moore, M.A., eldest son of Francis Moore, M.D., of Great Hadham, Herts, to Mary, eldest daughter of the late Rev. John Gibson, B.D., Vicar of Furneaux and Brent Pelham, Herts.

Peirce—Lilwall.—On April 13, at the parish church, Wimbledon, London, James E. Peirce, M.R.C.S., L.S.A., Bryn-villa, Brynmawr, to Emilie Maria, second daughter of John Lilwall, Esq., Hay, Breconshire.

Rice—Addison.—On April 17, at Southam, Warwickshire, David Rice, Surgeon, to Mary Ann, younger daughter of the late John Addison, Esq., of Little Staughton, Beds.

Richardson—Wardle.—On April 14, at the parish church, Leeds, William Edmund Richardson, Surgeon, Rochdale, to Clara, daughter of Charles W. Wardle, Esq., Whitkirk, near Leeds.

DEATHS.

Brush, Lionel Herbert, third son of John Ramsay Brush, M.D., of Camden-crescent, Bath, at Weston-super-Mare, on April 17, aged 5 years.

Toulmin, Eliza, the wife of Frederick J. Toulmin, F.R.C.S., at 36, Thurloe-square, South Kensington, on April 12.

Williamson, Alexander, Captain Peninsular and Oriental Company, son of the late Benjamin Williamson, M.D. Aberdeen, at Bridge of Allan, on April 12, aged 39.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Bristol Royal Infirmary.—Dispenser; must understand purchasing drugs and compounding and dispensing medicines. Applications and testimonials to the Committee on or before May 4.

Charing-cross Hospital, West Strand.—Assistant Physician and Physician for the treatment of diseases of the skin. Candidates must have a degree from one of the principal Universities of the United Kingdom, and be F. or M.R.C.P.L. Applications and testimonials to the Secretary on or before the 27th inst.

Farringdon General Dispensary and Lying-in Charity, 17, Bartlett's-buildings, Holborn.—Honorary Surgeon; must be F. or M.R.C.S.E., not practising Midwifery or Pharmacy. Applications and testimonials to Mr. Green, St. Michael's-house, St. Michael's-alley, Cornhill, on or before the 26th inst. Election on May 4.

Glenorchy.—Medical Officer wanted by the Parochial Board of Glenorchy and Inishail, Argyleshire, N.B. Applications and testimonials to the Rev. D. McLean, Chairman of the Board, F. C. Manse, Glenorchy, Dalmally, on or before May 1.

Hospital for Sick Children, 40, Great Ormond-street.—Assistant-Physician; must be F. or M.R.C.P.L. Applications and testimonials to S. Whitford, Esq., Secretary, on or before the 28th inst.

Lincoln County Hospital.—Physician; must have a diploma from one of the Universities of Great Britain or Ireland, and be F. or M.R.C.P. Lond., F.R.C.P. Edin., or F.K.Q.C.P. Applications and testimonials to Mr. John William Danby, the Secretary, Lincoln, on or before May 17. Election on May 20.

Liverpool Dispensaries.—Three Assistant House-Surgeons; must be duly registered. Applications and testimonials to the Secretary on or before the 28th inst. Candidates will be required to attend before the Medical Board at the Dispensaries' Office, Leith Offices, Moorfields, on the 29th inst. at 2 o'clock p.m.

London Fever Hospital.—Physician; must be F. or M.R.C.P.L. Applications and testimonials to the Secretary, London Fever Hospital, Liverpool-road, N., on or before May 8.

North-Eastern Dispensary for Children.—Physician. Further particulars may be obtained on applying, by letter, to J. D. Fry, Secretary, 9, College-hill, E.C.

Retford General Dispensary.—House-Surgeon and Apothecary; must have both Medical and Surgical qualifications. Applications and testimonials to the Dispensary Committee on or before May 8. The duties will commence on July 1.

St. John's-wood and Portland Town Provident Dispensary.—Surgeon. Applications and testimonials to W. W. Watts, Esq., at the Dispensary, 1, Henstridge-villas, Ordnance-road, N.W.

Stafford County Lunatic Asylum.—Assistant Medical Officer; must have two legal qualifications, and be 25 years of age, and unmarried. Applications and testimonials to Dr. Bower, at the Asylum.

West London Hospital, Hammersmith.—Assistant House-Surgeon; must be legally qualified. Applications and testimonials to the Secretary on or before May 15.

POOR-LAW MEDICAL SERVICE.

RESIGNATION.

Great Yarmouth Parish.—Mr. T. H. Moxon has resigned the South District; salary £80 per annum.

APPOINTMENTS.

Foleshill Union.—John Orton, jun., M.R.C.S.E., L.S.A., to the Exhall and Keresley District.

Reading Union.—Adam J. Moore, M.R.C.S.E., L.S.A., to the St. Mary District.

St. Alban's Union.—Richard H. Prior, L.R.C.P., M.R.C.S.E., L.S.A., to the Second District.

An adjourned meeting of the Metropolitan Association of Medical Officers of Health will be held on Saturday, May 1, at 7·30 p.m., at the Scottish Corporation Hall, Crane-court, Fleet-street, when the discussion on Dr. Letheby's paper "On the Methods of estimating Nitrogenous Matters in Potable Waters, and on the Valne of the Expression 'Previous Sewage Contamination,' as used by the Registrar-General in his Monthly Reports of the Metropolitan Waters," will be resumed.

Académie de Médecine.—An election took place at the last meeting to fill a vacant place in the section of Hygiene and Materia Medica. The candidates were MM. Fauvel, Hillairet, Le Roy de Méricourt, Gaillard, Bertillon, and Lagneau. M. Fauvel obtained fifty-nine of the suffrages of the eighty voters who were present.

CAMBRIDGE.—Dr. Ransom took his seat at the Cambridge Board of Guardians on Wednesday last, having headed the poll in the contest for the parish which he represented. Singular to state, it is just twenty-five years since the Doctor was appointed one of the Medical officers of the house, and it was at the earnest request of the ratepayers that he consented to be put in nomination. He has been appointed upon several committees, and will be a valuable member of the Board.

AT a meeting of the Liverpool Medical Institution on Thursday, the 15th inst., a resolution, moved by Dr. A. T. H. Waters, and seconded by Dr. Vose, was passed to the following effect:—"That a local subscription be opened in aid of the fund now being raised for a memorial to the late Dr. Marshall Hall, and that the subscription list be placed in the library."

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.—At a meeting of the Board of Governors of this Hospital, held on the 17th inst., Mr. Robert St. John Mayne, son of the late eminent and lamented Dr. Robert Mayne, was unanimously elected one of the Surgeons of the institution, in the room of Dr. Maurice H. Collis, deceased.

SWISS DOCTORESSES.—In a letter from Zurich it is stated that there are at the present time eight ladies studying Medicine, most of them being either English or Russian. This has suggested to Professor Kapp the opening of a girls' gymnasium for the purpose of preparation for University studies.

THE quarterly meeting of the Poor-law Medical Officers' Association will be held at the Freemasons' Tavern, Great Queen-street, Lincoln's-inn-fields, on Wednesday, April 28, at half-past seven precisely. After the address of the President has been delivered, and a resolution submitted affirming the general objects of the Association, the meeting will proceed to consider the Irish system of out-door Medical relief, the operation of the Irish Medical Charities Act, and the advisability of its extension to England and Wales. Several members of Parliament have promised to attend, and will probably take part in the proceedings.

ST. VINCENT'S HOSPITAL, DUBLIN.—On April 20 the annual distribution of the prizes in Clinical Medicine and Surgery took place in the theatre of this Hospital, in the presence of the Medical staff and students. After an eloquent tribute to the memory of the late Dr. O'Ferrall, by whom this office had always been hitherto discharged, Dr. Quinlan said:—"It now becomes the duty of my colleagues and myself to declare the names of the candidates successful in the recent competitive examination. This examination included not only an oral trial of the readiness of your knowledge, but a test by written answers to written questions of the depth and extent of your clinical information. Its result has a practical value, inasmuch as the questions were not merely such general ones as could be answered by general knowledge acquired by lectures or books, but were specially framed so as to require on your part an accurate recollection of the leading features of the nature and treatment of most of the important cases treated in this Hospital during the past session. I am glad to be able to add that, especially in the junior class, your answering has been most creditable to you and gratifying to us." The following prizes were awarded:—Senior Class, Mr. J. J. Power; Junior Class, Mr. F. Codd, and Mr. Myles O'C. M'Swiney; Certificate, Mr. M. J. Malone. Dr. Quinlan concluded by announcing that next year the senior candidates would, in addition to the present examinations, be called upon to examine and prescribe for patients whom they had not before seen, and the juniors be examined in the minor operations of Practical Surgery, thus constituting a complete test, theoretical and practical, of the benefit derived by them from the advantages afforded by the great institution in which they studied.

IN the Thirteenth Annual Report for 1868 of the Nottingham Lunatic Asylum Dr. Stiff remarks that "there is an accumulation of sixteen lunatics—namely, one man and fifteen women—over the numbers remaining at the close of the preceding year. This excess of patients must be distinguished from an increase of insanity. The table of admission shows that the new cases were only 93, or two fewer than in 1867. The accumulation depends chiefly upon the character of the cases admitted, whether they are acute and amenable to early treatment, or whether they are chronic and permanent ones. It is well established that the majority of curable patients leave the Asylum convalescent during the first year of treatment, while the aged and demented remain under care until they die. A few years ago it would have been deemed an unusual proceeding to send to the Asylum imbecile persons from 70 to 86 years of age to be confined as lunatics; nevertheless twenty persons of this class have been received here during the last two years. The expectation of life of persons of the age of 70 and upwards is between six and seven years. Some reduction might be made in the number of harmless and idiotic patients if their friends or the guardians of the poor would consent to take charge of them. In order to prevent unnecessary trouble or expense they might be sent out on trial to their respective localities. Three persons voluntarily applied for admission in the early part of the year, each labouring under a different form of insanity. The first, a man suffering from chronic mania, had been a patient here thirty-seven years before; the second was a female—case melancholia—who had formerly made a similar application; and the third, a young man labouring under epileptic imbecility. All three were consigned to their friends."

THE LATE DR. ADAMS, OF LANARK.—A handsome monument has just been erected beside the grave of the late Dr. Adams. It consists of a wall tablet in three massive panels, on the centre one of which is inscribed the following:—"Erected to the memory of Alexander Maxwell Adams, M.D., L.R.C.S.E., F.F.P. and S.G., Provost of the Royal Burgh of Lanark, who died in office at Lanark on July 17, 1867, in the 54th year of his age. This monument is erected by a number of his friends, in admiration of his eminent talents as a Physician, in recognition of his valuable public services for seven years as Provost of Lanark, and as a tribute of affectionate respect for the amiability of his character, and the many virtues which adorned his private life."

CASE OF OBESITY.—M. Parrot, Physician to the *Enfants Assistés*, relates the case of a girl, 10 years of age, 1·45 mètres in height, and exhibiting no deformity. Her large development of fat has only taken place of late years, and she now weighs 80 kilogrammes (more than 175 pounds). Nothing similar has been observed in the child's family. Her intellectual development is backward, her manners being infantile. Speech is somewhat difficult, and her voice is deep. She possesses notable muscular power, but is soon fatigued, and standing upright is very troublesome to her. Her appetite amounts to voracity. Some of the admeasurements are as follows:—circumference of the cranium 58 centimètres; submental circumference 61; from one acromion to the other 37; circumference of the arm 38; of the wrist 17; height 97; bimammary circumference 111; umbilical 107; of the waist 94; of the calf 43; of the hand, at the second phalanx of the fifth finger, 20. The child exhibits no signs of scrofula.—*Revue Photographique des Hôp. de Paris*, No. 2.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Mr. Orton's cases have been received, and shall have early insertion.

Americus.—The protracted crying was probably after the operation.

R. E. C.—The double qualification is necessary.

Students.—The work referred to was written by the late Mr. Lizars.

X. A.—Surgeons to militia and volunteer regiments are entitled to the cockade.

Juvenis.—The minimum fee for successful vaccination is one shilling and sixpence.

Reader.—"The Gold-headed Cane" was written by Dr. MacMichael. It consists of biographies of Radcliffe, Mead, etc., and its title had its origin in a gold-headed cane which originally belonged to Radcliffe, was bequeathed by him to Mead, and so on. The cane some years since was to be seen in the Library of the College of Physicians.

When Thieves fall out, etc.—Up to a recent date American publishers used to pirate the works of English authors most remorselessly, but had a kind of thieves' honour amongst themselves, so that when one had published a pirated book he was left alone with his prey, and others refrained from pirating the same. Thus we learn that one of the fraternity who made arrangements for reprinting Dr. Barnes's Lectures from our columns (of course without consulting Dr. Barnes) disposed of his interest in them (!) to another publisher. Now, however, these harpies are beginning to rob each other. If A. publishes a pirated book, B. will publish the same if he thinks it will pay him, and, lo! now some of them open their eyes, and begin to think honesty may after all be the best policy, and that an American law, recognising the copyright of English authors, and enabling American publishers to buy and hold it, would be a good thing.

THE CHLORIDE OF AMMONIUM AND THE PERCHLORIDE OF MERCURY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Having delayed till now making any further remarks on the double solution of chloride of ammonium and perchloride of mercury in order to

verify once more the statements I made in a former number of yours, I beg through your medium to thank J. B. S. for the trouble he has taken to consider the subject, and while acknowledging the difficulty and uncertainty that must surround questions as to the coexistence in solution, combination, or double decomposition, of salts whose respective solutions are colourless, I wish to call attention to the fact that I found it impracticable to obtain a permanent solution of the chloride of ammonium at the degree of concentration, obtained at a boiling heat, mentioned by me in a previous number, without dissolving in the solution, while hot, the perchloride of mercury. The questions requiring unequivocal answers for elucidating my original one appear to be the following:—1. Could the temperature attainable by a nearly saturated solution of the sal ammoniac, just short of actual ebullition, so act on the perchloride introduced into the saline solution as to determine the formation of some compound more soluble than either salt alone, or, if possible, coexisting in the same solution in simple intermixture, such as mechanical admixture of the separate solutions in the cold might, *à priori*, be supposed to effect? 2nd. Independently of the effect of heat, may concentration of the solutions have any influence in determining such a result? 3rd. In the absence of either heat or concentration alone having such a power, may they not jointly have it? 4th. May not a process of slow evaporation and crystallisation, from a concentrated solution of the two salts together, afford some means of determining the chemical constitution of the solution in question, at least at its highest practicably attainable state of concentration and under the prolonged influence of heat? Begging, Sir, to apologise for the unavoidable length of my question, I am, &c. EXPERIMENTALIST.

LINDLEY MURRAY ON INHALERS.

The following advertisement is extracted from a Dublin daily paper:—

Just Published,

THE TREATMENT of CONSUMPTION by INHALATION. By THOMAS S. PALMER, M.D., L.R.C.S.I., 32, Merrion-square North.

This little pamphlet, which may be had with the inhaler, the author advocates *this* as the only rational and reliable treatment of *this* distressing malady, and points out practical means of carrying *that* treatment into effect.

"I have had the opportunity of testing the method which I now advocate, and which I may peculiarly call my method, during a period of more than sixteen years, and I can with confidence recommend its employment in all the stages of consumption."—Extract from Pamphlet.

The inhaler, with fluid for inhalation complete, may be had through all respectable chemists, and wholesale from Bewley and Draper, 23, Mary-street, Dublin.

COMMUNICATIONS have been received from—

Mr. H. W. BUDD; Mr. G. STREET; Mr. C. J. CULLINGWORTH; Dr. RUDYARD; Mr. JOHN D. HILL; Mr. C. ORTON; Mr. JOHN GIBSON; Dr. W. H. CORFIELD; Mr. J. W. BARNES; Dr. PHILIPSON; Dr. JAMES ROGERS; Dr. CLIFFORD ALLBUTT; Mr. SUTTON; AMERICUS; Dr. DUKE; Mr. T. M. STONE; Dr. BATEMAN; Mr. J. CHATTO; REGISTRAR, Medical Society of London; Dr. GUY; Mr. T. BAYANT; Dr. B. WILLS RICHARDSON; Dr. LETHEBY; Dr. BALLARD; Dr. BEVERIDGE; Dr. BOWER; MEDICUS; Dr. DALE; Dr. J. N. VINEN; X. A.; Dr. QUINLAN; Mr. CONSTABLE; Dr. W. B. HAMILTON; Dr. J. J. PHILLIPS; Mr JAMES S. BRAZIER; Dr. GERVIS.

BOOKS RECEIVED—

Eléments de Science Sociale, par un Docteur en Médecine—Population Fallacies, by a Graduate of Medicine—Macdonald on Sound and Colour—Crane's Report of the Sanitary Condition of Leicester—American Journal of Obstetrics, vol. i. No. 4—Report of the Nottingham United Lunatic Asylum—Dale on the State of the Medical Profession.

NEWSPAPERS RECEIVED—

New York Medical Gazette—Granada Medical Gazette—Brighton Herald—Medical Press and Circular—Brighton Examiner.

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 17, 1869.

BIRTHS.

Births of Boys, 1072; Girls, 1085; Total, 2157.
Average of 10 corresponding weeks, 1858-67, 1988·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	817	778	1595
Average of the ten years 1858-67	712·1	669·5	1381·6
Average corrected to increased population	...	...	1529
Deaths of people above 90	...	...	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	1	2	6	1	10	8	6	...
North	618210	1	3	6	...	24	20	2	...
Central	378058	...	5	3	...	8	1	3	..
East	571158	...	9	15	1	27	11	5	...
South	773175	...	9	11	1	34	15	5	...
Total	2803989	2	28	41	3	103	55	21	..

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·682 in.
Mean temperature	55·2
Highest point of thermometer	79·1
Lowest point of thermometer	37·9
Mean dew-point temperature	49·2
General direction of wind	Variable.
Whole amount of rain in the week	0·46

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 17, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending April 17.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending April 17.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3170754	40·7	2157	1462	1595	79·1	37·9	55·2	0·46	46
Bristol (City)	169423	36·1	122	76	*89	78·2	44·4	55·3	0·40	40
Birmingham (Boro')	360846	46·1	304	175	141	77·8	41·6	55·1	0·43	43
Liverpool (Boro')	509052	90·7	331	295	262	76·1	42·9	54·3	0·13	13
Manchester (City)	370892	82·7	289	210	*186	78·5	41·5	56·0	0·43	43
Salford (Borough)	119359	23·1	103	60	71	77·4	42·2	55·6	0·41	41
Sheffield (Borough)	239752	10·5	198	126	130	75·1	44·0	55·3	0·71	72
Bradford (Borough)	138522	21·0	155	71	83	74·0	44·5	55·9	0·30	30
Leeds (Borough)	253110	11·7	138	129	114	76·0	43·0	56·6	0·41	41
Hull (Borough)	126682	35·6	74	59	75	73·0	38·0	51·3	0·59	60
Newstl-on-Tyne, do.	130503	24·5	85	69	87	71·0	40·0	50·1	1·24	24
Edinburgh (City)	178002	40·2	124	86	109	70·7	39·0	52·5	0·90	91
Glasgow (City)	458937	90·6	449	268	383	69·6	38·3	52·5	0·20	20
Dublin (City and some suburbs)	320762	32·9	192	158	188	73·2	36·4	52·5	0·45	45
Total of 14 large Towns	6546587	35·5	4727	3244	3516	79·1	36·4	51·2	0·50	51
					Week ending April 10.			Week ending April 10.		
Vienna (City)	(1863) 560000	...	...		385	...	...	51·1	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·682 in. The barometrical reading decreased from 30·16 in. on Tuesday, April 13, to 29·00 in. on Friday, April 16.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

April 24. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

ROYAL INSTITUTION, 3 p.m. Mr. A. Geikie, "On the Origin of Land Surfaces."

26. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Prof. Bennett, of Edinburgh, "On Pneumonia." Mr. Jabez Hogg, "On Cataract and its Treatment."

27. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

ETHNOLOGICAL SOCIETY, 8 p.m. Mr. William Blackmore, "Notes on some of the principal Tribes of the Indians of the United States, with a Brief Account of the late Indian War." Mr. E. T. Stevens, "Some Characteristics of the Stone Implements and Objects found in the Mounds of Ohio."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8½ p.m. Mr. Thomas Smith, "On Nephrotomy for Renal Calculus." Mr. Spencer Wells's "Third Series of 100 Cases of Ovariotomy."

ROYAL INSTITUTION, 3 p.m. Prof. Grant, "On Stellar Astronomy."

28. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

HUNTERIAN SOCIETY, 8 p.m. Dr. Beigel, "On Chorea."

29. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Tyndall, "On Light."

30. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ROYAL INSTITUTION, 8 p.m. Mr. R. H. Scott, "On the Work of the Meteorological Office, Past and Present."

BURGUNDY WINES.

What more valuable therapeutic agent than a pure Wine rich in Aromatic properties, but free from an excess of Alcohol and Sugar? Such is PIOT FRÈRES' BEAUNE. 44s. per doz.

That the judicious exhibition of easily assimilated Tonics and non-intoxicating Stimulants in the form of Wine pure and generous, yet very moderately alcoholic, is often more efficacious than all the fortifiants in the Materia Medica, is a truth that has become generally recognised with the advanced minds of the Profession; and which of the various juices of the Grape is calculated to be of the most active benefit—*instead of the least harm*—is a question that demands the serious consideration of every Practitioner.

The qualities that render Burgundy emphatically the Wine for Invalids in this climate are its richness in aromatic properties, its freedom from acidity, and its comparatively great powers as an exhilarating and sustaining stimulant in proportion to the small quantity of alcohol it contains.

MM. PIOT FRERES have the pleasure to submit upwards of thirty varieties of Burgundy Wines, and offer every facility and assistance to members of the Medical Profession in selecting the Wines best adapted for various diseases, constitutions, and temperaments.

PIOT FRÈRES, Growers and Factors of Burgundy Wines. London Depot, 282, Regent-street, W.

Natural Mineral Waters of Vals, Vichy, Carlsbad, Seltzer, Kissengen, Homburg, PULLNA, FRIEDRICHSHALL, &c., direct from the Springs; also the Artificial Mineral Waters prepared by Dr. Struve and Co. at the Royal German Spa, Brighton, and the Natural Bromo-Iodine Water of Woodhall Spa, Lincolnshire.—Agents, W. BEST and SONS, 22, Henrietta-street, Cavendish-square, London, W.

NATURAL MINERAL WATERS OF VICHY,

Efficacious in Stomach, Liver, and Renal Diseases; Gout, Rheumatism, Diabetes, &c.

Also, the celebrated OREZZA MINERAL WATER, containing Iron, and which is extensively prescribed as an invaluable Tonic.
VICHY PASTILLES, the best Digestive Lozenges; and VICHY SALTS for Baths. Also, other French and German Natural Mineral Waters.
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CARLSBAD	FRIEDERICHSALL	POUGUES	SPA
CONDILLAC	HOMBOURG	PULLNA	VALS
CONTREXVILLE	KISSINGEN	ST. GALMIER	VICHY
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See "The Lancet," Feb. 22, 1868; "Med. Times and Gaz.," March 21, 1868; "Brit. Med. Jour.," June 27, 1868; and "The Public Health," Sept. 1, 1868.
INGRAM & CO., 35, Bucklersbury, E.C.; BEST & SONS, 22, Henrietta-st., Regent-st., W.; MAYO, WATSON, & CO., 2, Berners-st., Oxford-st., W.
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And 55, GROSVENOR STREET.

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For INFANTS, WEAK CHILDREN, and CONVALESCENTS.

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Messrs. S. and Co. beg to call special attention to these Biscuits, and to recommend them most confidently to the notice of the Profession and the public, as having been proved to be of the greatest benefit both to Infants and Adult Invalids.

In an able article on "The Art of Feeding Babies," attributed to Dr. Druitt, it is said:—"We must notice the very ingenious MALT Biscuits made by Spiking, of Dover-street; these contain the malt and wheaten flour in the form of a biscuit: they keep any time, and require no more cooking than any other nursery biscuit. When mixed with milk-and-water they dissolve into a smooth, custard-like mass, with nothing lumpy or pasty about them. We have known them eagerly used by adults troubled with great irritation of stomach and bowels. They make capital imitation of custard."—See "Medical Times and Gazette" of August 24, 1867.

Price 8d. per lb., or 4s. 6d. per box.

SPIKING & CO., 5, DOVER-STREET, PICCADILLY, W.

CLINICAL SURGERY.—No. I.

ON THE

IMPACTED FRACTURE OF THE NECK OF THE THIGH-BONE,

MORE PARTICULARLY IN REFERENCE TO ITS DIAGNOSIS.

By THOMAS BRYANT, F.R.C.S.,
Assistant-Surgeon to Guy's Hospital.

(Concluded from page 407.)

Case 8.—*Impacted Fracture of the Neck of the Femur treated as a Contusion.*

On July 26, 1865, I was consulted by a Mr. L., aged 27, a patient of Dr. Brett, of Watford, respecting an injury to his left hip of some weeks' standing. It appeared that when hunting on May 15 he was thrown off his horse and fell directly upon his left hip; he was unable to move after the accident or to use the limb. He was carried home, and Dr. Brett sent for. A careful examination was then made of the limb, but, as Dr. Brett states, he could not satisfy himself as to the nature of the accident. The symptoms were inconsistent with a dislocation or an ordinary fracture. There was clearly shortening of the limb, and slight eversion of the foot, and this shortening could not be diminished by extension. The patient was unable to raise the leg; no crepitus, however, could be felt. The head of the bone could also be rotated in the acetabulum. The patient was consequently kept in bed and the limb placed on a pillow, cold lotions being applied. This treatment was steadily pursued for about ten weeks, and as the patient failed to get on as it was expected, by Dr. Brett's advice I was consulted. The gentleman came into my room on crutches, but resting on the limb. On comparing the two lower extremities, I found that the left or injured one was about three-quarters of an inch shorter than the right, and that this shortening was clearly in the thigh. The left foot was slightly everted, but less so than the right, and the patient was unable to rotate it inwards so completely as on the sound side. The left trochanter was situated nearer the median line of the body than the right, and about the neck of the bone there was much thickening, apparently osseous. The head of the femur rotated smoothly and without pain in the acetabulum, and all the movements of the thigh could be performed, although less thoroughly than on the sound side. With these facts before me, I had no doubt that the case was one of impacted fracture of the neck of the thigh-bone without displacement of the trochanters. I advised him to use crutches for a time, and to take off pressure; giving at the same time a favourable prognosis. This gentleman subsequently had a strong and useful limb, the lameness from the shortening being the only discomfort.

Case 9.—*Impacted Fracture of the Neck of the Thigh-bone treated as a Case of Contusion.*

Edward C., aged 41, a labourer, came under my care at Guy's Hospital on May 9, 1865, for some affection of his left hip. It appeared that he had experienced a fall upon the trochanter two years previously, that he was unable to stand or to use the limb after the accident, and that the Doctor who attended him said it was only a bad bruise. He stated that the limb was shorter than the other after the fall, and that he could do nothing with it for about six weeks. After that he began to get about with a crutch. He kept his bed for about six weeks, and applied cold lotions to the part. When I saw him the leg was one inch shorter than the other. The head of the bone rotated in the acetabulum. Flexion and rotation of the limb could be performed, although not perfectly. The left trochanter was clearly placed nearer the median line of the body than that on the right side, and there was great thickening of the bone about the neck of the femur. There was no pain or other symptom; the shortening of the limb was the sole cause of his distress. It was tolerably clear that in this case an impacted fracture had existed.

Remarks.—The nine cases I have just related were all seen during life, and terminated well. I propose now to give short reports of five other cases, four of which have been communicated to me by my friends, Dr. W. Hills, of Norwich, and Mr. Bisshopp, of Cheshunt, and to illustrate three of them by drawings. The preparations from which the drawings were taken are now in the Guy's Museum. The fifth case has been extracted from the note-book of my father, the late Mr. T. E. Bryant, of Kennington, and the preparation has been in the Guy's Museum since his death in 1840. The true nature of the case has never been recognised, as the section of the bone was made in the wrong direction. From the drawing (Fig. 4) it will be seen to be an admirable example of the impacted fracture.

Case 10.—*Impacted Fracture of Neck of Thigh-bone—Death on fifty-fifth Day.*

A woman aged 62, an inmate of the Kent County Lunatic Asylum, when walking in the hop-ground on September 7, 1857, fell upon her hip. When taken up she was examined by Dr. William Hills, the resident Medical officer, who found the injured limb to be half an inch shorter than the sound one, and that there was slight eversion of the foot. The patient had partial power to flex the thigh. Crepitus was only detected after several efforts had been made to find it. A long splint was applied for six weeks, and the patient regained the use of her limb. As she stood there did not appear to be any perceptible difference between the lower extremities, and the patient would not admit there was any dissimilarity. Early in October this patient was seized with a severe attack of bronchitis, which terminated her life upon November 12, fifty-five days after the accident. Dr. Hills removed the head and neck of the bone, and kindly sent it up to me. It will be seen that the neck of the bone has been fractured and completely driven into the shaft; the small trochanter has been also fractured and displaced upwards. Perfect union has taken place. The specimen (Fig. 1) is a good one of the impacted fracture. (Preparation, Guy's Museum, 1188[15].)

Case 11.—*Impacted Fracture of the Neck of the Thigh-bone—Death seventeen Months subsequently.*

Ann C., aged 66, a patient of my friend, Dr. W. Hills, fell accidentally in the ward of the Kent County Asylum on February 16, 1853, and injured her right hip. The limb after the accident was about one inch and a half shorter than the left, and this shortening could not be diminished by extension. Crepitus could not be made out. Dr. Hills was consequently disposed to look upon the case as one of dislocation. The symptoms were not, however, consistent with such an idea; consequently a long splint was applied, and the woman confined to bed for six weeks. A good convalescence followed, and the patient soon regained strength in the limb, and was able to walk without assistance. The shortening, however, still persisted. On July 30, 1854, seventeen months after the accident, she died from acute bronchitis. The specimen, now in the Guy's Museum (1188[60]), was removed after death, and is a good example of the impacted fracture (Fig. 2). The neck of the femur had evidently been driven into the bone for more than one inch, the direction of the cancelli of the bone indicating the extent. The trochanter major was also fractured. Good repair had taken place.

Case 12.—*Impacted Fracture of the Neck of the Thigh-bone—Death five months subsequently.*

W. M., a Waterloo veteran, aged 84, came under the care of my friend Mr. Bisshopp on September 7, 1865, on account of an injury he had sustained a few hours previously, caused by a fall from the edge of his bed on to his left hip. The accident was followed by severe pain, and the old man was unable to rise after the fall. When seen by Mr. Bisshopp, the left leg was lying motionless in the bed, and the foot was everted. The limb was not apparently much shorter than the sound one; there was a difference, but it was not measured. The head of the femur could be rotated in the acetabulum, but the movement caused much pain; pressure, also, upon the trochanter and behind it caused severe suffering. No crepitus could be felt. Mr. Bisshopp recognised the nature of the accident, and fixed the limb on a long splint. The man died five months after the accident of acute bronchitis. After death, the specimen marked 1189[15] in the Guy's Museum was removed, and it shows a good example of the impacted fracture which has undergone repair.

Case 13.—*Impacted Fracture of the Neck of the Thigh-bone—Death 7 weeks subsequently.*

C. F., aged 69, an inmate of the Kent County Asylum and a patient of Dr. W. Hills, now of Norwich, was pulled off the edge of her bed by a child on Nov. 20, 1857, and fell upon her right hip. The accident was followed by pain in the part, but more particularly in her knee. There was some shortening of the limb after the accident, but no eversion of the foot. The patient could also partially flex the thigh when in bed. After several attempts crepitus was made out, and this was only obtained by an assistant extending the limb and at the same time rotating the leg inwards. A long splint was applied and kept on for some weeks, but a bedsore appeared, and from

this she sank exhausted on January 8, seven weeks after the injury. The specimen marked 1185^{20} (Fig. 3) was removed after death, and is clearly a case of double impacted fracture of the neck of the thigh-bone within the capsule. The line of fracture, as exhibited in the specimen, is very irregular, and is not seen upon one half unless some force is employed to separate the parts. The reparative process had gone on favourably. The neck had been fractured near the shaft and driven in; it had also been fractured near the head and driven in likewise, but into the head of the bone. Fig. 3 well illustrates this unusual condition.

Fig. 1.

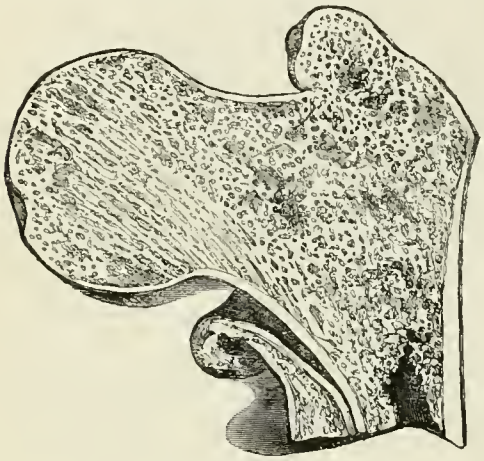


Fig. 2.

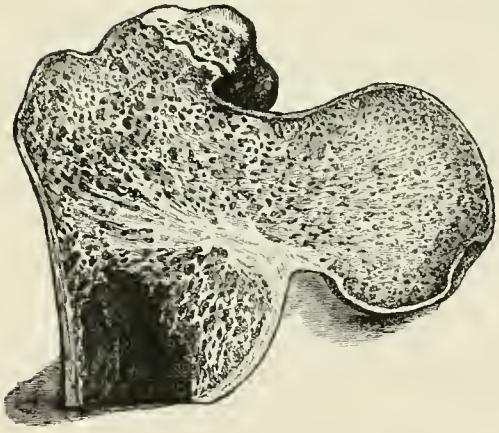
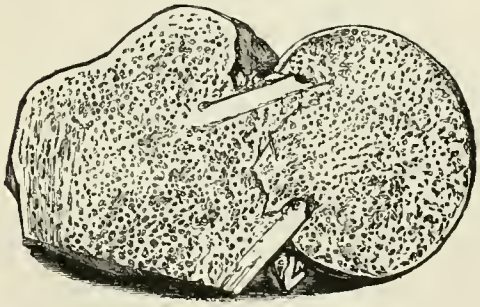


Fig. 3.

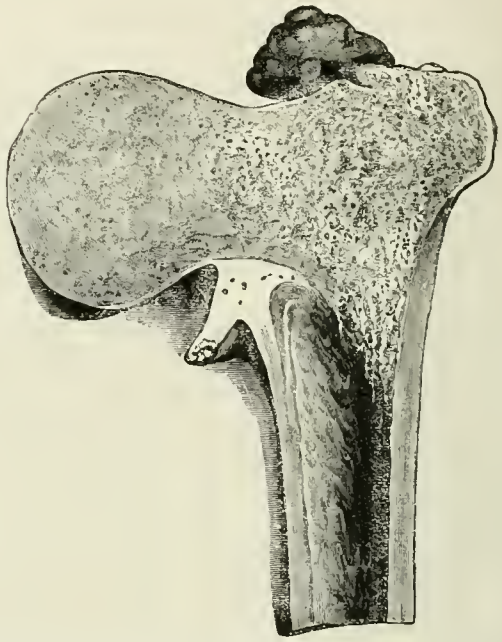


Case 14.—*Impacted Fracture of the Neck of the Thigh-bone ten months before Death.*

The following case of impacted fracture occurred in the practice of my father, the late Mr. T. E. Bryant, of Kennington, in the year 1833. The preparation has been in Guy's Museum since his death in 1840, but from the way in which the section was made the true nature of the case has never been clearly revealed. It is an admirable example of the impacted fracture. The history of the case as taken from my father's note-book is as follows:—

Mrs. L., upwards of 60 years of age, fell on to the trochanter and was brought into Lambeth Infirmary on August 16, 1833. The limb was shortened and the foot everted; a crepitus was also found on rotating the limb. The leg was kept at rest upon a pillow and an inclined plane, and in about six weeks the patient was able to leave her bed and walk by means of a stick. She died from fever in June, 1834, ten months after the accident. My father adds the case is very like one related by Sir A. Cooper in his work on Dislocations, given to him by Mr. Powell (*vide* plate xi., fig. i.), and in this opinion I entirely agree.

Fig. 4.



Remarks.—The cases I have just related are so alike in all their details, that it is difficult to arrive at any other conclusion than that they are essentially of the same nature, and that the symptoms by which they were characterised clearly indicated a definite condition of parts—a special form of injury. A comparison, also, of the cases seen during life, and the histories of those from which the preparations were taken, tend also to confirm this opinion, and to show that this special form of injury is the impacted fracture of the neck of the thigh-bone. The symptoms, indeed, of this form of fracture are so constant, and in their combination are so characteristic, that it is a source of some surprise they are not more generally correctly interpreted. Yet the truth must be confessed that the Profession as a body do not recognise the accident as they ought; they may have heard the name of such a form of fracture, but they fail to recognise the features by which it may be known; they look upon it as one of such rarity as to be in the ordinary run of practice scarcely worthy of consideration. As a result, grievous errors in practice are constantly fallen into; for, on the Surgeon failing to recognise the true nature of the case by its history and clinical symptoms, the patient is submitted to a series of manual examinations, too probably of a forcible kind, in order to determine the presence or absence of a dislocation of the head of the femur or of a non-impacted fracture of its neck, the symptoms of the impacted fracture not being quite consistent with either form of injury; and to this end the existence or non-existence of crepitus is the one point looked for. In this attempt grievous harm is committed—harm, also, which from the nature of the case is clearly irreparable.

Let us, therefore, turn back to the cases which have been related, and find out from their clinical symptoms the special points by which the impacted fracture may be recognised.

To aid us in this endeavour I have tabulated the fourteen cases, having arranged the symptoms in a definite order, and placed them under such headings as can be readily recognised. I propose subsequently briefly to analyse the table and to draw up such general conclusions upon the subject as the facts may appear to warrant.

Table illustrating the Clinical Symptoms of Impacted Fracture of the Neck of the Thigh-bone.

	Seen a few hours after accident.					Seen some weeks after accident.				Specimens with reports.				
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 (Fig. 1). Guy's Mus., 11886	11 (Fig. 2). Guy's Mus., 11869	12. Guy's Mus., 11895	13 (Fig. 3). Guy's Mus., 11850	14 (Fig. 4). Guy's Mus., 11875
Age of patient	44	51	64	56	65	60	40	27	41	62	66	84	69	60
Nature of injury	Fall on trochanter	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto
Amount of immediate shortening	About 1 inch ...	Ditto ...	Less than 1 inch	Ditto ...	Ditto ...	1 inch ...	Less than 1 inch	Ditto ...	About 1 inch	About ¾ an inch	About 1 inch ...	Slight ...	Ditto ...	Shortened
Shortening remediable by extension or irremediable	Irremediable	Ditto ...	Ditto ...	Ditto ...	Ditto ...	—	Ditto ...	Ditto ...	—	Ditto	Ditto ...	Ditto ...	Ditto ...	—
Position of foot	Less everted than sound limb	Everted ...	Ditto ...	Slightly everted	Everted	Straight ...	Straight; foot everted on sound side	Everted ...	—	Slightly everted	—	Everted ...	Not everted	Everted
Position and amount of mobility of the head of the femur	Head rotated smoothly in acetabulum with trochanter major	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	—	—	Ditto	—	—
Relative position of trochanter major	Nearer the median line of the body and ant. sup. spin. process of ilium than on sound side	—	—	¾ of an inch nearer ant. sup. spin. process of ilium	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	—	—	—	—	—
Crepitus	Absent	Indistinct	Absent ...	Ditto ...	Ditto ...	—	—	Absent at first	—	Indistinct ...	Absent	Ditto ...	Indistinct ...	Crepitus felt
Patient's power over injured limb after accident	None	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Could rotate limb slightly after accident, and when seen freely	After accident none; good power when seen	Ditto, ditto	Ditto, ditto	Could partially flex thigh on pelvis	—	—	Could partially flex thigh in pelvis	—
Condition of parts about the neck of the bone on digital examination	Some thickening felt on recovery	Thickening	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	Ditto ...	—	—	—	—	—
When patient was seen ...	A few hours after accident	Ditto ...	Ditto ...	Ditto ...	Ditto ...	10 weeks after accident	13 weeks after accident	9 weeks after accident	2 years after accident	Died on 55th day from bronchitis	Died 17 months after injury from bronchitis	Died 5 months after injury from exhaustion	Died on 49th day from fever	Died in 10 months

Analysis of Table of Clinical Symptoms.

From the above table of clinical symptoms the following conclusions may fairly be deduced :—

1. That in all the cases the injury to the hip-joint was communicated through the great trochanter.

2. That, as a result of the injury, there was more or less loss of power in the limb; in some of the cases it was complete; in as many the patient could rotate the limb slightly on the couch; and in two cases partial flexion of the thigh could be performed.

3. That in all the cases immediate shortening of the injured limb was the direct result of the accident; and that this shortening was about one inch or less, and was irremediable by extension.

4. That the foot of the injured extremity was either straight or slightly everted, although in several cases this eversion was less marked on the injured than on the sound side.

5. That the great trochanter was placed nearer the median line of the body, and also nearer the anterior superior spinous process of the crest of the ilium. than on the sound side.

6. That the head of the femur could be made to rotate smoothly in the acetabulum, and that the great trochanter moved with it.

7. That crepitus was either absent or indistinct in all the cases.

8. That all the cases, with one exception, occurred in patients past middle age.

Now these symptoms, taken as a whole, without the slightest doubt indicate an impacted fracture; for, although there are other injuries to the hip-joint which may give rise separately to many of the symptoms just detailed, there are none in which all or most are found combined. There is no injury to the hip-joint in which the head of the femur rests, and can be made to rotate, in its acetabulum, in which immediate shortening is ever found, with the exception of a fracture; and there is no form of fracture that occurs under like circumstances, with the exception of the impacted, that is not accompanied by a crepitus which can be readily detected, complete eversion of the foot, and loss of power over the limb. In fact, the symptoms of an impacted fracture are most marked when taken together, and cannot well be misinterpreted. They are as marked as those of ordinary dislocation of the head of the femur, or of an ordinary non-impacted fracture of the neck of the bone.

As a conclusion, I would therefore again repeat that I believe it would be a far safer clinical rule of practice to suspect all cases of severe injury to the hip-joint received through the great trochanter to be examples of the impacted fracture of the neck of the thigh-bone, and to conclude that such is not the case when the symptoms clearly prove a different condition, than to leave the suspicion of such an injury out of consideration altogether, or only to entertain the idea of its presence when the symptoms which the case presents are clearly inconsistent with the existence of any other form of recognised injury. By the strict observance of this rule I feel convinced that mistakes in practice would not be so frequent or so serious, for errors in diagnosis would be more rarely made.

ORIGINAL COMMUNICATIONS.

ON IMPURE WATER AS A CAUSE OF THE EXCESSIVE MORTALITY FROM CHOLERA IN HOLLAND DURING THE FIVE EPIDEMIC VISITATIONS SINCE 1832.

By A. M. BALLOT, M.D., Rotterdam.

In the beginning of the year 1868 I published in our Medical journal (*Nederlandsch Tijdschrift voor Geneeskunde*) a treatise, the tendency of which was to show the influence of the water we drink on the propagation of cholera. In the course of the year 1866, Holland, with a population of 3,528,708, lost by that disease 19,691 of its inhabitants, the greater part of them living in the large towns. The idea of attributing the propagation of cholera in the first place to the water we drink has appeared to me for a long time the most applicable to our country. The *genius epidemicus*, that *Deus ex machina* that was called upon to explain all illnesses whose origin could not be accounted for in any other manner, proved insufficient. That *genius epidemicus* was pretended to supplant other diseases. The cholera

by no means supplanted them. On the contrary, it presented itself in our country as a foreign invader, spreading death and destruction, but leaving all the other illnesses as they were.

The kingdom of Holland is divided into provinces, some of which are more elevated than the others. The country is intersected by rivers, ditches, and canals. The rivers are partly liable to ebb and flow, according to the direction of the wind; and in so far as they are, all noxious substances susceptible of it have an ample opportunity of sinking, so much the more as between every ebb and flow there is a stagnancy of the current. The canals receive their waters from the rivers or from the polders.(a) The water in the canals, ditches, and polders is generally at the same level. The water we drink is chiefly drawn from those rivers, ditches, and canals, and also from wells. Rain water is only drunk where nothing else is to be found. It is only the wealthy who first filter their water. As it will appear afterwards, there is a difference in the soil of the different provinces which causes the well water in different places to be of a very different nature. If we consider the putrid matters by which all those waters are corrupted, we find them innumerable, so much the more as they are farther distant from the river. These putrid matters are in the first place the human excrements, which flow away in rivers or canals, or, being collected in pits built of bricks or bottomless tuns, sink largely into the ground. The corruption of the water by these substances is but too evident. In Rotterdam, for instance, the openings of the pipes through which the water passes into cisterns, from which it is carried up by pumps into the houses for domestic use, and the sewers of the privies, are found in the same quays, separated only by a few feet distance. As for the wells, their water rises and ebbs according to that of the neighbouring canals or ditches. In 1832 our Professor Mulder proved already that in many of our towns, and principally at Rotterdam, our wells contain nothing but soakage water.

Most of the cholera plagues that since 1832 have prevailed in our country first appeared at Rotterdam, and thence spread over the country along the Meuse and the canals. Besides, the innumerable travellers who from different parts arrive at Rotterdam by railways, steamboats, stage coaches, etc., and after a few days' sojourn return home, were the means of propagating the cholera throughout the country.

I profess that I and many of my countrymen are not able to say in how far Pettenkofer's theory of the ground water may be applicable to the lower part of our country. We should be glad to hear that learned man's opinion upon this subject after personal inquiry into it on the spot. Everything is artificial in the lower districts of our country, and there the cholera is always the most powerful.

Table I.—Mortality in Twenty-one Chief Towns during Five Cholera Epidemics in the Netherlands.

Towns.	1829. Popula-tion.	1832-3. Mor-tality.	1848-9. Mor-tality.	1853-5. Mor-tality.	1859. Mor-tality.	1866. Mor-tality.	1868. Popu-lation.
Amersfoort ...	11782	114	118	38	—	186	13248
Amsterdam ...	202364	1273	2273	1921	136	1101	262840
Arnhem	14507	264	406	61	55	427	29644
Breda	13114	112	—	145	23	128	15225
Delft	15023	173	578	237	118	428	22032
Dordrecht ...	19972	255	530	124	135	598	24124
Gouda	12878	273	313	154	142	154	15514
Groningen ...	52260	471	883	203	27	1046	37312
Haarlem	21667	192	220	43	—	216	29580
Hague (The) ...	56105	359	609	173	78	1016	87319
Hertogenbosch ...	20489	320	—	—	—	296	24222
Kampen	8882	51	204	140	—	305	15489
Leeuwarden ...	20058	113	286	23	—	64	25059
Leiden	24564	594	965	87	327	892	38492
Maestricht ...	24444	—	304	87	1	299	28719
Meppel	5725	25	86	56	—	216	7573
Nymegen	17734	66	7	1	10	68	22508
Rotterdam ...	72294	1845	2083	1541	455	1211	115554
Schiedam ...	11588	299	301	229	79	217	16820
Utrecht	43207	502	1663	487	286	1619	58985
Zwolle	15640	91	268	67	4	204	20448

The population of 1829 is the result of the decennial official census taken in that year; that of 1866 is taken from an official report.

In Table I. I have brought together all the towns where the cholera epidemics that have afflicted our country have prevailed in any sensible degree. This table shows that the different towns have been afflicted in different degrees. Some of them have only been afflicted a few times, others more frequently, but not so violently; others, again, a few times, but in a high degree; others, at last, at every epidemic, and almost always in a high degree. A slight look at this table will show us that the cholera epidemic of 1866 is by no means inferior to its great predecessors in malignity. There was in our country a cholera mortality equal or superior to the greatest mortality in other countries. In 1866, in the whole kingdom, 19,691 persons died of cholera, or 55 in 10,000 inhabitants.(b) In the same year, the mortality amounted—

For Zwolle	to	99	in 10,000 inhabitants.
Rotterdam		105	,, ,,
The Hague		112	,, ,,
Bois-le-duc		122	,, ,,
Schiedam		129	,, ,,
Amersfoort		140	,, ,,
Arnhem		144	,, ,,
Dordrecht		168	,, ,,
Delft		190	,, ,,
Kampen		196	,, ,,
Leiden		231	,, ,,
Utrecht		274	,, ,,

If we compare with these numbers the mortality in East London—72 in 10,000 inhabitants—(c) we find a most considerable difference in favour of East London.

By casting up the cholera deaths in every place in Table I., and comparing them with the population of 1849, occupying a middle place between the first and last epidemical year (1832 and 1866), we shall obtain the following result:—

Table II.

Towns.	Population, 1849.	Mortality.	Proportion of mortality to population.
Leeuwarden ...	24490	406	1 in 60
Haarlem	25852	621	1 41
Maestricht	25140	691	1 36
Bois-le-duc	21873	626	1 34·9
Breda	14169	408	1 34·7
Amsterdam	224035	6704	1 33
The Hague	72225	2240	1 32
Zwolle	18168	634	1 29
Amersfoort	12222	486	1 25
Kampen	12185	760	1 17·4
Meppel	6639	383	1 17·3
Dordrecht	20909	1283	1 16·2
Arnhem	19111	1210	1 16
Gouda	13788	1040	1 13
Leiden	24490	2835	1 12·66
Rotterdam	90073	7135	1 12·62
Groningen	33694	2704	1 12·45
Delft	18449	1534	1 12
Schiedam	12736	1125	1 11
Utrecht	47781	4557	1 10·5

The death-rate has no absolute value here; it has only a relative one. It shows still more evidently that the different towns have a different predisposition for cholera, offering it more or less facility for its settlement and propagation; for though in a certain place the cholera has been more violent than in others—as, for instance, the Hague showed in 1866 a larger number of cholera deaths per 1000 than Rotterdam—yet by the absolutely larger number of deaths in Rotterdam it appears that there must be a particular cause why the illness so easily takes root in that town, as also in Leiden, Groningen, Utrecht, and a few other places.

When we consider the seven towns last mentioned in Table II., showing the greatest mortality, and inquire into the points of similarity and difference between them, we shall find that the soil of Leiden, Groningen, Delft, Schiedam, and Utrecht is clay; that of Gouda fen, and that of Rotterdam clay and fen. In all these towns the inhabitants drink water from a river, ditch, or well. As for sewage, the excrements can, or could formerly, freely soak into the ground, or are, or were, carried off into ditches and canals.

If we reflect on how porous a bottom, in which already putrid (rotten) organical matters are to be found, all these towns have been built, and when we see how these cities pollute that porous bottom by their excrements, whilst those towns that are situated on rivers or canals have their sewers pouring their contents directly into them, we find in those places one thing common to all—viz., drinking water drawn either from a ground polluted for centuries by human excrements or from rivers, canals, and ditches into which the excrements pass off from the sewers. Even though the wells, whose water is drunk, may have been wholesome in times past, yet the expression of Mulder is applicable to them—that "at length, in a town where the excremental and other matters are unlimitedly brought into the ground, every well becomes impure."

(a) A polder is a low ground or drained lake, surrounded by dikes, and kept dry by means of draining mills, which remove the water into a river or a canal.

(b) In England and Wales the whole mortality amounted to 14,378 in 21,210,020 inhabitants. (Report on the Cholera Epidemic of 1866, appendix, p. 52.) In the United Kingdom 17,793 in 29,946,058 inhabitants, or 6 in 10,000.

(c) Report on the Cholera Epidemic of 1866 in England, p. 21. The mortality from cholera in London without East London, was 5 in 10,000 (see p. 17).

I will now relate a few well-established facts that happened in our country:—

In 1866 a society for the improvement of public health at Utrecht inquired into the course and cause of the cholera. Dr. Snellen, an excellent observer, noticed that in a block of houses of a certain quarter of the town, inhabited by twenty-four families, thirty-two persons in twenty-one dwellings were seized by cholera—it was 30 per cent. of the population—and twenty-three died. In the whole town of Utrecht 4 per cent. of the population were seized by the epidemic. Those houses had not been built in a bad manner; on two sides they received light and fresh air. The people that inhabited them did not belong to the class of the poor. At the back of the houses is a common yard; along the houses is a foot pavement, then a row of linden trees, and the rest of the yard is used as a bleaching-ground. In this yard there are seven privies in pretty good condition, all running off into a ditch along the wall at the end of the bleaching-ground, and communicating with the canal. Here are found two wells with wooden pumps that supply clear and drinkable water. The foot pavement along the houses was full of holes or unevennesses, in which the foul water collected. The effects of the first cholera patient, bed, clothes, ewers, and pots, were aired and cleaned on this pavement. On inquiry, the wooden pumps proved to have become worm-eaten at the lower end. On July 4 one of the pumps, and on the 5th a second, were replaced by new ones perfectly impervious. After July 6 not a single person in that quarter had a fit of cholera. All the cases which happened there occurred between June 11 and July 6, whilst cholera continued in Utrecht till the autumn. It is perhaps a mere accident that from the date of July 6 cholera left that quarter, but it is not probable. It is far more likely that infected matters got into the waters of the pumps in the common yard, and so arrived at the stomach and bowels of the other inhabitants.

Immediately adjoining to the block of houses just mentioned, we find a charity-institution, called the Stephen's-foundation. This foundation consists of fifty houses or dwellings, inhabited by 260 persons, one of whom only died of cholera; and that one had drunk water from the above-mentioned pump.

At Leiden, says Dr. Winkler, they drink well-water—*i.e.*, water of the Rhine that has soaked into the ground. Leiden is a very old city; of course innumerable human bodies lie buried there. How wholesome that well-water of Leiden must be! The privies communicate with the canals by means of sewers, or the excrements are gathered into pits, which seldom require to be emptied in the usual manner, the ground being kind enough to imbibe whatever is liquid in them. And there was plenty of cholera at Leiden.

Now let me enter into more details about Rotterdam, a town that looks so airy and wholesome, and yet has obtained so sad a reputation in all the cholera epidemics, where, besides, the usual average mortality is 34 in 1000.

Rotterdam consists of three parts. One part (A), forming an irregular triangle, the base of which is situated along the Maese, is intersected by spacious canals, so that the largest ships can get into the inner part of the town. The ground of that part is clay, here and there with fen. The water they drink there is drawn immediately from the river or the canals.

The second part (B) has a lower situation. It is intersected by two small rivers, the Schie and the Rotte, and is surrounded by a canal or ditch (*singel*); the ground consists of clay and fen. In this part they drink well water, very seldom rain water, and also water from the river.

The third part (C), called the *Polderstad* (Poldertown) is still lower. Where it is standing now there were formerly gardens and arable land, intersected by ditches; the ground is fen and morass. In this part they drink nothing but well water.

Part (A) is in direct communication with the river; the water in the canals is liable to ebb and flood.

Part (B) is surrounded by a canal receiving fresh water at its two extremities.

Part (C) is also enclosed by a canal, which is properly an open sewer. From the canal of part (B) water is admitted into the numerous small ditches of the Poldertown, which receive all the excrements of the inhabitants of this part. After having passed through all those ditches, the water, converted into sewage water, runs off into the canal that surrounds part (C), and thence is carried off by two steam draining mills, at the west end into the Maese, at the east end into one of the canals of part (A).

It may easily be conjectured in what condition the water in the wells of the Poldertown is on learning that these wells are generally of little depth, and are dug in a morass, pierced by many thousands of piles on which the houses have been built, whilst the ground is charged with infected water, and, moreover, contains cesspits.

In part (B) the sewage is similar to that in part (C). The excrements are either gathered in pits or run off for the greater part into the Schie or Rotte, so that the well water is by no means better here. Besides, the Rotte flows along the general burial ground of Rotterdam, and cannot regularly pour its water into the Maese. The Schie runs through several towns, and going along receives all the human and animal excrements. It may be imagined how drinkable the water of the wells will be here. It is often troubled and has a peculiar smell.

One would be tempted to think that part (A) has excellent water to drink from those wide and deep canals which many of your countrymen have admired when arriving by the London or other packet boats at our beautiful spacious quays lined with trees. But they are mistaken. First these waters are corrupted by all the sewers discharging into them. Secondly, those canals are covered, as it were, by large and small vessels, the population of which is still more numerous than that of the neighbouring houses, and they throw all their excrements into the canals. Thirdly, this water is spoiled by that of the Schie and Rotte, the sluices (floodgates) of which are opened when the tide is ebbing to allow their filthy contents to pass off through the canals into the river; this passage soon becomes visible by a black track in the canals, which afterwards spreads over the whole of them. Finally, as it has been observed already, the water from the sewers of the Poldertown is emitted at the east end of the town into the canals, and passes off through them into the river.

Let us now consider—

1. That at Rotterdam the inhabitants generally drink water thoroughly vitiated by sewage matter.

2. That this town has a porous bottom saturated with organic matters in a state of decomposition.

3. That there is a frequent intercourse of people from all countries.

4. That cholera prevails in Rotterdam as soon as the disease has reached any neighbouring point.

Is it a wonder, then, that we renounce all other hypotheses, and that we attribute the cause of the propagation of cholera to the water, and exclusively to the water we drink?

All our sewers either discharge directly or indirectly into our ports and canals, or their contents have an opportunity to get into the wells. The excrements of all the foreigners are in the same way taken up in the water that is drunk by the whole population. Is there any theory that explains the first appearance of the cholera in a town so evidently as that of the water we drink?

Poverty, want, a dense population, human misery, cannot be denied to be found in this city. But are they comparable to those we meet with in the vast centres of the world? Are they comparable to those we see in the poorest quarters of London? Is there not an immense distance from the human misery and depravation in London and Paris to those in Rotterdam? And in your country the cholera disappears, whereas it keeps its force in our country. Much is done here, many hygienic improvements are effected—so many even, that some persons, observing the unrelenting rigour of the plague, are heard to say, "Look, now; however you try to banish the cholera, it is good for nothing." But the drinking water has remained as it was. Nay, rather, the increasing population of our town and the places situated on the rivers, which emit their water through our canals into the Maese, render it continually worse.(d)

If it is necessary for the first propagation of the cholera that cholera excrements get into the water which is drunk, and so pass into the stomachs of other persons, it is also necessary that people have a predisposition to be attacked by it. A want of coincidence between these two conditions may explain how, in a little solitary town, a single case of cholera is imported without being followed by others.

The appearance of cholera in places and persons that have apparently had no connexion with choleraic foci, stated in so many reports on cholera epidemics as a proof that these epidemics were self-generated or autochthonic, may be readily explained by the theory of propagation by the agency of water.

A person suffering from diarrhœa, coming from an infected place, makes use of the privies on his way, and then travels on; nobody knows anything of his passing. Perhaps that very same person is attacked by cholera; but then he will be far from several places where he has left the germs of the dis-

(d) When in the past year (1867) our water was chemically and microscopically analysed, the discoveries of Hallier and others about cholera cryptogamia were still unknown.

ease. But it will not be one person only that, unobserved, spreads the germs of the epidemic when it has rooted in neighbouring countries; there will be many in the above position, coming and going, and nobody observing their passage. Who knows how very small a quantity of their excrements, having got into the water drunk by a susceptible person, is sufficient to originate an epidemic without our being acquainted with the place whence it comes? The first patient may be interrogated with the utmost exactness; he will not be able to assert anything beyond his not having visited anybody that was affected by the disease, and so the inquiry will always have a negative result.

The cholera never makes any wide leap so as to render this hypothesis of its propagation improbable. Between the latest infected place and the places where it already prevailed we shall always be able to notice a frequent communication.

Let us take for an example Rotterdam, where generally the cholera has first broken out in our country. Many epidemics have begun at about the time of the fair, when many foreign companies of players and other people take up their lodgings in that town for a few weeks. The fair happens in the month of August, when there are generally many cases of common autumnal cholera.

In 1866, on the contrary, nobody here thought of cholera before it broke out; the prevailing character of disease (*genius epidemicus*) was quite different from that which is general before a cholera epidemic; the weather was even rather cold; it was in the beginning of April that the first case of cholera occurred; the nearest town where the cholera was then present in a high degree was Diekirch, in Luxemburg.

In 1867 the disease again broke out suddenly at Rotterdam, and soon became very severe, though of short duration. The first case occurred on August 9, about the time of the fair. Was there a connexion between the cholera and the troops of fair visitors? The nearest towns affected by the cholera were Elberfeld and Cologne.

To be sure, some very sporadical cases of cholera had now and then occurred in our country, but since June no case had been recorded. So these cases seemed rather to be on each occasion newly imported, whilst the places where they occurred had no predisposition for the disease, or the quantity of imported cholera-poison was not sufficient. The appearance of the epidemic at Rotterdam in August was evidently and without any doubt the consequence of a quite new importation from abroad.

Another natural cause of the importation of the disease into our town is the frequent communication. What a number of foreigners arrive here every day by steamboats, railroads, and other means of conveyance; how many vessels daily go up and down the river; how many vessels daily arrive here from the Rhine! Who would be capable of watching all those vehicles and interrogating all the comers whether they have visited places affected by the cholera? Who knows how much cholera-poison is imported here without producing any case of the disease? It may even be possible that the predisposition for the cholera is less here than in places where it never prevails, but that the immense quantity of imported matter causes it at length to break out as a necessary consequence.

The first cholera cases of 1867 occurred in those parts of the town where there is a busy intercourse of vessels. Among the first victims there were aged persons of distinction that seldom went out, but continually had Rhine vessels stationed before their houses. They drank the water from the canals.

The year 1868 was very instructive for those who pretend that the real Asiatic cholera is only a more violent species of cholera nostras (or common autumnal cholera), for there will seldom be seen a stronger concurrence of all the momenta which are generally thought to favour the cholera—violent, almost insupportably hot, dry weather, increased decomposition of all organic matters, want of water, and consequently want of cleansing. Yet not a single case of cholera occurred in this town, only some severe cases of cholera nostras, of which, however, the patients soon recovered.

Some persons contend that, if we admit the water as the means of propagation of the cholera, the whole population of an affected town must be exterminated by the augmentation of the cholera-poison, whereas, in fact, the disease gradually lessens. Yet I think that the disappearance of the cholera is also easily explained by the hypothesis of the water method of propagation.

In the first place the most sensible persons are affected by the disease, and, in proportion as it increases, the less sensible persons become more susceptible. Is it because they always drink of the infected water, which, being infected continually in a higher degree, at length pervades the strongest organism? Are the grumblings in the bowels marks of beginning infection or only nervous phenomena, anguish and fear?

But if, in the very middle of an increasing epidemic, a peculiar meteorological phenomenon occurs—as, for instance, heavy rains(e)—the water is efficaciously refreshed, the cholera-poison rarefied; the most susceptible persons are dead, as are also some of the less susceptible ones; the infecting water having lost much of its force, the effect will be less vehement on those less susceptible people. A smaller number will be affected, and by-and-by the influence of the poison will totally disappear. In this way the cholera comes to an end. Only a violent infection imported from abroad is capable of suddenly bringing the disease a second time to its former height. So in the last Prusso-Austrian war, when huge masses of soldiers, among whom the cholera prevailed, removed, the disease more than once was seen bursting out again in a violent degree in places it had left not long ago.

If we now consider the mortality by the cholera in the different provinces of our country, we shall find that the water which is drunk is shown to be everywhere the cause of infection.

Table III.

Names of the provinces.	Population on Dec. 31, 1865.	Mortality from the cholera in 1866.	Proportion of cholera mortality to population.	Average ordinary mortality during 20 years 1840-1860.
North Brabant ...	423460	1157	1 in 374	1 in 45
Gelderland ...	427852	1458	1 293	1 46
South Holland ...	672367	7688	1 87	1 32
North Holland ...	516803	2594	1 199	1 33
Zeeland	176169	252	1 700	1 31
Utrecht	172787	2705	1 64	1 36
Friesland	288991	461	1 626	1 43
Overysel	250766	1017	1 344	1 41
Groningen	224237	1525	1 146	1 43
Drenthe	104037	384	1 270	1 47
Limburg	222578	450	1 494	1 45
The whole kingdom	3530047	19691	1 in 180	1 in 38

Now, the ground in the different provinces is rather heterogeneous. In all but Zeeland, the soil consists chiefly of sand (diluvium and alluvium), clay, and fen. In one, however, there is more clay, in another more sand or fen. Have the sandy or clayey provinces remained free from the cholera? We can by no means state any regular connexion.

Gelderland, Overysel, North Brabant, and Utrecht, where there is a great deal of sand and a more elevated ground, ought to have the first places with respect to health; South and North Holland, Drenthe, Friesland, and Groningen must be the most unhealthy; and Zeeland would be in the middle.

When only casting a slight look at the last column of the table, containing the average mortality for twenty years, we see that there must be causes that neutralise a more favourable disposition of the soil. That column gives the following series, beginning with the most healthy:—1, Drenthe; 2, Gelderland; 3, Limburg, North Brabant; 4, Friesland, Groningen; 5, Overysel; 6, Utrecht; 7, North Holland; 8, South Holland; 9, Zeeland If the common mortality and that of the cholera should equally assign the same place in this series to a province, we must observe that many of the causes which contribute to the propagation of the cholera are also conducive to diarrhœa, typhus, and dysentery. It appears, however, that, as regards exemption from cholera mortality, the variety of the soil has still less influence; for in this respect Zeeland takes the lead, followed successively by Friesland, Limburg, North Brabant, Overysel, Gelderland, Drenthe, North Holland, Groningen, South Holland, and Utrecht.

The greatest relative mortality lighted on Utrecht, a beautiful province containing but little fen, and consisting chiefly of sand diluvium and alluvium) and clay. The fourth in order, with respect to unwholesomeness, is North Holland; and the difference of mortality between this province and the next preceding—viz., Groningen—is not a small accidental one, but a most considerable one, its mortality being a third of that in Utrecht, and nearly the half of that in South Holland. Friesland and Zeeland are the most favourably situated, their mortality being about a tenth of that in Utrecht, an eighth of that in South Holland, and the half of that in Gelderland.

It is evident by these examples that it is not the soil of fen,

(e) Dr. Snellen, in his above-mentioned treatise, says—"In the night of June 29, in one hour's time, 300,000,000 litres of water poured down on the surface of Utrecht, being a quantity such as though each of the inhabitants had fetched 6000 litres of water to clean the ground."

clay, or sand, that may be looked upon as the cause of the propagation of the cholera, but that necessarily another important influence must co-operate, and this influence is naturally thought to be the water drunk. And herewith I have reached the end of my article. But before ending I am going to recapitulate the principal arguments, the so-called proofs which I shall confirm by others as I proceed.

In the province of Utrecht, so wholesome and agreeably situated, the disease prevailed violently in the city of Utrecht, which receives drinking water from the ground infected for centuries by all sorts of excrements, and in the towns that are situated on the rivers and canals. In South Holland nearly all the towns have the sad advantage of lying on rivers or canals and drinking water from their ground saturated with putrid organic matters. The city of Groningen is in an equal condition. North Holland constitutes a favourable exception, though there is much fen and as many canals as in South Holland; but a whole district of this province containing several towns and villages does not drink water from the soil, but rain-water, whilst Amsterdam, a considerable part of the province, drinks, for a great part, water from the downs. There are still many people in this town who do not drink the latter, but rain-water, drawn from pits that proved not to be hermetically closed. Besides, we have always to consider that there is everywhere plenty of water, and that especially in the lower classes there are many that drink the water, however bad, if they only can have it cheap and in an easy way.

In Gelderland, that beautiful and healthy province, it was the towns situated on rivers that were affected. Arnhem, with its delightful environs known to so many of your countrymen, has been affected by the disease as often as it appeared in our country. The same may be said about the towns of North Brabant lying on rivers; it was chiefly these that were affected by the cholera. But, above all, Friesland and Zeeland, with a ground of fen, clay, and sandy clay, were the least affected. But in Friesland most inhabitants drink rain-water, no water from the ground; and in Zeeland there is no drinkable water but rain-water, because the water from the ground or the rivers and canals is salt or brackish. In some places no other cases of cholera occurred but the imported. The three largest towns, Middelburg, Flushing, and Zierikzee, in the vast epidemic of 1866, numbered only four cases of cholera. And Zeeland is by no means reputed healthy, so that it cannot be thought to have no predisposition for such epidemics. Zeeland, moreover, is frequently affected by diseases that in other provinces prevail alternately with cholera. The fevers of Zeeland are generally known. In his review Pettenkofer points out the connexion between intermittent fevers, typhus, and cholera.(f) In North Holland, too, fevers are endemical.

Another instance in conclusion. At Harlem the cholera prevailed in 1849. In 1866, when everywhere else it prevailed in the same degree, in a certain quarter of this town not a single case occurred. What had been effected there? That quarter was chiefly inhabited by bleachers, wanting pure water for their business. After the society for supplying Amsterdam with water from the downs had been constituted, those bleachers, whose quarter was crossed by the tubes, contracted also for the water which they not only used for their washing, but also for drink.

Resuming my arguments, I find in substance:—

1. Our country is highly affected by the cholera at every epidemic, chiefly in those parts where they drink water directly from the rivers and canals, or from the ground saturated with sewerage matter.

2. In places where rain-water is generally drunk the disease is by far less violent.

3. Places where there is no other drinkable water but rain-water are not affected by the epidemic; the single cases occurring there are imported.

4. When places affected by the cholera were supplied with pure water instead of the vitiated water, the disease disappeared.

Rotterdam.

Ingham Infirmary, South Shields.—£2025 have already been subscribed towards £5000, the amount required for this institution, which is to be erected as a memorial of the late Mr. Ingham, who was for twenty-five years M.P. for the borough; and it is proposed to amalgamate the South Shields and Westoe Dispensary with it.

(f) "Zur Aetiologie des Typhus" in the *Zeitschrift für Biologie*, Bd. I., Heft I.

ON THE HYPODERMIC INJECTION OF MORPHIA.

By ARTHUR EVERSHED, L.R.C.P. Lond., etc.

The hypodermic injection of medicines is yet, it appears, far from being in general use throughout the Profession, notwithstanding its great value. It is especially in cases of neuralgia that this method of administering sedatives exhibits to most advantage. The effect of a small dose of acetate or hydrochlorate of morphia—*i.e.* from $\frac{1}{3}$th to $\frac{1}{4}$th of a grain—in a case of facial neuralgia, for instance, injected beneath the skin of the forearm into the areolar tissue, is sometimes almost marvellous; usually within ten minutes the patient is quite free from pain, often giving expression to his feelings thus—"I am quite comfortable, and free from any pain." The effect of one such dose is startling to any one who has not had some experience in these cases; the beneficial influence continues for several hours, and in ordinary cases not arising from organic disease, a few injections will suffice to effect a cure. It may be that the affected nerve is in a state of impaired nutrition; then the morphia acting upon it, places it at rest as regards its function; at the same time the nutrition of the nerve continues, so the neuralgia is relieved by placing the nerve in a state of rest.

I have several times discussed this little operation and its effects with Professional friends, whose experience extends over many more years than my own, and have been surprised to find how few of them have adopted it; many are fearful of using it, having heard of alarming consequences following the injection. Unquestionably, it is an operation requiring nicety and extreme care in its application for the first time in any case. During the last two years I have used the syringe to a great extent in various cases; the largest dose I have administered has been half a grain of hydrochlorate of morphia, the usual dose being one-eighth of a grain, and this is usually sufficient to secure a night of ease to a patient suffering from the rheumatic pains, common amongst old people; a less quantity will sometimes suffice.

It is exceedingly useful in almost all cases attended with local pain, and in many cases of wakefulness—*e.g.*, delirium tremens.

It is a remarkable fact that morphia thus used has a more permanent effect in allaying pain than when given in any other way. One case, for instance, may be mentioned—that of a man, aged 63, who was suffering constant and severe pain from an epithelial growth of the cheek and contiguous parts. One injection at the beginning of last December gave relief for some days. The injection was repeated in about a week, and since that time there has been almost entire freedom from severe pain. Previous to the first injection, sedatives had been taken constantly for several months, with but very slight relief. The injection in this case has only been used twice.

After a fracture has been reduced, and the limb placed in proper position, a small dose of morphia injected into the areolar tissue of the limb is of great value in preventing muscular spasm, and, I think, ought scarcely ever to be omitted. The cases in which morphia and other sedatives may be thus administered advantageously might be multiplied indefinitely. I do not propose at present to enter more fully into the subject. The object in view will be attained if some of my Professional brethren who have not yet adopted this plan can be induced to make a trial of it; I feel certain, if they try it, they will at once appreciate a means of relief so satisfactory to their patients and to themselves.

Ampthill, Beds.

I do not deny that cholera may be communicated in other ways than by human intercourse, but from experience of the disease, both in Europe and the East, I feel assured that the latter is the most usual means by which the malady is propagated. In the cholera season of 1849 in England, I recollect a man coming home from an infected district ten miles away. The next day he died, and before the body was buried his mother, who had come two miles for the purpose of nursing him, sickened and died in her own house. From these two centres of infection the cholera spread in various directions. I have also noticed very similar occurrences in India. I am strongly inclined to the opinion that the evacuations of the diseased, either conveyed in a dry state by human intercourse, or through the medium of water, are the principal cause of recurring cholera.—*Marwar, the Land of Death, by W. J. Moore, of the Political Agency, Joudpoor.*

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

ST. THOMAS'S HOSPITAL.

MYELOID TUMOUR OF THE UPPER JAW—EXCISION—RECOVERY.

(Under the care of Mr. SOLLY.)

WILLIAM E., aged 23, a cheesemonger, was admitted into accident ward November 21, 1867, with a simple fracture of the left femur in the middle third of its shaft, caused by catching his foot in a hole and falling.

He was an ill-developed, strumous-looking lad, having the appearance of a boy of 15 or 16, and had been the subject of rickets. His head was large and somewhat ill-shaped, and his father was stated to have died of "water on the brain."

The fracture united well and with good length in about five weeks' time, but symptoms then appeared of mischief referable to the left hip joint. The disease in the left hip increased, and the limb was one inch shorter than the right on February 8, 1868. Disease then commenced in the right hip, and increased as the acuteness of the disease in the left hip diminished. By October, 1868, the left hip was dislocated on to the dorsum ilii, and this limb was about two inches shorter than the right.

Posterior curvature of the spine in the dorsal region was noticed in March, and shortly afterwards there was some hyperæsthesia of the right side, followed by partial loss of power in the right arm, pain in the left side of the head, and some dimness of sight in the left eye. By October, 1868, the power of the right arm was restored, but there was very marked numbness after holding anything for a few moments, and the shooting pains in the left side of the head remained.

About the middle of February enlargement of the left upper jaw commenced. This was very pronounced by March 2; but it was not attended with pain or tenderness. At that time the enlargement was, except in one spot, of extreme hardness; below the orbit, however, where it projected as a double boss, it was elastic. It gradually encroached more and more upon the mouth and nasal passages, the latter of which became completely closed. Towards the orbit it did not increase much, and the eye was at no time much affected. Subsequently he had some pain in the tumour, described as like a red-hot iron plunged through it.

On March 25 he had scarlatina, and the tumour ruptured into the nose, spontaneously discharging a quantity of fluid, which was stated not to have been purulent.

The tumour after this diminished, but again enlarged, and on June 2 was tapped, after extraction of a tooth from the mouth through the alveolar cavity, and about a pint and a half of blood is stated to have followed.

Pus is reported to have come from it in quantity on July 19.

On October 21 the condition of the tumour was as follows:—It projected into the mouth as a hard mass from the left half of the hard palate; the left side of the face was greatly distorted, and a portion of tumour projected just below the orbit, and was in this place elastic. There was no evidence of fluctuation, no tenderness, and very little pain. The lachrymal duct was obstructed, as were also both nasal passages, from the pressure of the tumour, but there was very little impairment of vision. The growth had been steadily increasing, and certainly with some rapidity, during the previous three or four weeks, and the man had complained of a good deal of inconvenience from it, and some pain. Mr. Solly therefore, after consultation with his colleagues, determined to operate.

On October 21, after the administration of chloroform, Mr. Solly laid open the antrum by means of a trephine, and exposed a solid growth, which broke down rather readily. An examination of the posterior attachments of the tumour by the finger passed up behind the soft palate completed the evidence as regards the limitation of the growth, and satisfactorily proved that its complete removal would be accomplished by excision of the left upper jaw. A flap from the cheek was reflected outwards by an incision commencing at the lower border of the upper lip, and passing upwards around the attachment of the left ala nasi to a point corresponding with the orifice of the ductus ad nasum; the tumour by this limited incision was completely exposed. The anterior commissure and palatal plate of the superior maxilla were then divided with cutting pliers, and the tumour, grasped by the lion forceps, being very soft, broke up, and had to be taken away piecemeal. The whole of the superior maxilla, with the exception of the nasal process, was completely removed. Chloroform was not administered to the extent of perfect anæsthesia, in order that the blood, as it passed back into the glottis, might be coughed up by the patient, thus avoiding the danger of suffocation. At one period of the operation breathing was for a moment suspended; but the patient, being raised up quickly, was soon restored. There was not much blood lost, but syncope occurred, and he was laid flat, when the heart again pulsated. The time occupied by the operation was about twenty minutes. The cavity was stuffed with oiled lint, and the edges of the wound approximated by sutures. The tumour proved, upon microscopical examination, to be of a simple myeloid nature, composed chiefly of large compound groups of cells, with sharply defined nuclei.

During the next two days there was not much reaction, but on the 24th it was marked. After this he rapidly improved.

November 21.—The wound had quite healed, and very little deformity remained.

March 20, 1869.—At the present time there is no evidence, upon cursory inspection, of a tumour having existed. There is no deformity of the face. The lad's voice is good.

Mr. Elliot, Surgeon-dentist to the Hospital, has kindly fitted him an admirable artificial upper jaw, teeth, and palate. His sight is improved; there is no loss of power in that side of the face; and there is no symptom of recurrence. As regards his other ailments, the disease in the right hip remains in abeyance, being very chronic, and troubling him but little; that in the left hip is more advanced, and is evidenced by shortening to the extent of from one and a half to two inches, inversion of the foot, dislocation of the head of the bone on to the dorsum ilii, and pain and tenderness on pressure. Six weeks ago the left hip became greatly swollen and acutely tender, with much pain along the shaft of the bone; but this has receded. The inguinal glands are somewhat enlarged. The evidences of spinal mischief are more pronounced. There is marked pain and tenderness over the upper dorsal region, and decided loss of power in the right arm, with occasional formication in the same limb.

Remarks.—The above case is one of peculiar clinical interest. Here is a boy brought into Hospital with a fractured femur, and, in the course of his convalescence, evidences are manifested of disease—first in one hip and then in the other. During the progress of the disease of the hip-joints it was noticed that enlargement was appearing in the upper jaw, and this before long became pronounced as a morbid growth, and the upper jaw had to be removed eleven months after admission. But the sum of the poor fellow's troubles was not completed; for, soon after the appearance of disease in the right hip, symptoms of disease of the spine manifested themselves, and these have kept steadily on the increase up to the present time. The question arises as to what may be the relation of these several affections to one another. The want of development, the ill-shaped head,

the disease in the hip-joints and in the spine, together with the strumous appearance of the lad, are all probably related in their cause, and point to a constitutional affection. The myeloid tumour appears to be distinct, however, from these, though a possibility of relation with the origin of the hip and spinal disease must be borne in mind. In reference to the operation, which was rapidly performed, Mr. Solly, in the course of a clinical lecture, remarked that the nature of the growth rendered its removal *en masse* somewhat difficult; it broke down very readily, and consequently had to be taken away in pieces. This case differs in some respects from the two others in which Mr. Solly has removed the upper jaw. In one of these the tumour was fibroid, of a firm consistence, and came away *en masse*. The wound healed rapidly, and the lad, who was 17 years of age, was alive ten years after the operation, and may be alive now. In the other case the disease was encephaloid, and there was no difficulty in the operation; but the disease soon returned again, and terminated fatally. Five months have elapsed since the operation on W. E.; the patient is still in Hospital under treatment for disease of the spine. There now only remains an orifice large enough to allow the finger to pass up towards the posterior nasal sinuses. Since the adaptation of an artificial palate the power of articulation and deglutition has been for the most part restored.

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SATURDAY, MAY 1, 1869.

DR. WILKS'S LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

We cannot allow the admirable lectures of Dr. Wilks, the publication of which in our columns has been continued during the past sixteen months, to come to a close without expressing the satisfaction which their perusal has given to ourselves and to the Profession for whose instruction it is our business to cater. They are the production, not only of a man distinguished in his order, and occupying a very responsible position as the teacher of a large body of young men who are all, in due time, to be the dispensers to the public of the benefits derivable from the exercise of the Medical art, but of one also who, however extensively he has read, yet habitually brings all to the test of bedside experience. A true Guy's man, he is thoroughly imbued with the traditionary practical spirit of his school. Whatever may be the success in teaching which attends the labours of those who derive their illustrations from the practice of a small Hospital of necessarily selected cases, there can be little question that the advantages of a large Hospital like Guy's lie in the readiness with which groups of cases of similar diseases can be seen by the student at one time, or within a short interval of time, and can be utilised by a teacher whose duty lies not in repeating to his class the hackneyed descriptions found in systematic treatises on Medicine, but in demonstrating those varieties in form and aspect which they will meet with themselves when thrown upon their own resources. It must have occurred to others as well as to ourselves that these lectures partake more of the character of clinical lectures than of systematic—not that they are deficient in orderly arrangement, but on account of the profuse manner with which the cases in the wards are employed to give point and force to the doctrines enunciated. And this we hold to be the only proper mode of teaching the art and science of Medicine. If ever "cram" is to be put down and solid learning substituted, it must be by such a method as this. Another quality in these lectures will have occurred to our readers, and that is the absence of anything like dogmatism in matters relating to the treatment of the diseases discussed, and the fair manner in which routine practice is declared to be routine, while methods of treatment which are matters of controversy are put before his hearers in the enlightened spirit of Medical eclecticism. An excellent illustration of this is to be found in Dr. Wilks's remarks upon blood-letting generally, and in two diseases in which it is the fashion now to decry it—namely, apoplexy and epilepsy. Commencing with a *résumé* of the physiology of the nervous system, at least of so much of it as can be readily applied to the elucidation of nervous diseased phenomena, Dr. Wilks passes under review all the more important maladies to which a name has been given by systematic writers on this subject. If we had to pick out the part of these introductory remarks which presents the greatest novelty, and which will be read with the greatest interest, we think we should select that in which the author treats of the education of the cerebro-spinal centres as it bears upon the interpretation of some curious features of nervous disease. The diseases specially discussed are hemiplegia and paralysis of the spinal cranial nerves; apoplexy, which Dr. Wilks makes synonymous with extravasation of blood; inflammation of the brain, including softening and meningitis; general paralysis of the insane, and delirium tremens; after which he goes on to the diseases of the spinal cord, and, after pointing out their general character, discusses individually the subjects of paraplegia, locomotor ataxy, progressive muscular atrophy and functional and local paralysis. The later lectures are occupied with the subjects of headache, epilepsy, chorea, and hysteria. We only give expression to the general feeling of our readers when we say that we part with Dr. Wilks with regret.

COMPENSATIONS FOR RAILWAY ACCIDENTS.

Nothing can be more unsatisfactory than the present system of compensating persons who have been injured on railways. A case was tried three weeks since at Manchester, in which the evidence of the Medical witnesses on one side was diametrically opposed to that on the other—not as to the extent or permanence of the injury received, but as to the possibility of the accident having caused the lesions which presented themselves. The history of this remarkable case is as follows:—

Mr. Sagar, on August 1, 1865, was a passenger on the Lancashire and Yorkshire Railway from Burnley to Manchester. An engine came in collision with the train in which Mr. Sagar was travelling. He was sitting with his back to the engine, and was thrown with great violence forwards, and fell on the floor of the carriage. He was stunned, and when he recovered his senses he found he was suffering from a severe blow on the right side of the face, and when he got out of the carriage felt an acute pain at the root of the neck behind. The pain increased rapidly, and when he got to Manchester he could move his head with great difficulty, but could not turn it round. It felt as if the neck had been stretched. On August 8 he consulted his ordinary Medical attendant, who thought the accident of a more serious character than Mr. Sagar did himself. The pain and stiffness in the neck lasted for four or five months. With the exception of boils in 1861,

he had been in good health up to the accident. After it he lost his usual spirits and energy, though still able to get about his ordinary business. In November, 1867, two years and a quarter after the accident, he began to experience a particular sensation in the left arm. It consisted of a severe pain three or four inches in front of the arm, and it continued to increase up to January or February, 1868, when he lost all power in that arm. About Good Friday, 1868, the right arm became affected with a good deal of "throbbing and fluttering." This was succeeded by pain similar to that which he experienced in the left arm. In November, 1868, he went to London and consulted two eminent Surgeons. Since January 16 of the present year he has been confined to the house entirely. We take this statement from the examination in chief of the plaintiff. In cross-examination it was elicited that he had been occasionally exposed to the influence of cold air and of heated rooms, and that the pain at the root of the neck had ceased entirely for two years and a quarter before the symptoms of paralysis manifested themselves. The pain which commenced in the left arm in 1867 was the only pain which he suffered, but on Good Friday, 1868, the pain began in the right arm, and in June, 1868, the power in that arm was entirely lost. At the latter end of last year he had pain at the top of the back, but the pain had gone gradually down to the lower part of the back, the pain at the top of the back being not so bad as it was, but the pain at the bottom was very bad. He had found no difficulty in walking until the last five or six weeks, but now he walked with difficulty. The object of the plaintiff's counsel was of course to show that the symptoms under which he then laboured were the direct result of the injury which he sustained at the time of the accident. Of course the difficulty which presented itself was the long time which had elapsed between the cessation of all the primary symptoms and the commencement of the pain and paralysis in 1867. The Medical witnesses on the part of the plaintiff felt no difficulty in giving their decided opinion that these symptoms were clearly traceable to the injuries sustained two years and a quarter before. It was admitted by them that it was an exceptional case, but instances were on record in which a long interval had elapsed between the receipt of injuries similar to that suffered by the plaintiff, and the development of symptoms such as those under which he at present laboured. The witnesses contended, moreover, that the plaintiff had never suffered from rheumatic inflammation of the joint affected; that it was perfectly consistent with Medical experience that there might be a cessation of all local symptoms for a considerable time; that inflammation might nevertheless have been slowly proceeding in the outer structures of the spinal column, and gradually involved the spinal cord itself. Thus the injury received by the plaintiff in the railway was fully adequate, in the opinion of the Medical witnesses, to account for all the mischief which had ensued, and which now threatened the very life of the patient. To rebut this evidence, several eminent Medical Practitioners, both Surgical and Medical, were examined. These one and all positively and unequivocally repudiated the idea that after an interval of two years and a quarter the symptoms of paralysis and the pain under which the patient laboured could be in any way associated with the injury received on the railway. They contended that it was contrary to all experience, if the spine had been injured in 1865, that all symptoms of that injury should have remained in abeyance for upwards of two years. These witnesses all contended that the symptoms were clearly and unequivocally due to rheumatic inflammation, and that it was, in their opinion, all but impossible that they could have originated in this injury.

After able speeches by the advocates on either side, Mr. Justice Lush, one of the ablest and most acute on the bench, in his summing-up to the jury, acknowledged that he could afford them little assistance in the decision which they were called upon to make. They had heard the evidence, and it was for them to determine upon which side the proofs were the strongest. The jury, after considering the matter for an hour and a quarter, gave their verdict in favour of the plaintiff, and awarded him damages to the extent of £4000.

The next day, on a motion made by the counsel for the defendants, execution was stayed for a fortnight, in order that they might have an opportunity of considering the evidence. The application was granted.

Anything more unsatisfactory than the result of this trial it is scarcely possible to conceive. Here was an issue involving most complicated questions in pathology submitted to a jury of laymen. How much better would it be that a Medical tribunal should be established, in which the members of that tribunal should be assessors, and not witnesses or advocates. We complain not of the Medical witnesses on either side in this remarkable case; we believe them to have been actuated by the purest motives, but the proceedings of such a trial are far from satisfactory. They have a tendency to lower the value of Medical evidence in the estimation of the public. How is a jury, special though it may be, to determine the value of Medical evidence on the most intricate points of pathology? There can be but one answer to this question. To make the provisions of Lord Campbell's Act equitable, the whole question of the injuries sustained by a sufferer from a railway accident should, and must, be eventually submitted to Medical arbitration, and not to a tribunal of lawyers and special jurymen, who have the issue in their hands. We have purposely avoided, in our account of this extraordinary trial, going into minute details, which had really nothing to do with the verdict at which the special jury arrived. Many points of interest, in a pathological point of view, were discussed; but they must have only served to confuse the judge, counsel, and jury. It is difficult to understand how they could have given a different verdict in the face of the conflicting evidence which was brought before them.

THE WEEK.

TOPICS OF THE DAY.

The spring is fast advancing, the Liberal majority are carrying Mr. Gladstone's Irish Church Bill through the Committee of the House of Commons with a wet finger, and there is no reason at present to expect an unusually protracted Parliamentary session in 1869. The question which is naturally uppermost in Medical political circles is the one which has been asked in so many past sessions—What are the chances of a Medical Act Amendment Bill being passed this year? For ourselves we are sorry to say that we are not sanguine on the subject. The Government, although strong in the House of Commons, has its hands full, and will assuredly not be desirous of opening a troublesome question which is not regarded as important by the general public. If, indeed, Medical reformers would be satisfied with an amendment of Clause 40 of the original Act which should prevent a false assumption of Medical titles, and with securing reasonable facilities for the registration of Practioners holding respectable colonial and foreign Medical diplomas, there is no doubt that an Act embodying these alterations might be obtained. But, on the one hand, there is the cry, which is a popular one in large sections of the Profession, for "direct representation" in the Medical Council. On the other there is a feeling, which we know to be strong in certain influential quarters, that a board more limited than the present General Medical Council, and more directly representing Government principles in reference to the public interest, would be desirable. We think it a pity that the discussion of these two opposite sets of opinions, which must occupy time, should be allowed to interfere with and postpone the amendments of the Medical Act which all agree to be necessary. Still, recollecting the fact that we are already in May, that united action seems improbable, and that the General Medical Council will not meet until the early part of

June, we can only repeat that our hopes on the subject are not excessive.

In another column we publish an additional manifesto put forward by Dr. Sibson, the President of the Council, and Dr. Edward Waters, the Chairman of the Committee of the British Medical Association, on the subject of the direct representation of the Profession in the General Medical Council. This document is addressed to members of the Legislature and the general public, and is published as a preface to the address to the members of the Association and the Medical Profession which was issued in October last. We have already stated fairly our opinion on the subject of direct representation. We are quite ready to allow that those who provide the funds for the maintenance and expenses of such a body as the General Medical Council have a good claim to be represented in it, and, through their representatives, to take part in its deliberations. That an abstract principle of right is involved here we are most ready to confess. But, on the other hand, we regard any proposal to enlarge the General Medical Council as utterly mistaken. Already the Council is only too large. The faults which are, or have been, justly found with it and its confessed practical imperfections are nearly all of them attributable to its size, which is far too large for that of a working committee, but quite large enough to encourage an appetite for speechifying which would scarcely find *pabulum* in a smaller assembly. We do not, however, wish to press for a diminution of the size of the Council. Direct representation, in our opinion, can only be obtained, with due regard to all the circumstances of the case, by giving the members of the Medical Profession a voice in the choice of the representation of their respective Colleges, Halls, and Universities. Throw open the elections in the examining and licensing bodies. Let every Member of the College of Surgeons, for instance, and every Licentiate of Apothecaries' Hall or of the College of Physicians have a vote for the person who is to represent the body to which he is affiliated in the General Council, and we believe that the anomalies of the present position would be redressed, whilst at least the constitution of the Council would not be seriously injured. The recent elections for members of Parliament to represent the Scottish Universities prove that there need be no difficulty in conducting such elections. For instance, if members to represent the Universities in the Medical Council were chosen by the registered Medical graduates who form part of the General Council of the University instead of by the Senatus Academicus, which is composed of the Professors, the principle of direct representation of the Profession would be recognised, whilst the University itself would be more truly represented in the Medical Council than at present.

We hear on good authority that it is probable the Pharmacy Amendment Act will be extended to the whole kingdom instead of being limited to Scotland only—in other words, that the rights of all duly qualified Medical Practitioners to dispense and send out their medicines will be reserved, and not merely the rights of duly qualified apothecaries.

The explanation which Mr. Bruce gave to Sir G. Jenkinson, in answer to his questions as to the reprieve of the convict Wiltshire and the general exercise of the Royal prerogative since the present Ministry have been in office, if it be held to be satisfactory in the particular instances under discussion, at least reveals a most unsatisfactory state of the law. In the first place, according to Mr. Bruce, at least one-half of the capital sentences pronounced—those for child murder—are never intended to be carried into effect. The whole proceeding is a solemn farce. The judge, when he sentences the woman to be hanged by the neck until she is dead, knows that her life is in no more danger than his own. The jury are, or will be, equally aware of the fact; and, after the announcement of the Home Secretary, we may certainly expect such prisoners to receive their doom with the utmost composure, fully aware that it is a mere fiction. Whether this be a desirable state of things we leave our readers to judge. But if the one-half of convictions will certainly not be carried into effect, the uncertainty of the other half leaves the opponents of a hard and fast rule of justice nothing to desire. The fact is that the whole of the trial, the indictment, the pleadings, the verdict of the jury, and the sentence of the judge are merely preliminary proceedings. The real trial takes place in Whitehall; and, as sometimes one set of opinions on questions connected with crime, and sometimes another, may be in the ascendant, we are thrown into a condition in which the death or escape of criminals entirely depends on the accident of the mental and moral constitution of the Home Secretary of the day. Contrast, for instance, the cases of Sheward and Constance Kent, and see if there is any valid reason why the former should have been hanged on his own confession for a murder committed eighteen years ago, and the latter should have been respited from death for an equally cruel murder committed on her own confession five years before. Then, again, some Home Secretaries would have considered that Wiltshire's murderous attack upon his gaoler, which proved that he would have no hesitation in killing another to save his own worthless life, at least most seriously enhanced his original crime of brutal lust and violence, and placed him beyond the pale of mercy. This, however, was not Mr. Bruce's opinion. We do not criticise his decision, but we say that it is most unsatisfactory that the issues of life and death should be practically in the hands of a temporary functionary, who has nothing to guide him but his personal feelings, opinions, and conscience.

In the case of the Queen *v.* Henry Jenkins, to which we lately drew attention, the judges of the Court for the consideration of Crown cases reserved have had no hesitation in quashing the conviction, on account of the defect in the dying declaration of the woman Reeves. It will be remembered that the defence of the prisoner entirely rested on the introduction, by interlining, of the words "at present" in that part of the declaration in which the deceased stated that she made "the above statement with the fear of death before me, and with no hope of my recovery." When the declaration was read over to her she said "at present"; the clerk interlined the words, and saved Jenkins's life. Now this may be in accordance with law, but we doubt whether it is conducive to justice. Speaking from a Medical stand-point, we have no hesitation in saying that a dying declaration such as the law requires could not be made by one in a hundred of dying persons. Still, the quashing of the conviction was thoroughly in accordance with the exposition of the law which has been given by various judges, and recently in the case of the woman Barrett tried at Leeds. But we cannot think that the present state of the law admits of no improvement. By the Scottish law, although all reasonable precautions are taken to protect the interests of an accused person and to insure truth, there is that fair consideration given to the statement of a person who is under reasonable expectation of death which the English law denies.

The election to the Surgeoncy of the Sussex County Hospital, vacant by the death of that excellent Surgeon and kind-hearted man, Mr. Harry Mills Blaker, has resulted in the election of Mr. F. W. Jowers, who for a considerable period has filled the office of Assistant-Surgeon in the Hospital. The Assistant-Surgeoncy vacated by Mr. Jowers has been filled by the election of Mr. Nathaniel Paine Blaker. At the meeting of the governors for the election of a Surgeon a remark of a gentleman who proposed Mr. Jowers, to the effect "that the governors could have no greater testimony of Mr. Jowers's fitness than the silence of the Medical men of the town, of whom, he believed, there were something like a hundred, not one of whom came forward to oppose him," led, as might have been expected, to some comment. Dr. Taaffe said that the absence of competition arose from an unfair mode of election, which gave other candidates no chance of success. He afterwards explained that he referred to the existing rules of the

institution, all of which, however, in the present election had been strictly complied with. He bore, as did all the speakers, high testimony to the merits both of Mr. Jowers and Mr. N. P. Blaker, but he said that the statutes relating to the election of Medical officers required altering and revising. Dr. Hall also complained of a law which excluded a Physician-Accoucheur from the Medical staff of the Hospital. We apprehend that the unopposed election of Mr. Jowers was the consequence not only of his individual and Professional fitness, but of his thirteen years' connexion with the Hospital. When a man undertakes and well performs the duties of Assistant-Surgeon to a public institution, he naturally and rightfully expects to succeed in his turn to the office of Surgeon. It seems clear that this was all that was meant by Mr. Chamberlin (Mr. Jowers's proposer), and that it is fully recognised by the Surgeons of Brighton. We can readily understand, however, that the rules of the Hospital may require revising, and it is to be hoped that if this be undertaken it will be done in a fair and liberal spirit.

DR. BALLOT ON CHOLERA AND WATER SUPPLY IN HOLLAND.

It is unnecessary for us to call attention to the profoundly interesting paper, by Dr. Ballot, of Rotterdam, on the connexion between cholera mortality and impure water. Holland is a country in which the effects of such water deserve to be thoroughly worked out—whether they be the normal and regular effects, or the occasional, such as a cholera epidemic. And the results may throw light upon the action of the same agent in our own country.

THE CORONERSHIP FOR WEST MIDDLESEX.—ELECTION OF CORONER.

The litigation between Drs. Diplock and Hardwicke respecting the coronership for West Middlesex still goes on. For upwards of a year this painful and unseemly contest has been carried on with a vigour and at an expense which are surprising and deplorable. This is more the case, in consequence of there being no real principle at stake. Both gentlemen are members of our own Profession, and there is no evidence that either of them is incapable of fulfilling the duties of the office in a most satisfactory manner. Dr. Hardwicke, indeed, was for a long period the deputy-coroner for Central Middlesex, and displayed much ability in that position. Dr. Diplock has officiated as coroner for West Middlesex for more than twelve months, and we have heard nothing to his discredit as a judge either as to matter or manner. We assume, then, that the duties of the office have been well performed by Dr. Diplock. It is contended, however, that a great number of his supporters "illegally voted" for him—that is, they had no legal freehold in the county, many of them "having property in graves" or being "watermen on the Thames." Nearly fifteen months have been expended in costly law proceedings to set aside the election on the above grounds. We learn by a circular issued by some friends of Dr. Hardwicke that the proceedings are to be persevered in during this (Easter) Term. But, in order to carry this out, money is required. Already Dr. Hardwicke has expended £1400 in law, and Dr. Diplock's outlay can scarcely be less. Dr. Hardwicke's friends call upon the Medical Profession and the public to assist him in establishing "in this country the great principle of purity of election."

We must say that it appears to us that the parties most interested in the quarrel are the genuine freeholders of West Middlesex, who, if the allegations made are capable of proof, have been grievously wronged; but the Medical Profession have no direct interest in the matter, the issue being the substitution of one Medical coroner for another. Had the Medical to wage war with a legal opponent, the case would have been different, and it would have been our duty to assist our brother in every legitimate way. We regret exceedingly that steps were not taken early in the affair to bring the quarrel to a close by some friendly arrangement. As it is, we suppose it will now go on to the "bitter end," and whoever is eventually declared to be coroner for West Middlesex will have obtained his office at a very dear price indeed.

Dr. Hardwicke has deserved well of the Profession by his literary efforts and his services as Secretary of the Social Science Association, and many persons would willingly contribute to the promotion of the interests of so amiable and deserving a man; but it is a silly thing to see members of our Profession throwing their hardly earned guineas into the well-filled pockets of the bar.

But it is evident that the present system of electing coroners in counties and some boroughs is most objectionable. It is objectionable not only in the indefinite qualification of the voter, but in the enormous expenses to which candidates are occasionally subjected. Better than the present system would be vesting the power of election in the Home Office, or perhaps in the Chief Justice, himself the chief coroner for all England; or, if this be objected to, then let the freeholders who are on the Parliamentary register, and no others, be the voters for the election of coroner.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

On the evening of Tuesday, the 27th ult., the Society met, under the presidency of Dr. Burrows, for the discussion of two most important papers. The first of these was by Mr. T. Smith, and treated of nephrotomy as an operation for the removal of renal calculi. The paper chiefly dealt with two points—the one the possibility of diagnosing by physical means the existence of a renal calculus; the other, the feasibility of removing this by a simple incision. Mr. Smith related certain cases where calculi had been felt, and their position defined, during life, especially in children. As to the possibility of laying bare the kidney for, if necessary, an exploratory operation, Mr. Smith contended, and every one familiar with colotomy agreed with him, that this was neither difficult nor dangerous. Mr. Smith has not performed this operation, and, after waiting in vain for a suitable case, he determined to bring the paper forward, if it were only to direct men's minds to the possibility of such an operation. He cited one case where it was had recourse to from an early number of the *Philosophical Transactions*, and referred to the numerous instances where the kidney had been opened and calculi discharged when suppuration had taken place. Of even greater importance was the paper by Mr. Spencer Wells which followed. This gave the statistics of another hundred operations for ovariotomy, in addition to the two series already published by this gentleman. It is highly gratifying to find that the percentage of mortality is reduced still further in this century, notwithstanding that ten fatal cases followed rapidly on each other during the extremely unfavourable weather in the latter end of last year. The bad effects of the season were noticeable in all operations, but especially, it would seem, in that of ovariotomy. One of the most important parts of Mr. Wells's paper was that which dealt with the subject of tapping for ovarian disease. He pointed out how different ovariotomy and tapping were in their character; with the former it was either kill or cure, whilst the latter was at best but a palliative, and could usually in no way influence beyond retarding the fatal result. It was unfair, therefore, to attribute all the deaths that followed tapping to the influence of the operation, and even to do so in ovariotomy, for the operation was sometimes had recourse to when death was threatening, and death might follow notwithstanding operative interference. Of still greater practical value was that part which dealt with the influence of tapping on subsequent success in ovariotomy. From the mass of cases now at his command Mr. Wells can speak with authority on this point, and it is gratifying to hear from his statistics that ovariotomy is not more fatal after one, two, or even three tappings than when the cysts have never been emptied. Mr. Wells also contends that the operation of

tapping before attempting an ovariotomy is advisable, and that, with proper precautions, there need be no escape of fluid into the abdominal cavity. He showed, further, that in certain cases where the patient has again and again been tapped, there are no adhesions of the tumour, whilst in others the adhesions are strong and firm, although there may have been no previous tapping. Altogether this is one of the most valuable contributions on the subject of tapping for ovarian disease which have been laid before the Medical world.

CROSS CUPPING.

THE *Daily Telegraph* and a host of the correspondents of that journal have brought charges against the Medical Department of the army which, for the sake of the Profession generally, and of that portion of it engaged in the public services particularly, we should be glad to see disproved. We cannot believe that it is the intention of the Medical authorities of the army that every soldier before being discharged from the service as an invalid should, irrespective of the nature of his ailment, bear upon his person the indelible marks of cross cupping, or other forms of local depletory or derivative treatment. In cases of advanced and wasting disease such treatment would not only be highly injurious, but, as a means of preventing re-enlistment —this being the reason assigned for the alleged practice— would be unnecessary. If individual Medical officers of the army have so far misinterpreted their duties to their patients as Medical men, it is high time that they should be set right on the subject. It would appear to us that no soldier should be discharged from the army on Medical grounds unless for well-marked and incurable disease, or for loss of limb or other injury equivalent thereto, and that, if disabled by climate or otherwise in the service, the discharged soldier is clearly entitled to a permanent pension proportionate to the extent to which the disability may prevent his earning a livelihood. There can be no doubt that there are forms of disease, such as epilepsy and allied affections, which render the soldier not only inefficient himself, but a source of danger to others—as exemplified by the recent sad event at Dover, where an insane soldier shot a comrade—and which, in many instances, present no signs or symptoms which would be obvious on the necessarily cursory examination of a proposed recruit. In the Medical treatment of such cases, derivatives or local depletion are so frequently employed in some stage or other of the disease, in both civil and military practice, as to be almost universal. That the existence of the marks left by such treatment is one of the reasons for which a recruit is considered ineligible for military service is the probable cause of the impression that they are inflicted by Medical officers as a brand rather than as a legitimate and generally recognised remedial measure. When such an impression, even among Medical officers of the army, is so general as from the statements of the *Daily Telegraph* it appears to be, it will be to the advantage of all concerned that it should be removed as promptly and effectually as possible. It is certainly not within the province of a Medical officer to draw blood or inflict any scar otherwise than with curative intentions. Cross cupping—by which is meant the second application of the scarifier at right angles to the first—is considered by some to be less effectual than the single incisions as a means of drawing blood, on account of the wounds becoming more readily clogged by the cellular tissue on the application of the glasses; but, for the very same reason, the subsequent cicatrix is more visible. If this be the mode of cupping in general use in the army, and if the leaving of a permanent scar be an ulterior object in its employment, it would be well that it should be discontinued.

Since writing the above, we have heard with much pleasure that a circular from the Director-General of the Army Medical Department is about to appear, desiring that the practice of cross cupping shall be discontinued.

ABORTION AND INSANITY IN AMERICA.

WE quote the following from Dr. Robertson's "Notes of a Visit to American Asylums," reprinted from the current number of the *Journal of Mental Science*:—

"Dr. Deuzen, of the Michigan Asylum, in his last annual report, directs special attention to one of the causes of mental disease in the females under his care—the revolting and unnatural habit of forced abortion, to which public attention has been lately attracted in this country by the discussion of its propriety at the meetings of a certain society. His remarks on this subject are well worthy of quotation:—'Fearfully afflictive as is insanity under any circumstances, it is unmistakably and unspeakably more so when, in the person of one bearing the cherished and sacred name of wife, it is in one sense self-induced, and by the commission of a crime against a far higher than human law, and in direct violation of the holiest instinct of her nature. There has been no uniformity in the character of mental disease thus developed. The derangement of mental function has generally occurred as a result of local injury, and the serious impairment of general health directly traceable to the criminal act. In a few cases it has operated directly as a moral cause—as, for instance, when the unfortunate sufferer has borne a child, which has been permitted to remain with her only long enough to show the unhappy mother the priceless value of the gift she had previously refused to accept. In these cases the immediate cause of insanity was remorse. Unless this most disastrous practice be speedily arrested by the efforts now being used to suppress it, and by more stringent laws severely punishing all parties implicated, it will materially increase the number of female patients annually presented for treatment.'"

Dr. Gray, of the New York State Asylum, bears similar testimony.

"One woman told me, and the statement was verified by her husband, that seven successful abortions were procured on her by one of her female friends—and both of these women were highly respectable persons and members of the Church.(a) When in broken health, and after failure in the eighth attempt, she applied to a Physician, he informed her of the criminality of the act, its dire consequences to health, and advised her against the continuance of such a practice. She subsequently, however, obtained the services of a charlatan, who succeeded in inducing abortion, and, some months later, this woman was admitted into the asylum in wretched health, and suffering from melancholia, which her pastor, ignorant of her true history, attributed to religious excitement. A minister recently informed me that, in his congregation in a country village, one of the principal women approached his wife with a proposition that she should destroy her prospective offspring, declaring that she thought it right to do so, and mentioned others who resorted to the practice, rather than be troubled with children."

FROM ABROAD.—REANIMATION OF AN ACADEMICIAN—TEACHING OF THE PARIS FACULTÉ DE MÉDECINE.

A CIRCUMSTANCE which is probably unique in the histories of academies occurred recently in the Académie de Médecine. M. Coste, the distinguished embryologist and pisciculturist, was elected as a "membre associé libre," equivalent to our "honorary fellow," in room of the late M. Laffon de Ladépat, one of the original foundation members of the Academy. A better selection could not have been made, and probably the only person who felt surprised at its announcement in the *Journal Officiel*, which now takes the place of the *Moniteur*, was the deceased academician himself. At all events, it awoke him into an existence which, as regards the Academy, had become extinct, and in a polite note he informed his colleagues that he was alive and well, but, in order to avoid any inconvenience to a learned body to which he had so long had the honour to belong, he sent in his resignation. At first sight, this case might seem to justify the strictures of M. Guardia on the uselessness to the Academy of these honorary members for which he suffered expulsion from its staff of officials. But elections of this sort are not made with the expectation of getting work from or even the presence of the persons selected,

(a) These words must be understood as they would be in England. It does not appear to what religious community these women belonged.—ED.

but as a recognition of services already rendered or of position attained.

How difficult it is to please all sides is proverbial. A year or two since the Paris Medical and scientific press resounded with complaints of the inefficiency of the means of instruction in the physical and natural sciences as contrasted with the elaborate appliances of the German universities. The authorities, admitting that there was some justice in the comparison, and laudably desirous of emulating their trans-rhenane neighbours in this pacific field of operations, set to work in good earnest, reorganised the modes of teaching, and established physiological, chemical, and physical laboratories on a scale that involved the expenditure of large sums of money. Alas! if they expected gratitude and contentment, for the cry now taken up is that the Faculty of Medicine is being overridden by a virtual Faculty of Biology, which, like other parasitic growths, will ere long be the death of the body on which it lives. A phrase uttered by M. Duruy when the funds were voted for the new laboratories has been seized hold of in this sense. "Medicine, in our day," he observed, "is passing through a curious phase of renovation. The sciences which were heretofore considered as accessory, and had become somewhat neglected, are now almost regarded as the principal."

"Here we have," exclaims the *Gazette des Hôpitaux*, "the funereal oration of the Paris Faculty of Medicine. Formerly Medicine and Surgery were taught in order to render men useful to the sick, and, side by side with the Professional Medical education, physics and chemistry were taught as accessories. At the present day 'the sciences once termed accessory are almost now the principal,' and this is the Faculty of Medicine as viewed by a Minister of Public Instruction. In this new direction impressed upon Medical studies, what becomes of Medicine? That is easy to predict, and even now may be seen in the clinical incompetence of the candidates who present themselves at the *concours* for *agrégé*-ships or Hospital appointments, and at the *concours* for the *internes*. The students are learned enough in biological physics, in comparative physiology, and in histology, but they are almost entirely ignorant of descriptive and regional anatomy, human physiology, pathological anatomy, symptomatology, and diagnosis—that is to say, of all that constitutes the basis of practical Medicine and Surgery. Alas! poor Faculty."

The students also, encouraged by the insertion of their observations in the journals, are complaining of the elaborate and unpractical character of their lectures, and are leaving the benches empty. They say that most of them are poor, and ill able to contend with the enhanced prices of a residence in Paris. They say they have too much of the microscope and too little of the bedside, while the modern habit of incessant changes of chairs on the part of the Professors prevents any fixity in the system of teaching being pursued, and destroys its practical reality. If, with the increasing difficulties of living, the exigencies of these minuter studies continue to augment, the students must be derived in future from another class of society which has ample time and money at its disposal.

That there is some truth in these complaints is evident, and not less is the difficulty of the task of those who have to direct the course of Medical education. The same difficulty is met with in our own country, though not to the same extent as in France, where the Medical students are derived from a lower stratum in society than with ourselves.

PARLIAMENTARY.—SECONDARY EDUCATION AND ENDOWED SCHOOLS—THE CATERHAM ENTERTAINMENT AND THE OUTLAY FOR METROPOLITAN ASYLUMS—THE PREROGATIVE OF MERCY—VARIOLA OVINA—MURDER OF SERGEANT BARNES—LIFE PEERAGES—GREENWICH HOSPITAL—THE EXEMPTION OF HOSPITALS FROM LOCAL TAXATION.

In the House of Lords, on Thursday, April 22,

Lord Lyttelton presented a petition from the General Medical Council in favour of improvement in secondary education and endowed schools.

In the House of Commons, in answer to a question of which Mr. Torrens had given notice, Mr. Goschen said that he did not know who was to pay for the entertainment at the laying the stone of the Caterham Asylum on the 17th inst. He had been told that it was to be paid for by the contractor who was building the works. Mr. Goschen only knew that the expenditure would not come out of the metropolitan rates. With regard to the question of the estimated outlay for the Lunatic Asylums and Fever Hospitals, Mr. Goschen said:—

"I do not understand that the statement was made that the Government intended to sanction the sum of £490,000, but simply that this was the estimate of the Metropolitan Hospital Board. I may state, however, that of this £490,000, £270,000 were sanctioned as far back as June last for the two Lunatic Asylums. The remainder would, therefore, be the estimate for the three Fever Hospitals. But the Poor-law Board has not yet sanctioned the expenditure, and as, on my suggestion, the Metropolitan Asylums Board has consented to limit itself to the erection of two Hospitals instead of three, the estimate may be reduced by about £60,000. I may add that every item of expenditure will be rigidly scrutinised before it is sanctioned by the Poor-law Board."

In answer to questions by Sir G. Jenkinson, Mr. Bruce went through the list of condemned criminals who had been executed and reprieved since his tenure of office. In reference to the reprieve of C. Wiltshire, he said the charge against Wiltshire was that he, being drunk, violated a drunken woman. According to the evidence, she had been drinking at publichouses. She left one at 10 in the evening; she fell repeatedly, and at last fell down in a lane, where she was seen by the prisoner at 1 o'clock on a tempestuous night, and by him violated. The next day her dead body was found, about eighty yards distant, under a hayrick. There was no doubt that she had been violated by the prisoner, but the opinion of the judge and of the jury was that her death had been caused rather by intemperance and exposure to the weather than by the violence of the prisoner. The evidence of the Surgeon was as follows:—

"I conducted the post-mortem examination with a view to discover the exact cause of death. I used all the means my skill afforded. Considering all I saw, I found nothing inconsistent with death from natural causes. I mean from wet and cold."

This opinion was also endorsed by the other Surgeon examined in the case. He had also received from t..n of the jury who tried Wiltshire a memorial, in which they gave the same opinion as to the cause of death. This opinion of ten of the jury was also the opinion of the Judge, which he communicated in sending to the Home-office another memorial in the prisoner's favour, on the ground that he had no intention to take life. After reading extracts from these memorials, Mr. Bruce said it was well the House and the country should understand how the discrepancy so often arose between the Judge and jury on the one hand, and the Home Secretary on the other. The jury, under the direction of the Judge, found a prisoner guilty on a charge of murder, and the Judge was constantly obliged to pass sentence of death in cases where it was quite certain it would not, could not, and ought not to be executed. Take the case of child murder, for example; no woman was now executed for killing her infant child. No sooner had the Judge passed sentence of death in such cases than he communicated to the Home Secretary his opinion that it ought not to be executed. As long as this was the state of the law, it was impossible that the decision of the Home Secretary should not be sometimes in disaccord with the finding of the jury and the sentence of the Judge.

In answer to a question by Lord R. Montagu, Mr. W. E. Forster said that two cargoes of sheep, in each of which were some believed to be suffering from sheep-pox, had been landed, the one in London, the other at Harwich; that they were ordered to be slaughtered, and that no sheep were to be landed at the wharves until the latter had been disinfected.

On Friday, in reply to another question from Lord R. Montagu, Mr. Forster said that the infected sheep had come from Antwerp—that the steamers in which they were brought were to be disinfected to the satisfaction of the Government officers, although until the passing of the Bill now before the House, Government had no power to order such disinfection.

On Monday, in the House of Lords, the Seabirds' Preservation Bill was read a second time.

In the House of Commons, in reply to Mr. Taylor, Mr. Cardwell said his attention had been called to the case of Sergeant Barnes. It was true that the murderer Batten had been suspected of insanity by his officers and comrades. The man had been 53 days in Hospital, and was discharged by the Surgeon on the ground that he was sane, and had discharged his duties with perfect regularity. He had communicated with the Director-General of the Medical Department, being of opinion that there had been neglect on the part of the Surgeon, and the Director-General would communicate officially with the Surgeon on the subject.

On Tuesday, in the House of Lords, after a debate, Earl Russell's Bill for the Creation of Life Peerages was read a second time.

In the House of Commons, another conversation took place on the importation of sheep affected with variola ovina. Mr. W. E. Forster said that a cargo of 900 sheep had arrived from Hamburg. Four were found by the Custom-house officers to be suffering from sheep pox. The whole had been killed, and the vessel and wharf disinfected. There was, however, some doubt whether the disease really was sheep pox. Another cargo of 1800 sheep, of which five were believed to be diseased, had been also slaughtered. Mr. Forster said that the Privy Council did not think it necessary to re-enact the Order of Council for the slaughter of sheep arriving at English ports. There was a great difference between the cattle plague and the sheep pox. There was no difficulty in stamping out the latter. To re-enact the order for the slaughter of sheep arriving from abroad, when mutton was so dear, would inflict a serious hardship on the metropolis.

Mr. Trevelyan brought in a Bill to make better provision respecting Greenwich Hospital and the application of its revenues. The main provisions of the Bill, which he explained at considerable length, will be to empty Greenwich Hospital and the infirmary by transferring the confirmed invalids to Haslar and Plymouth Hospitals, and by offering out-pensions, to clear the country workhouses of discharged seamen of the Royal Navy by an extension of the system of out-pensions, and to accommodate the *Dreadnought* patients within the walls of the Hospital. The oft-urged grievance of the "Greenwich sixpence" the Bill proposes to deal with by handing over to the Board of Trade a sum not exceeding £4000 a year, to be expended in pensions to officers and seamen of the mercantile marine who had for ten years paid the sixpence.

Mr. Candlish and Mr. Liddell gave a general sanction to the principle of the Bill, and ultimately it was read a first time.

Part of Wednesday afternoon was occupied in the discussion of Mr. Wheelhouse's Bill for exempting Hospitals and other similar institutions from local taxation. It was supported by Mr. M'Laren, Mr. P. W. Martin, Mr. Baines, and others; but Mr. Goschen opposed it. He said that though the Bill was not a very large one, it embodied a serious principle, which might lead the House very much further, for it would be impossible to draw the line at Hospitals and Infirmaries. It would be more advisable to lay down the principle that these institutions should receive public support directly, rather than indirectly at the expense of the parishioners among whom they happened to be situate. The Bill would throw a burden on the very class which it was desired to relieve as far as possible from local taxation.

Mr. Sclater-Booth and Sir M. H. Beach concurred entirely with Mr. Goschen's reasons for not supporting the Bill, and the debate was not concluded when a quarter to 6 arrived.

Camphor as an Application in Chancre.—M. Champouillon, a Surgeon-Major of the French Army, states that during the last eleven years he has dressed chancres, whether hard or soft, with finely powdered camphor, and has derived the greatest advantage from the practice. The chancre begins to clean at once, and an ordinary cicatrisation is not uncommon at the end of ten or twelve days. When the ulcer is very large or phagedænic, or the constitution is bad, more time of course will be required; but even in these cases the aspect of the sore is rapidly changed for the better. Buboes are also of rarer occurrence. It succeeds best in the chancres covered with the prepuce, as the dressing is less disturbed.—*Recueil de Méd. Mil.*, February.

REVIEWS.

Irritability: Popular and Practical Sketches of Common Morbid States and Conditions bordering on Disease, with Hints for Management, Alleviation, and Cure. By James Morris, M.D. Lond., Fellow of University College, etc. London: Churchill and Sons. 1868. Pp. 114.

This little book is not addressed to the Profession. Its professed object is to enforce the maxim of Ovid—

> "Principiis obsta: sero medicina paratur
> Quum mala per longas invaluere moras."

The author dwells upon the importance of attention to the earliest symptoms of disorder, and urges early application to a Medical Practitioner. We think he might have written a better book, but we have no particular fault to find with it, except that it is calculated to foster that morbid subjectiveness which characterises the hypochondriac. Unfortunately, too, the title selected is that most likely to attract readers from this unhappy class of people.

On Digitalis; with some Observations on the Urine. By T. L. Brunton, B.Sc., M.B., late Senior President of the Royal Medical Society, and late Resident-Physician to the Clinical Wards Royal Infirmary, Edinburgh. London: Churchill. 1868. Pp. 132.

This is a highly valuable monograph upon a very important drug, based upon careful experiment and observation by a man evidently well qualified for the work he undertook. Without following the author through all the evidence he adduces in support of his conclusions—evidence, however, which no future writer on the subject can afford to pass over unconsidered—we shall present to our readers the hypothesis which he has been led to form as to the action of the medicine. "Digitalis causes contraction of the small arteries, and at the same time acts on the regulating apparatus of the heart, both directly and to a much greater extent through the vagus, thus causing slowing of the heart without loss of tension; it stimulates the muscular-motory apparatus, causing increased force of the cardiac contraction. This primary stimulus then gives place to paralysis—first partial and then complete. The regulating force gradually loses its power, so that the muscular-motory power causes a quick beat to be occasionally interpolated. As the regulating power gets enfeebled, it can only occasionally assert its influence, and the pulse, formerly slow with occasional quick beats, is now a quick one, with occasional slow beats or intermissions. As the regulating power becomes entirely lost, the intermissions disappear, and the pulse becomes regular, but very quick; the capillaries have also become paralysed and dilated, but occasionally, just before death, they become spasmodically contracted. The muscular-motor power gets weakened; the fibres connecting the different ganglia of the heart, and which, by keeping up a perfect correspondence between the different ganglia, enable the heart to contract rhythmically, now convey impressions slowly and imperfectly; the different parts of the heart no longer work in unison, and the contractions become irregular and peristaltic. By-and-by the fibres do not transmit impressions at all, and the ganglia working in independence of each other, we see some continuing to make the little area they supply pulsate when the rest has stopped, and finally the ganglia themselves become paralysed, and the heart remains motionless and contracted. But it is probable this stimulating influence is not exerted on the heart and capillaries alone, but on involuntary muscular fibre throughout the body, or on the sympathetic nerves which supply it, since we find it causing contraction of the stomach, intestines, and uterus; and in those organs also its stimulating effect would probably be followed by paralysis. Not only the nerves are affected, but the power of the muscular tissues themselves is impaired, as shown by Dybkowsky and Pelikan, who found that when two muscles were taken from a frog, one having been taken from a leg which the poison was prevented from reaching by a ligature applied previous to its administration, and the other being taken from the poisoned animal, the curve described by the former in the myographion was much higher than the latter, showing its greater power." (P. 53.) With respect to the action of digitalis on the kidneys, he concludes:—"1. That in anasarca, especially from heart disease, digitalis acts as a diuretic. 2. That it sometimes, but not always, acts as such even in health. 3. That when it acts upon the intestinal canal so as to cause vomiting and purging, or when it affects the pulse

so much as to cause intermittence, and possibly, before this takes place, diuresis is much lessened, though a moderate degree of retardation may co-exist with diuresis. 4. That in large doses it causes suppression of urine, lasting in the human subject for three days." (P. 40.) When acting as a diuretic, the author believes, from observations made on his own person, that it also increases tissue change, as indicated by increase in the urea discharged. Finally, he gives a warning to those who use it indiscriminately in cases of weak heart. "I believe that I have proved that it increases the force of the cardiac pulsation; but if while the motor nerves were stimulating it to contract, and the capillaries at the same time were opposing a resistance, the fibres of the heart itself were not composed of sound muscle, but were fatty and friable, some of them would be pretty sure to rupture, and the results would be disastrous. I therefore think that in cases of fatty heart great caution is necessary in administering it." (P. 58.)

Le Choléra. Etiologie et Prophylaxie, etc. Exposé des travaux de la Conférence Sanitaire Internationale de Constantinople, mis en ordre et précédé d'une Introduction. Par A. Fauvel, Délégué du gouvernement français à la Conférence, Médecin ordinaire de l'Empereur, Médecin de l'Hôtel-Dieu, etc. Paris: Baillière. 1868. Pp. 673.

It is scarcely necessary for us to do more than announce the publication in a complete form of the proceedings of the Constantinople Conference under the able editorship of M. Fauvel, since we gave to our readers a summary of the more important of its labours before the Conference quite broke up. Still the volume is very acceptable, and will be read with interest by all who have not yet had an opportunity of perusing the original documents, and such constitute the mass of the Profession. Dr. Fauvel has done well, also, in bringing the conclusions arrived at into a focus in the summary with which the work commences. The value of the book is enhanced by an excellent table of contents, and by a map showing the course pursued by the epidemic during the year 1865, starting from Calcutta and Singapore and terminating in the far West in Halifax, New York, and Guadeloupe.

Collection de Calculs Urinaires et d'Instruments de Chirurgie du Dr. J. Civiali. Paris: J. Rothschild. 1869. Pp. 80.

This is scarcely a book to be reviewed; it is one to be used as a guide in the careful study of the admirable collection made at the Neckar Hospital. The great loss which Surgery sustained by the death of the author occurred just as he had completed this catalogue. The collection itself, the editor of the volume justly says, brings into a focus the scientific life of M. Civiali. This work must of necessity be upon the shelves of any Surgeon who makes calculous disorders any portion of his study; this is equivalent to saying that no Surgeon can afford to overlook it.

PROVINCIAL CORRESPONDENCE.

BIRMINGHAM.

April 28.

The Guardians v. *Poor-law Board—Qualified and Unqualified Doctors.*

At their fortnightly meeting held on the 21st, the guardians, in reply to Mr. Goschen's last communication, which had been drawn up a committee appointed for that purpose, was discussed, and ultimately adopted. It was a very able one, and, in addition to the other reasons for the reduction of the Medical staff, which were stated in a former letter to the Poor-law Board, the evidence of two of their Medical officers was adduced, which was taken some months ago before a committee appointed to investigate the out-door Medical relief department, and upon which, in a great measure, the report of that committee was framed. These Medical officers stated that they were not overburdened with work, and that they could do even as much again were they only fairly remunerated for it. The guardians also advance the argument that since the reduction of the Medical staff the Medical work of the parish has been done very satisfactorily, without any complaints of overwork having been made by the Medical officers. This being so, they ask the Poor-law Board to sanction the new arrangements, or to allow them to remain in operation for at least twelve months, at the end of which time, if they do not give satisfaction, others shall be entered into. The average number of patients which each officer has to attend to weekly at the present time is about 110, and two midwifery cases. These latter are generally conducted by midwives, so that only in difficult cases is his work increased from this source.

The best solution we can offer for this Medical question—and it is one which, so far as we are informed, would satisfy the persons more immediately concerned—is a better rate of remuneration—say £250 a year, instead of £200. The addition would just compensate them for the loss in vaccination fees.

The Birmingham Medical Registration Society, whose operations have lain so long dormant that its very existence was almost denied, has suddenly aroused itself into activity by instituting a series of prosecutions against certain individuals who have been practising Medicine without being duly licensed. On Tuesday last the first case came on for hearing at the Public Office, and created considerable interest and curiosity on the part of the Profession and the patients who had been treated by the defendant, one Grayston, formerly a Surgeon's assistant, and now conducting a practice amongst the poor on his own account. The following facts in the case were candidly admitted:—That the accused had as many as half a dozen capital letters to his name, that he was in the habit of signing certificates of death, that he had emblazoned on his door the word "Surgery" (it is said that the word is sometimes made to look as much like "Surgeon" as possible), together with the inscription of Medical College, Pennsylvania, on his house. The question of fact for the adjudication of the magistrate was, had the defendant "wilfully and falsely called himself what he was not?" After hearing the pleas of the defendant —*e.g.*, a long apprenticeship, attendance at lectures and Hospital practice, and qualifications to dispense—Mr. Kynnersley ruled "that there had been no false and wilful assumption of an English qualification." The summons was therefore dismissed, and the accused left the court free. This case may be regarded in a twofold aspect. It shows that when a "society" undertakes to protect its members from an injustice it should be careful to make good its case. The second lesson which it affords is that if the public are inclined to submit their diseases to the treatment of unqualified men they are at liberty to do so. The law will not punish those who practise upon their ignorance and credulity, nor protect them from the machinations of the worst of all impostors—the Medical impostor. But, from what oozed out in the course of the evidence, it would appear that certain qualified members of the Profession connived at the practices of these dabblers in Physic, and for a certain annual consideration protected them from coroner's quest investigation. Surely, what can be more humiliating than the acknowledgment of such a fact as this? The Profession may well blush that it has in its ranks such renegades. One such person here has got his name in all quarters of the town, thus throwing a shield over a host of irregular proceedings. No doubt even the more respectable part of the Profession is not wholly blameless in the matter, from the custom of engaging unqualified assistants, who are the chief offenders in this way. Some firms have been the means of thus launching sundry poachers into business of this kind, themselves perhaps being members of the same registration society. These having praised the abilities and acquirements of such persons while they were their assistants, and told their poor patients that they were quite to be relied upon in sickness, cannot suddenly turn round and tell a different tale after the same assistants have set up in business on their own account. At the same time it is difficult to see why the magistrate should not have adjourned the case at least, even if he did not perceive that from the wording of the Medical Act there really was a false pretence, as it says in Clause 11, "or use any name, title, or addition, or description implying that he is registered under this Act, or that he is recognised by law as a Physician or Surgeon, etc." Now, surely when a man signs himself in certificates M.R.C.P., and, when challenged, answers that it means "Member of the Reformed College of Pennsylvania," or suchlike, if this be not a false pretence, we should like to know, as Mr. Motteram, the counsel in the case, said, what is one. This very word "reformed" should have indicated to the magistrate that, even if Grayston belonged to any such place, it was not a regular institution, but some botanic or homœopathic humbug, similar to those that exist in this country, consisting of herbalists and the like. We would also say that the word "surgery" clearly "implies" the place of business of a Surgeon *legally* qualified; and as the brief preamble of the Act, showing its great object, says "whereas it is expedient that persons requiring Medical aid should be enabled to distinguish qualified

from unqualified Practitioners," we wonder how they are ever to be distinguished if such a decision as this be correct. We trust, therefore, that all concerned will reflect well over the subject before the next batch of cases comes on for inquiry, especially bearing in mind that the words "law," "legal," and "lawful," employed in a British Act of Parliament, mean that which is "law," "legal," or "lawful" in Great Britain only, and has nothing to do with Pennsylvania any more than with China or Timbuctoo—a fact, however, that seems to have become obscured in the opaque atmosphere of Birmingham, where a liberal Medical franchise is thus extended to all comers.

GENERAL CORRESPONDENCE.

EXAMINATIONS FOR NAVAL MEDICAL APPOINTMENTS.

LETTER FROM DR. JAMES LITTLE.

[To the Editor of the Medical Times and Gazette.]

SIR,—You will much oblige me by directing the attention of candidates for Medical appointments in the Royal Navy to an important alteration that has been made in the regulations. In those issued by the Lords of the Admiralty on May 7, 1867 (sect. 9), it was announced that "a favourable consideration will be given to those who have obtained the degree of M.D. from any University in the United Kingdom."

The President and Fellows of the King and Queen's College of Physicians remonstrated against this announcement, as it implied that the qualification given in Medicine by a College of Physicians was inferior to that given by any University in the United Kingdom; and as it confounded together all Universities—those requiring degrees in arts previous to graduation in Medicine, and those not requiring degrees in arts. In addition to a written remonstrance, Sir Dominic Corrigan, Bart., and Professor A. Smith had an interview in June last with Lord Henry G. Lennox, then Secretary to the Admiralty. The result has been that the paragraph has been withdrawn from the recent regulations of the Admiralty, issued on Nov. 4, 1868, which now place fairly on a level all who pass the examination for the Navy, without regard to their place of education or the corporation from which they have obtained their qualification.

I am, &c.

JAMES LITTLE, M.D., Fellow and Registrar.

King and Queen's College of Physicians in Ireland,
Dublin, April 24.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, APRIL 6, 1869.

R. QUAIN, M.D., President, in the Chair.

MR. J. LOCKHART CLARKE read a report on the Spinal Cord of the patient whose case had been described by Mr. W. Adams. There was great thickening of the membranes of the cord.

Dr. BRISTOWE read a report on the Tumour of the Tongue shown by Mr. Hickman. It had its seat in the substance of the tongue, and appeared to spring from the glands in that organ.

Dr. HERMANN BEIGEL exhibited a Living Specimen of Skin Disease hitherto not described, and to which he gave the name of Papilloma area-elevatum. The patient was a male child, twelve months of age, and born of healthy parents. The mother had noticed that different parts of the child's body became covered with small pimples of the size of a pin's head, which soon increased and formed patches, the largest about an inch and a quarter in diameter. Those patches were raised above the surrounding skin, the latter not being inflamed. The patches were of a round shape, and their surface was smooth, as if covered with healthy skin. Others, particularly those on the face, were covered with a thin scab, which, when removed, showed a surface resembling a sponge, the effect of much hypertrophied infiltrated papilli discharging small quantities of serum and pus. On cutting with a knife or scissors, the patches proved nearly insensible, the child exhibiting no signs of pain. The microscope showed a great abundance of epithelial formation, the papilli being either extensively infiltrated or broken down. The child had not been, and was not, feverish, his health was pretty good, and he had no cachectic appearance. Dr. Beigel thought that this form of skin disease which he brought under the notice of the Society had not been described. The name he applied to it was intended to indicate the most prominent symptoms—namely, that the papilli are principally affected, and that the skin affection is of a round shape, areated, and raised above the level of the surrounding skin.

Dr. TILBURY FOX remarked that the appearance was due to sessile warts—a condition described by Dr. M'Call Anderson as eczema marginatum. No new name was needed.

Dr. HILTON FAGGE thought it rather unusual. There was a model in Guy's Museum like it.

Dr. LANGDON DOWN had that day seen a similar case in the London Hospital.

Dr. LEGG then showed for Dr. Wilson Fox a specimen illustrative of Granulations on the Mitral Valve, associated with chorea, but without any history of rheumatism. There was a constant murmur. The brain had been examined, and there was plugging of the vessels of the medulla oblongata.

Dr. BRISTOWE showed a specimen of Strictured Gut removed from the body of a woman, aged 38, who had been ill three months. She had vomiting and constipation, and was much emaciated. After death, a stricture was found in the jejunum. It was not very tight, as fæces were found below; but it was formed of a ring on the peritoneal surface, with an ulcer internally. Dr. Bristowe suggested that there may have been intussusception and sloughing, and that the slough may have passed away during life.

Mr. MOSELEY exhibited a specimen of Necrosed Jaw occurring in a man, aged 35, who had worked in a match manufactory. Nine years ago he suffered from pain in the jaw, which five months ago became worse, and an abscess formed. The patient died before long, when the jaw was found to be nearly bare, much wasted, but with some new bone.

Dr. LANGDON DOWN exhibited an Unsymmetrical Brain, a good example of what is found in some idiots. During life the difference of sides might be seen, although the bone made up for it a good deal. The change was not the result of pressure, but *vice versâ*. This child was begotten while the insanity of its father was incubating; all the other children were healthy. The left hemisphere was small, especially in Broca's region. The child could not speak, but was not aphasic. The cerebellum was symmetrical. The whole brain weighed 37 oz.

Dr. CHURCH showed an Atrophied Spleen, etc., removed from a woman aged 51, who came into Hospital with fluid in her abdomen and pleura. After death her omentum was found thickened and infiltrated with a lymphomatous material, which also entered into the liver and the substance of the diaphragm. It surrounded the pancreas, which was much atrophied. There had been much fat in the woman's fæces during life. The spleen only weighed 5 drs. 15 grs.

Dr. CHURCH also showed an Aneurism of the middle Cerebral Artery. It was very large, and consisted of two sacs, one having a dense, hard wall; the other thinner, and consisting chiefly of pia mater. The latter gave way. A month previous to his final entrance into the Hospital the patient had been brought to it in a kind of fit, from which he was apparently roused by galvanism. When again brought in, after he had fallen in the street, he rallied with the use of the battery, but died in three hours. The blood had escaped into the lateral ventricles: there was none below the arachnoid.

Dr. MOXON exhibited a specimen illustrating Apoplexy into the Canal of Fallopius in a case of Bright's Disease, causing facial paralysis. The specimen was from a man aged 43, who died in Guy's Hospital, having been under Dr. Moxon's care for albuminuria and dropsy. On admission he had partial paralysis of the right side of his face, without deafness in the right ear and without weakness of any other part. The paralysis was of a few weeks' standing on admission, and remained stationary during the fourteen weeks he lived in the Hospital. He suffered from cerebral complications during all this time, being listless, drowsy, and slow in speech, and having giddiness and headache. He had several attacks of convulsions, but the state of his facial nerve never varied under all these circumstances. The brain was pale, but showed no local disease. The dura mater showed a dark brownish-black patch in the situation of the aqueduct of Fallopius. On removing the dura mater this dark patch was found to proceed from a dark discoloured spot in the bone, which further examination showed to be caused by an effusion of blood. This effusion of blood may be of the same nature as those common effusions of blood into the retina with which all are familiar.

(To be continued.)

CLINICAL SOCIETY.

FRIDAY, APRIL 9, 1869.

Dr. GREENHOW in the Chair.

DR. BROADBENT read a communication on the Treatment of Anæmia and Chlorosis with Manganese and Nickel. Proceeding on the assumption that all closely allied substances have analogous therapeutical actions, and that manganese and nickel are chemically closely allied to iron, and on the fact that iron is generally admitted to be an effectual remedy in the disorders above mentioned, Dr. Broadbent determined to ascertain by experiment to what extent the salts of the other metals could be advantageously employed for the same purpose. Several cases were related, in some of which the results were negative, in others favourable. In one case the sulphate of manganese, in others the chloride, was employed, the salt being usually combined with quinine or some other bitter.

Dr. POWELL asked if manganese had been used where iron failed.

Mr. CARTER said a gentleman had recommended manganese and iron in combination in cases of anæmia; he had used them himself, but with no very marked success.

Dr. LANGDON DOWN regretted that the metals had not been given alone; in most instances some tonic which would improve digestion had been given along with them. He had frequently used manganese as a cholagogue, apparently with good results. These we could not expect in iron.

Dr. BROADBENT, in reply, said he had not used manganese where iron had failed, and, as his experiments were comparative, he had ordered these metals in the same way as the iron was ordered in the Hospital Pharmacopœia. When given as a purgative the sulphate of manganese was commonly employed. The sulphate of iron would have something of the same effect.

Dr. GREENHOW read an account of a case of Tabes Dorsalis. The patient had suffered from nervous disorder for five years. The more important symptoms during the two years he was under observation were the following:—1. Impaired tactile sensibility of the area of distribution of the dorsal spinal nerves from the third to the tenth, and of the distal two-thirds of both upper limbs, especially of the surface parts supplied by the ulnar nerve. 2. Lancinating pains referring to all parts of the body below the root of the neck, unattended with spasm; to these the patient had been subject, without intermission, for many months. 3. No impairment of co-ordination of voluntary movements, twitching contractions of the flexors of the hand, which can be controlled by voluntary effort; wasting of the muscles of both hands, especially the right. 4. Contraction of both pupils—excessive of the right, moderate of the left; double vision of objects at distances either greater or less than five feet; the image of a near object seen by the right eye being to the left of that seen by the left eye; ophthalmoscopic results negative or nearly so. Dr. Greenhow believed the case to be unique in the limitation of the affection to the upper part of the body, and in the consequent absence of any disorder of locomotion. He thought the symptoms to be referable to disease of the posterior column, of the same nature as that which exists in the ordinary cases of locomotor asynergy, but differing from them in being limited to the upper part of the cord.

A report on this case by Dr. Buzzard and Dr. Moxon was then read. Considering that the most characteristic symptoms of tabes dorsalis may be comprised under the heads of ubiquitous shooting pains, anæsthesia, ataxia, and disorder of the eye, and that although in most cases all these groups of symptoms are present, some of them are occasionally wanting in cases which are found to be due to lesions of the same kind as those found in locomotor ataxy, the reporters were of opinion that in this instance the absence of the prominent feature to which the disease owes the name conferred on it by M. Duchenne, ought not to be regarded as a reason for excluding it from the class of cases comprised under the term tabes dorsalis.

Mr. CARTER said the ocular disturbances were different from those of locomotor ataxy. The characters of the diplopia differed. He had not seen cases of locomotor ataxy lasting as long as this without atrophy. It was curious that the pupils were so much contracted.

Dr. SILVER regretted that in the report the different kinds of sensibility had not been separated and their peculiarities noted, as in such and allied cases there were not unfrequently great diversities in the anæsthesia. Further, in judging of the real nature of such cases, those which approximated to them, however slightly, should be duly considered. Dr. Silver then referred to certain cases where some of the symptoms were similar to those in Dr. Greenhow's case, others not, and pointed out that whilst loss of tactile sensibility was frequently accompanied by painful sensations, in some instances the loss of sense of temperature was even more marked.

Dr. BROADBENT thought the reporters would have done better had they spent more time in trying to localise the morbid changes.

Dr. BAEUMLER had seen the case, and was under the impression that the man had received an injury which might have been the starting-point of the symptoms.

After some remarks by Mr. BARWELL, Dr. GREENHOW replied.

Mr. HOLTHOUSE, after relating a case of Sub-glossitis, which he believed to be an affection of rare occurrence, remarked that its peculiar features were an absence of enlargement and protrusion of the tongue, and of all symptoms of dyspnœa, the swelling being limited to the sub-glossic region; there was no inflammation of the salivary glands. Supposing some slight injury had been sustained by the mucous membrane of the floor of the mouth, the subsequent mischief might have resulted from blood poisoning introduced through the wound. Treatment was essentially tentative. In the present instance the symptoms rapidly subsided after the use of quinine, but the value of this remedy could not of course be determined by a single case.

Mr. CALLENDER suspected the discharge was pus mixed with saliva; he had seen a similar case which caused much dyspnœa. He pushed a director down to the base of the tongue, when pus readily flowed. The disease was ordinary suppuration, but deep-seated.

Dr. CHURCH said that were it not for the absence of pain, he had once seen a very similar swelling from a wasp-sting.

Mr. HULKE said that the intrusion of some foreign body, as a piece of grass, had been known to give rise to such symptoms.

CURARE IN TRISMUS AND TETANUS.

PROFESSOR BUSCH, of Bonn, gives us a record of his experience in the history and treatment of traumatic trismus and tetanus during the Bohemian war of 1866.(a)

The fights in Paris in 1848 brought one thousand wounded to the Hospital, but none was attacked by tetanus. During the Schleswig-Holstein war, 1849, a single case came under the notice of Stromeyer. On the other hand, there were 86 cases during the Italian war of 1859, on the Austrian side, as Demme informs us, and even more—namely, 140—on the Italian side. The expedition to the Crimea occasioned the admission to and treatment of 12,094 wounded in the English Hospitals, 19 of whom only suffered from subsequent attacks of tetanus. 363 such cases occurred during the great American war. The percentage of occurrences is largest in hot climates; for instance, Gilbert Blanc states that 30 cases of traumatic trismus and tetanus happened during the West Indian war, when the number of wounded was 810.

Dr. Busch had 21 cases under his observation in his field Hospitals. Twelve of them were in the castle of Hradek, where 500 patients were accommodated, 5 in the Lazaretto of Nechanic, where 600 were confined, 2 in Castle Prim, and 2 in Castle Stracow. Dr. Busch believes that special localities and overcrowding favoured the attacks. Almost all the cases were gunshot wounds of the lower extremities; this is partly explained by the timely removal to more distant Hospitals of those who had wounds of the upper limbs.

The percentage of recovery is larger in tropical climates—at least Blanc saved 43 per cent.; of Demme's cases 7 per cent. recovered; 7·4 was the percentage in the American war; of Busch's 21 cases 7 were saved—*i.e.*, 33⅓ per cent. The proportion is the more favourable the less acute the cases are. Where the symptoms become alarming on the first or second day of the attack, where the pulse rises to 90, to 120 beats, and the temperature exceeds 40° C., no hope is left. The intensity of the single attacks, the rapidity with which the convulsions spread from one group of muscles to the other, are of bad augury. When, shortly after the first warnings, the neck gets stiff, the teeth cannot be separated, when soon after the convulsions reach the trunk and extremities, and the tonic spasms change into clonic, the patients usually die. On the contrary, there is more chance of recovery when the mobility of the

(a) Dr. Busch "On Trismus and Tetanus," reprinted from the *Transactions* of the Rheno-Westphalian Association for Natural History and Science, 1867. (Verhandl. des Naturh. Vereins für Rheinland und Westphalen.) Pp. 15.

neck is only slightly interfered with, when the difficulty of opening the mouth increases slowly, when to the affections of the muscles of deglutition and mastication either no general convulsions supervene, or the muscles of the trunk and extremities suffer only at a late period and moderately. The time the disease lasted varied in Busch's cases from twelve days to a month.

Demme treated 22 cases with curare, 8 of which recovered, Busch 11 cases, 5 of which ended fatally. Of the 6 who recovered, one owed his health more to morphia given subsequently to the curare than to the latter. In very acute attacks Busch thinks it of no use to try curare; he treated his first 9 cases with morphia and inhalations of chloroform. He had one remarkably bad case where a quarter of a grain of morphia was injected every two hours, and the patient recovered, contrary to all expectation. The mode of exhibiting the curare was by subcutaneous injection; $\frac{1}{50}$ to $\frac{1}{30}$ grain of the pure article will suffice, injected every two hours. The 11 cases are related in which this was done, and the post-mortem appearances given in some. The author refers to the experiments of Humboldt, Brodie, and Voisin, made on animals, to the treatment of tetanus in horses with curare by Lavell (1810-12), and its first use in men by Vella (1859). The physiological effect of curare is paralysis of the ends of the nerves in the muscles; by this the electric currents are impeded from reaching these muscles. It seems that the peripheric ends of these nerves get earlier paralysed in those muscles affected with electric tension than in those not affected with tetanus.

The improvement of the patients is attested by the decreasing intensity of the convulsions. The patients themselves urgently requested the exhibition of the remedy as soon as they became aware of an imminent spasm by the increased rigidity of the muscles.

The author considers it desirable to employ in future the efficient component part of the remedy—the *curarine*. Sulphate of curarin was exhibited at a subsequent meeting by Dr. Preyer.

THE PROPOSED ROYAL ACADEMY OF MEDICINE.

The following is the scheme for the union of the Medical Societies to be considered at a meeting of the Fellows of the Medical and Chirurgical Society on Monday next:—

The Council of the Royal Medical and Chirurgical Society beg leave to recommend to the Fellows, that steps be taken to secure the union of various societies now existing in London for the cultivation of special branches of Medicine and of the allied sciences, and they submit the following resolutions for adoption as the basis of a scheme for effecting such union.

I. That a new Society be formed, and incorporated by Royal Charter, under the title of the Royal Academy of Medicine; and that this Academy comprise sections for the main branches of Medicine and the collateral sciences.

II. That the following sections be formed:—1. Medicine and Surgery. 2. Obstetrics. 3. Psychological Medicine. 4. Clinical Medicine and Surgery. 5. Pathology and Morbid Anatomy. 6. State Medicine—comprising Epidemiology, Public Health, and Medical Jurisprudence. 7. Physiology and Anatomy. Each section will entertain questions of Therapeutics, Chemistry, and Physics, so far as they bear on its special subject.

III. That, in the formation of the new Society, power be taken which shall enable the Academy to modify the existing sections, or to add new ones.

IV. That the general management of the Royal Academy of Medicine be under the control of a General Council, consisting of a president, two treasurers, two librarians, two secretaries, the presidents of the various sections, and additional members to be nominated one by each section.

V. That the presidents of the several sections be *ex officio* vice-presidents of the Academy.

VI. That the president, treasurers, librarians, and secretaries of the Academy be nominated by the General Council.

VII. That all the members of the General Council, with the exception of the vice-presidents, who are *ex officio* members, be elected annually by the Academy at a general meeting.

VIII. That the president of the Academy be chosen annually from amongst the past or present presidents of sections, and be ineligible for re-election; and that the president of the Academy cease, on his election, to be a president of a section.

IX. That the treasurers, librarians, and secretaries be elected annually from the general body of the Fellows, and that they be not allowed to hold other offices in the Academy or in any of the sections.

X. That the moneys, books, premises, and other properties, belonging to any of the Societies which shall join in the proposed amalgamation, become the property of the Royal Academy of Medicine; and that the entire management of the funds of the Academy be in the hands of the General Council.

XI. That there be at least three trustees, in whom the property of the Academy shall be vested; that they be nominated by the General Council, and elected by the Academy at a general meeting; and that their appointments be permanent.

XII. That all Fellows or Members of the following societies—viz., the Royal Medical and Chirurgical, the Pathological, the Epidemiological, the Obstetrical, the Clinical, and the Medico-Psychological Association—be original Fellows of the Royal Academy of Medicine without further nomination or election, provided they make the payments hereafter to be arranged.

XIII. That power be taken by the Charter to incorporate additional Medical Societies after the proposed Academy shall have been formed.

XIV. That Fellows, Members, or Licentiates of the Colleges of Physicians or Surgeons of Great Britain and Ireland; Doctors or Bachelors of Medicine, or Masters or Bachelors of Surgery, of the Universities of Great Britain and Ireland, or of the Colonies; Members of the Faculty of Physicians and Surgeons of Glasgow; Licentiates of the Society of Apothecaries of London, or of the Apothecaries' Hall of Ireland; or foreigners whose qualifications are satisfactory to the Council, be eligible for admission into the Academy by nomination and election, as at present is arranged in the Royal Medical and Chirurgical Society; and that their recommendation be signed by three Fellows of the Academy, two of whom, at least, shall be members of a section to which the candidate declares himself desirous of becoming attached.

XV. That in adjusting the scale of payments, consideration be had to the number of sections which each fellow may join, and for the privilege of using the library of the Academy and of receiving copies of the *Transactions* and *Proceedings* of the several sections.

XVI. That deductions from future payments to the Academy be allowed for any admission or composition fees which may have been already paid to any of the societies enumerated in Resolution XII., as provided in the by-laws of those societies.

XVII. That any fellow, who shall wish to leave one section of the Academy and join another, may do so on the day of the annual meeting of the Academy.

XVIII. That any registered Medical Practitioner, on complying with the regulations required, be eligible for election as an Associate of the Royal Academy of Medicine on payment of an admission fee of one guinea and an annual contribution of one guinea, which shall entitle him to attend the meetings of any one of the sections, and also to a copy of the *Transactions* and *Proceedings* of such section, and that the manner of election of such Associates be regulated by each section as it may think fit.

XIX. That no present Fellow or Member of any of the societies enumerated in Clause XII. be required to pay the admission fee of one guinea on becoming an Associate of the Academy; and that all privileges now enjoyed by the present members of those societies be, as far as possible, preserved to the members of the future sections.

XX. That the members of each separate section elect annually the Council of that section; and that such Council consist of a president, two secretaries, and such number of other councillors as shall hereafter be arranged. The president of each section and the represetative member of the section to the General Council must be Fellows of the Academy.

XXI. That the Council of each section have the entire control of the internal business of their own section, subject to such general arrangements as shall be made by the General Council of the Academy; and that they publish annually, or at such periods as shall hereafter be arranged, the *Transactions* of their own section, provided the expenditure of each section, for *Transactions* and other special purposes, do not exceed one half of the income derived from the annual subscriptions of its members.

XXII. That the General Council of the Academy may, under special circumstances, make special grants in aid of the publication of *Transactions*, or other expenses, of any section.

XIII. That the proposed Academy comprise a grade of honorary fellows, consisting of the honorary fellows or honorary members of any of the enumerated societies which shall join in the amalgamation, and others to be elected for life from British subjects who have eminently distinguished themselves in Medi-

cine or Surgery or in the sciences connected therewith, but who do not practise the Medical Profession; and from foreigners who have eminently distinguished themselves in Medicine or Surgery or in the sciences connected therewith. That such honorary fellows be elected by the Academy at a general meeting on the recommendation of the Council.

Should the scheme embodied in the above resolutions be approved, the Council recommend that it be submitted to each of the Societies mentioned in Resolution XII., and that they be requested to nominate three members each to form a general committee which shall draw up, with legal advice, a code of laws and regulations to be submitted to each society for its approval. Signed on behalf of the Council,

April 19, 1869. George Burrows, Chairman.

THE DIRECT REPRESENTATION OF THE MEDICAL PROFESSION IN THE GENERAL COUNCIL OF MEDICAL EDUCATION.

*** We have been requested to publish the following address:—

To Members of the Legislature and the General Public.

The General Council of Medical Education was established by the Medical Act, which was passed in the year 1858. That Act was to a great extent the result of the long-continued and successful labours of the British Medical Association, aided by the Medical press and the support of various members of the Legislature.

The General Council of Medical Education consists of twenty-four members—viz., a president, seventeen chosen by the universities and Medical Corporations of the United Kingdom, and six nominated by the Crown.

Nearly three-fourths of the Council are chosen by the very Colleges and bodies which it is the duty of the Council to superintend and to report upon to the Privy Council in case of defects in the course of study or examination; and it is certain that their presence in so large a proportion tends to perpetuate the evils of multiple examinations, numerous examining boards, and undue competition for candidates. This argument applies with equal force whether those members be chosen, as at present, by the governing bodies of the corporations or, as some desire, by the whole of their members.

At present, the President and the six members nominated by the Crown form the only counterpoise in the Council to the seventeen members chosen by the corporations and bodies which are under the supervision of the Council.

The whole of the ordinary funds of the Council are derived from fees paid by the registered Medical Practitioners of the United Kingdom.

The registered Medical Practitioners of the United Kingdom, although they thus supply the whole of the direct revenue of the Council, have no voice whatever in the appointment of the members of the Council.

The General Council have now been engaged for ten years in directing Medical education, and they have undoubtedly effected some improvements. Notwithstanding these, however, many grave defects are still uncorrected.

Of these defects three are especially to be noticed—

First, the defective previous education of the Medical student;

Second, the character of the course of study and the examinations, which are not sufficiently practical; and

Third, the number of examinations and examining boards.

1. The Medical Council have very properly made it a rule that every one shall pass a preliminary examination, or have taken a degree in Arts, before he can become a recognised Medical student.

Unfortunately this Preliminary Examination is in many instances a very imperfect test of the candidate's general knowledge. Thus the College of Surgeons is satisfied with an examination, intrusted by them to the College of Preceptors, which is much less strict than the Matriculation Examination of the University of London.

The result of this imperfect previous training is thus described by Mr. W. E. Forster, in his recent speech on moving the second reading of the Bill on Secondary Education:—"I will now trouble the House with one or two answers which were given in the course of the long inquiry of the commission. We examined among others, Dr. Gull, who was asked—'What in your opinion is the state of previous education which at present, generally speaking, the candidates for the Medical Profession obtain?' The answer was—'I should say that it is still in a very defective condition. There is no thoroughness in the teaching. I should say that the men are defective in common writing and spelling. Of course there are numerous exceptions, but it is still a common thing. There seems to be no training of the faculties of men for acquiring knowledge at all.' And Mr. Paget, in answer to a question which was put, said—'I should say that the condition of knowledge in young men coming up for examination in regard to scientific subjects is highly unsatisfactory.'"

2. At present, some of the examining boards take a candidate for a degree in Medicine or licence to practise to the bedside of the patient, and require him to examine and describe the case and give an account of the nature of the malady and its proper treatment. Other boards, however, do not practise this test, but content themselves with written and oral examinations. The Medical Council have not stepped in to regulate their method of examination, and to require that it shall be clinical or carried on at the bedside of the patient.

The result is that the Medical student, whose course of study is necessarily ruled by the character of the examinations, instead, in many instances, of being carefully trained at the bedside of the patients in the Hospital, merely "walks the wards," and listlessly saunters past the patients, without making himself really acquainted with their cases.

He, in fact, devotes himself to a verbal as opposed to a practical study of disease, and trusts too much to books, lectures, and the grinder.

If the examinations were, of necessity, conducted at the bedside, or clinical, the baneful system of cramming must die out, and the method and course of study must become essentially practical or clinical.

3. The number of examining boards in the United Kingdom included in Schedule A, and capable of conferring Medical degrees and licences, amounts to nineteen. It follows that the student, in order to obtain the "double qualification" in Medicine and Surgery, is at present frequently preparing for two, and occasionally for three, examinations at the same time. The studies for one examination clash, to some extent, with those for another, and under this influence, and that of the want of a practical character in many of the examinations, the student, towards the end of his career, when he ought to be making himself more familiar with disease at the bedside, frequently deserts the wards to be "crammed by the grinder."

It is extensively felt by the Profession that these great evils, which weigh immediately upon the public good, can only be remedied by a direct resort to the Legislature.

The proposed remedies are threefold.

1. The first remedy is the strengthening of the hands of the General Council, so as to enable them to prescribe the standard of studies and examinations with greater independence, and to regulate the examining boards with greater authority.

2. The second remedy is, that the colleges or corporations shall be required to unite to form one examining board, which shall conduct the minimum examination for licences to practise Medicine and Surgery, so that, instead of several examinations, there shall be but one.

3. The third remedy, which embraces the others, is the immediate object of this movement, the direct representation of the Medical Profession in the General Council of Medical Education.

The various colleges and bodies enumerated in Schedule A have been entrusted by the Legislature with the choice of the members of the Council, not to protect their own interests, but with a view to the public good.

It is believed that by the preponderance in the Council of the members so chosen, the public good is to some extent interfered with through the natural bias of those members to study, often unconsciously, the interests of the licensing bodies by whom they were chosen.

The six nominees of the Crown are not sufficient, either in number or in the character of the influences that they derive from the Crown, which is in its nature negative, to control the seventeen members chosen by the corporations and universities. What can they do among so many?

If to the Crown nominees were, however, added, in the proportion of one in four of the total number, members directly chosen, by means of voting papers, by the registered Medical Practitioners of the United Kingdom, it is believed that a valuable counterpoise would be afforded to the members chosen by the corporations.

The value of such representation of the Profession in forming a component part of the Medical Council may be thus briefly stated:—

Those representatives would have no interest to serve except that of improving the education and raising the character of their own Profession, and so directly promoting the public good.

They would be supported and impelled forward by a large body of men who would not willingly see the continuance of those evils that they so justly desire to have remedied.

They would convey important and immediate information from the body of the Profession to those members of the Council chosen by the corporations or nominated by the Crown.

As a final argument in favour of the direct representation of the Medical Profession in the General Council, which must tell home to the members of a representative legislature, the registered Medical Practitioners of the United Kingdom provide the whole of the ordinary funds of the Medical Council; they have surely, therefore, a constitutional right to a voice in the deliberations of the Council.

It is the reverse of desirable that the corporations should cease to send members to the Medical Council. The high reputation of such members and their intimate acquaintance with Medical studies and examinations will always render their presence in the Medical Council not only valuable, but necessary.

What is desired is, that those members shall be present, not in preponderating, but in justly proportionate numbers, so that they shall form one half of the Council, and that they shall be equally balanced by the combined numbers of the nominees of the Crown and the direct representatives of the Medical Profession.

Francis Sibson, President of the Council of the British Medical Association.
Edward Waters, Chairman and Convener of the Committee.
J. Watkin Williams, Secretary.

April, 1869.

NEW BOOKS, WITH SHORT CRITIQUES.

Insanity without Delusions. By G. Fielding Blandford, M.D. Oxon.

*** The writer in this paper reviews that class of cases of insanity in which no delusions are discoverable, a class which, more than any other, gives rise to contests in courts of law. The notion that delusion is always present in insanity was almost universally held down to the beginning of this century, and the writer quotes passages from Arnold and other authors of former days in which this doctrine is traditionally handed down. Among lawyers it has prevailed almost to our own days, and the opinions of eminent men, as Sir John Nicholl and Erskine, here quoted, influence the bench and bar even now. Yet practical Physicians—at any rate since Pinel—have seen and taught that insanity may exist without delusions, and they have for the most part described it in one of two ways, according to certain theoretical divisions. Some, as Dr. Prichard and Dr. D. Tuke, have set up a "moral insanity," as opposed to an "intellectual;" others have spoken of "intellectual insanity," and, on the other hand, of "emotional" or "affective." The writer objects to both of these classifications, and reviews four varieties of insanity without delusions—(1) Fatuity with loss of memory and defective powers; (2) the congenitally weak-minded; (3) the class usually called "morally insane;" (4) the class of so-called impulsive insanity. And he endeavours to show that in all of these, in addition to changed feelings or emotions, and outrageous or extravagant conduct, there is defect of intellect, defective or abnormal ideation. This method of examining and studying such cases will, he thinks, be useful to those who have to give evidence upon them, and will enable them to avoid the theories of "moral insanity," &c., which are so often supposed to have been invented by Doctors to prove an insanity which does not exist.

Essentials of the Principles and Practice of Medicine. By Henry Hartshorne, M.D., Professor of Hygiene in the University of Pennsylvania, etc. Second Edition. Philadelphia: Lea. Pp. 452.

*** There is perhaps no book in this country which exactly corresponds in character to that published by Dr. Hartshorne; in some respects it resembles a combination of Barclay's Diagnosis and the earlier editions of Tanner's Medicine. Used properly it may be of much service—that is, when employed as a sort of guide to the study of more extensive works. By itself it cannot fail to do harm, even although it contains an immense fund of information. It is such works which give students the idea that diseases are entities, hardly and sharply defined from each other, since they cannot fail to ignore the merging of one form of malady into another and the mixing up of one disease with another, the separation of which often constitutes the chief difficulty in diagnosis, and the great obstacle to successful treatment.

A Conspectus of the Medical Sciences, comprising Manuals of Anatomy, Physiology, Chemistry, Materia Medica, Practice of Medicine, Surgery, and Obstetrics, for the Use of Students. By Henry Hartshorne, M.A., M.D., Professor of Hygiene in the University of Pennsylvania, etc. Philadelphia: H. C. Lea. Pp. 1002.

*** The title given above is enough to give one some notion of the nature of this book. That a sufficient amount of knowledge on all the above subjects can be conveyed in 1000 small octavo pages, is too much for any one to believe. Such works indicate a low condition of Medical education such as is unfortunately too common in many places in the Union, where, after a total curriculum of six months, men are let loose to kill or cure. We would far rather entrust ourselves in the hands of one who had followed Sydenham's advice and read Don Quixote than of one who had mastered such a volume as we now have before us. Of no other science, or rather art, can it be so truly said as of Medicine that a little knowledge is a dangerous thing.

The Antiseptic Treatment of Wounds. By William MacCormac, M.A., M.D., one of the Surgeons to the Belfast General Hospital. From the *Dublin Quarterly Journal of Medical Science*, February, 1869. Pp. 13.

*** Contains seven cases of severe injury treated by carbolic acid applications. Dr. MacCormac has used these in various ways to wounds, abscesses, venereal sores, and phagedænic and other ulcers, usually with "satisfactory and encouraging results." But it is in severe wounds and compound fractures that he believes the efficacy of Professor Lister's treatment is best shown.

OBITUARY.

THE LATE ALEXANDER EDWARDS.

The news of the death of this well-known Surgeon arrived in England by the last mail from New Zealand. The position which Alexander M'Kenzie Edwards once held in the Surgical Profession was such that we cannot pass over the notice of his death as if some unknown member of the Profession had departed, for at one time Edwards appeared to be on the high road to the foremost place in Surgery. Born of Scotch parents, well connected, and highly educated at one of our great public schools, Edwards in due time entered the classes of King's College, where Todd, Budd, Fergusson, and Bowman were, by their great powers as teachers and practitioners of their art, shedding a lustre over their school. Edwards became deeply imbued with a love for anatomical research especially, and very soon distinguished himself by the excellence of his anatomical knowledge, and became equally remarkable for his diligent devotion in the Surgical wards of the Hospital, where he attracted the attention of Sir William (then Mr.) Fergusson, who became much attached to his young countryman, and ere long selected him as one of his private assistants, and no one has ever thrown himself into his special work with more ardour and energy than did Edwards. Subsequently he became House-Surgeon to King's College Hospital, and after leaving this post he turned his view in the direction of Edinburgh, where there appeared to be an opening for an enterprising young Surgeon, and thither he accordingly repaired, and, after having been some little time connected with Professor Millar, he became Demonstrator of Anatomy in the University of Edinburgh and an extra-mural teacher of Surgery; and many are the old pupils who look back with gratitude and affection to the days when Edwards delighted and instructed them. In due course he was elected Assistant-Surgeon to the Infirmary, and, through his industry and talents, and the influence of friends, especially Sir James Simpson, soon began to make a considerable reputation as a Surgeon, and it was with especial gratification that his old friend and master, Sir William Fergusson, saw the principles which he had taught Edwards and others carried out so ably and successfully in the place where he himself was instructed.

In the midst of this prosperity, however, the heaviest blow which can fall upon a man—viz., the loss of a faithful and loving wife—was experienced by Edwards. It completely stunned him, for he had lost one who was, in every sense of the word, a partner. His health and spirits became completely shattered, and it was very evident to those who had opportunities of seeing him that the bright promises of the future were not to be realised. He left the happy scene of his married life, and retraced his steps to London; but after a short struggle to maintain a footing in the great metropolis, broken in health and spirits, he determined, about two years since, to practise in New Zealand; and during the late rebellion he was on his journey to join the field force, when death overtook him in the prime of early manhood.

As we have before said, Edwards bade fair at one time to make a great name in the world of Surgery. He was an admirable anatomist, an excellent operator, and a remarkably clever artist. He could write well and could teach well—in fact, he had about him all the elements of success, and we cannot look back upon the premature extinction of so much promise without abundant sorrow, which we are sure hundreds of his old pupils and friends will share.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 27th inst., and when eligible will be admitted to the pass examination:—

Armstrong, R. S., of Guy's Hospital.
Benham, W. J., of the Bristol School.
Bishop, John, of Edinburgh.
Domville, E. J., of Guy's Hospital.
Elliott, F. W., of University College.
Freeman, J. A., of King's College Hospital.
Giles, P. B., of University College.
Gillott, Montague, of the Birmingham School.
Hill, C. H., of St. Bartholomew's Hospital.
Hughes, E. T., of the Glasgow School.
James, Cyrus, of the London Hospital.
James, D. P., of St. Bartholomew's Hospital.
Lediard, H. A., of Edinburgh.
Lloyd, T. L., of the Birmingham School.
Longhurst, A. K., of University College.
Macdougall, Alexander, of Edinburgh.
Martin, H. C., of Edinburgh.
Mayne, Thomas, of University College.
Morton, W. W., of Edinburgh.
Newstead, James, of St. Bartholomew's Hospital.
Nicholl, D. C., of Edinburgh.
Nicholson, T. D., of Edinburgh.
Palmer, A. M., of St. Thomas's Hospital.
Piggott, E. A., of St. George's Hospital.
Plowright, C. B., of the Glasgow School.
Reston, Henry, of the Manchester School.
Rimell, J. G., of University College.
Thomas, G. D. P., of St. Mary's Hospital.
Williams, Richard, of the Glasgow School.
Williams, W. J., of the Glasgow School.

Six candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their anatomical and physiological studies for three months.

The following passed on the 28th inst.:—

Batchelor, E. E. A., of St. Bartholomew's Hospital.
Birt, A. W., of St. Bartholomew's Hospital.
Birt, Ernest, of the Birmingham School.
Bower, Reginald, of the Birmingham School.
Bracey, H. R., of the Birmingham School.
Carruthers, Thomas, of the Manchester School.
Frost, R. R., of Guy's Hospital.
Gordon, J. G., of Edinburgh.
Horton, Walter, of the Birmingham School.
Hughes, H. R. G., of Edinburgh.
Jones, L. H., of the Birmingham School.
Lewis, Lewis, of University College.
Maberley, F. H., of the Birmingham School.
Morris, Henry, of St. Mary's Hospital.
Newberry, W. J., of St. Bartholomew's Hospital.
Owen, O. E., of the Glasgow School.
Peacan, Luke, of the Dublin School.
Pellereau, G. E., of University College.
Pinder, G. H., of the Manchester School.
Smith, G. A. C. V., of St. Mary's Hospital.
Steele, Russell, of University College.
Underhill, C. E., of Edinburgh.
Wardale, J. A. W., of University College.
Watson, W. G., of University College.
Webster, H. W., of the Manchester School.
Wesley, W. K., of St. Bartholomew's Hospital.
Whitehead, Alfred, of the Birmingham School.
Williams, R. W., of the Glasgow School.

Five candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their anatomical and physiological studies for three months.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, April 22, 1869:—

Cox, William Alfred, Mitcham, Surrey.
Mitchell, Joseph, Leicester.

Prigg, Frederick, Bury St. Edmund's.
Prosser, Richard Albert Shipman, Birmingham.
Shaw, Ollive Sims, Stockport.

The following gentlemen also, on the same day, passed their First Examination:—

Blyth, Alexander Wynter, King's College.
Fitzgerald, Conrad, Bristol Infirmary.
Wadsworth, Godfrey Bingley, University College.

At the preliminary examination in Arts held at the Hall of the Society on April 23 and 24, forty candidates presented themselves, of whom eighteen were rejected, and the following twenty-two passed, and received certificates of proficieney in general education.

In the First Class, in the order of merit:—

William Ambrose Greet.
Charles Hartley.
Percy Gordon Young.
Reginald K. Casley.
John Walton Hamp.
Walter Allsworth.
Joseph Bourne Waterhouse.
Joseph Balm Pike.

In the Second Class, in alphabetical order:—

Appleton, Frances A.
Bennett, William Henry.
Bevan, John Paul.
Coombs, Graham Lowe.
Davies, John.
Eskell, Herbert.
Gardner, Ernest Lloyd.
Gathergood, Benjamin W.
Gonsalves, Mansel Martinho.
Hyde, James John.
Judson, Thomas R.
Medcalf, Ernest Sexton.
Smales, Charles Edward.
Ward, Charles.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Sansom, A. Ernest, M.D., M.R.C.P.—Physician to the North-Eastern Hospital for Children.

NAVAL AND MILITARY APPOINTMENTS.

Admiralty.—The following appointments have been made:—William Anderson, Surgeon to the *Cadmus;* Robert Turner, Acting Assistant-Surgeon to the *Cadmus;* Archibald G. Robertson, Assistant-Surgeon to the *Orontes.*

5th Foot.—Staff Surgeon-Major Grahame Auchinleck, M.D., to be Surgeon, *vice* Thomas Clark Brady, appointed to the Staff.

Medical Department.—Staff Surgeon Frederick Douglas, M.D., having completed twenty years' full-pay service, to be Staff Surgeon-Major, under the provisions of the Royal Warrant of April 1, 1867—Surgeon Thomas Clark Brady, from the 5th Foot, to be Staff Surgeon, *vice* Staff Surgeon-Major Grahame Auchinleck, M.D., appointed to the 5th Foot.

BIRTHS.

Fry.—On March 20, at Trevandrum, Travancore, Madras, the wife of Walter Fry, Residency Surgeon, of a daughter.

Jessop.—On April 20, at 32, Park-square, Leeds, the wife of T. R. Jessop, F.R.C.S., of a daughter.

Madge.—On April 25, at 32, Fitzroy-square, the wife of Henry M. Madge, M.D., of a son.

Paget.—On April 17, the wife of Dr. Paget, Cambridge, of a son.

Pringle.—On April 26, at 27, Rutland-square, Edinburgh, the wife of Dr. Pringle, Depnty Inspector-General of Hospitals, late Madras Army, of a son.

Sumner.—On April 22, at 35, Wellington-road, St. John's-wood, the wife of W. A. Sumner, Surgeon, of a daughter.

MARRIAGES.

Barham—Elwyn.—On April 27, at Waresley, Hunts, Francis Foster Barham, late Royal Artillery, eldest son of Dr. Barham, of Truro, to Sibella Ryan, younger daughter of Colonel Elwyn, Royal Artillery.

Cockcroft—Brown.—On April 27, at St. James's, Paddington, Thomas H. Cockcroft, M.D., of Keighley, Yorkshire, to Emily, youngest daughter of the late Edward Brown, Esq., Reading.

Flint—Sullivan.—On April 22, at St. John's Church, Redhill, Hants, William White, second son of Frederick Flint, Esq., of Roper House, Canterbury, to Marion, daughter of the late J. Sullivan, M.D., of Charleville House, Co. Cork, and stepdaughter of the Rev. J. Maddy, Rector of Penhow, Monmouthshire.

Hensham—Street.—On April 17, at Sandgate Church, William Hensham, Assistant-Surgeon H.M.'s 14th Hussars, eldest son of William Hensham, Esq., of Kimbolton, Huntingdonshire, to Sarah Ellen, daughter of the late Thomas Street, Esq., of Ealing.

Isaacson—Ralph.—On February 6, in Melbourne, Stuteville John, third son of the late Rev. S. Isaacson, rector of Bradfield St. Clare, Suffolk, to Laura, eldest daughter of T. Shearman Ralph, M.R.C.S. Eng., Kew.

Johnson—Gana.—On February 14, Alfred Schomberg, eldest son of the late Dr. Alfred Schomberg Johnson, of Valparaiso, Chili, South America, to Josephine, third daughter of Augustin Gana, Esq., of Santiago, Chili, S.A. No cards.

Jordison—Cleghorn.—On April 13, at St. Saviour's, Paddington, Christopher, third son of R. B. Jordison, Surgeon, of South Ockendon, Essex, to Kate, only child of the late John Joseph Cleghorn, Esq. No cards.

Richmond—Rowlandson.—On April 20, at Torquay, John Alexander Richmond, Captain in H.M.'s Madras Staff Corps, eldest son of the late John Richmond, Superintending Surgeon Madras Medical Establishment, to Julia Louisa, daughter of the late Rev. E. Rowlandson, M.A.

Stockwell—Mogg.—On April 27, at St. Benedict's, Glastonbury, Frederick Stockwell, M.D., to Sarah Hodges, eldest daughter of John Rees Mogg, Esq., of High Littleton House, Somerset.

Wright—Powell.—On April 20, at Thames Ditton, Surrey, Alfred Wright, Surgeon, Romford, Essex, to Elizabeth Sarah (Beta), third daughter of the Rev. Joseph Powell, late Rector of Normanton-on-Soar, Notts.

DEATHS.

Baillie, Henrietta Charlotte, wife of Dr. N. B. Baillie, Civil Surgeon, and youngest daughter of J. B. Plumb, Esq., of Pembridge-crescent, Bayswater, at Bhaugulpore, Bengal Presidency, on March 29.

Barlow, Louisa, eldest daughter of the late William Barlow, Surgeon, Writtle, at Camden-town, on April 23, aged 78.

Connel, Vera Bridget, wife of Dr. Connel, and daughter of the late Lieut.-Gen. the Hon. Vere Poulett, at Torquay, on April 22, aged 75.

Donnet, Leopold William Henry, youngest son of Dr. Donnet, Deputy-Inspector-General, R.N., at the Royal Naval Hospital, Port Royal, Jamaica, on April 1, aged four years and three months.

Fast, George M., M.R.C.S., youngest son of the late Major-General J. W. Fast, at Victoria-road, Surbiton, on April 21, aged 42.

Munro, D., L.R.C.P., M.R.C.S.E., at Croydon, Surrey, on April 23.

Wilson, Jessey Janet Sredden, wife of James Arthur Wilson, M.D., at 28, Dover-street, W., on April 22.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Bristol Royal Infirmary.—Dispenser; must understand purchasing drugs and compounding and dispensing medicines. Applications and testimonials to the Committee on or before May 4.

Castlebar Union.—Medical Officer for the Castlebar Dispensary District. Candidates must be legally qualified. Applications and testimonials to J. C. Larminie, Esq., Spencer-park, Castlebar, on or before the 15th inst.

Carlow Union.—Medical Officer for the Borris Dispensary District. Candidates must possess the qualifications required by the Poor-law Commissioners. Applications and testimonials to the Hon. E. S. Stopford, Borris Lodge, Borris, Kilkenny, on or before the 5th inst.

Dingle Union.—Apothecary for the Workhouse and Dingle Dispensary. Applications and testimonials to P. Kennedy, Clerk to the Union, on or before the 6th inst.

Eastern Dispensary, Bath.—Resident Medical Officer; must be duly registered, and have both Medical and Surgical qualifications. Applications and testimonials to Mr. Edmund Smith, Hon. Sec., on or before May 10. Approved candidates will receive notice of the day of election.

Farringdon General Dispensary and Lying-in Charity, 17, Bartlett's-buildings, Holborn.—Honorary Surgeon; must be F. or M.R.C.S.E., not practising Midwifery or Pharmacy. Applications and testimonials to Mr. Green, St. Michael's-house, St. Michael's-alley, Cornhill, on or before the 26th inst. Election on May 4.

Glenorchy.—Medical Officer wanted by the Parochial Board of Glenorchy and Inishail, Argyleshire, N.B. Applications and testimonials to the Rev. D. McLean, Chairman of the Board, F. C. Manse, Glenorchy, Dalmally, on or before May 1.

Hospital for Consumption and Diseases of the Chest.—Resident Clinical Assistant. Candidates to send their applications and testimonials to the Hospital on or before the 10th inst., and to attend the Medical Committee the following day at 4 o'clock, with certificates of their Medical qualifications.

Lincoln County Hospital.—Physician; must have a diploma from one of the Universities of Great Britain or Ireland, and be F. or M.R.C.P. Lond., F.R.C.P. Edin., or F.K.Q.C.P. Applications and testimonials to Mr. John William Danby, the Secretary, Lincoln, on or before May 17. Election on May 20.

London Fever Hospital.—Physician; must be F. or M.R.C.P.L. Applications and testimonials to the Secretary, London Fever Hospital, Liverpool-road, N., on or before May 8.

New Ross Union.—Medical Officer for the St. Mullins Dispensary District. Candidates must be legally qualified. Applications and testimonials to M. F. Sweetman, Esq., Cornellan, Borris, Co. Carlow, on or before the 6th inst.

North Riding Infirmary, Middlesborough-on-Tees.—House-Surgeon; must be unmarried, and be F. or M.R.C.S., and possess a Medical qualification recognised by the Medical Council. Applications and testimonials to the Secretary on or before June 1. Election on July 1.

Notting-hill and Shepherd's Bush Dispensary.—Resident Medical Officer; must be registered. Applications and testimonials to the Hon. Secretary, at the Institution, Portland-road, W.

Paddington.—Resident Dispenser. Applications and testimonials to Henry Ausling, Clerk, Board-room, Paddington Workhouse, Harrow-road, W. Personal attendance at the Board-room will be required on the 5th inst., at 10 o'clock a.m.

Retford General Dispensary.—House-Surgeon and Apothecary; must have both Medical and Surgical qualifications. Applications and testimonials to the Dispensary Committee on or before May 8. The duties will commence on July 1.

St. John's-wood and Portland Town Provident Dispensary.—Surgeon. Applications and testimonials to W. W. Watts, Esq., at the Dispensary, 1, Henstridge-villas, Ordnance-road, N.W.

Stafford County Lunatic Asylum.—Assistant Medical Officer; must have two legal qualifications, and be 25 years of age, and unmarried. Applications and testimonials to Dr. Bower, at the Asylum.

West London Hospital, Hammersmith.—Assistant House-Surgeon; must be legally qualified. Applications and testimonials to the Secretary on or before May 15.

Westminster Hospital.—Assistant-Surgeon; must be F.R.C.S.E., not practising Pharmacy or Midwifery. Candidates to attend the House Committee, with certificate of age and testimonials, on the 4th inst. at 1 o'clock. Election on the 14th inst.

POOR-LAW MEDICAL SERVICE.

RESIGNATION.

*** The area of the district is stated in acres. The population is computed according to the last census.

Camelford Union.—Mr. Edward West has resigned the Camelford District; area 29,560; population 5335; salary £47 5s. per annum.

APPOINTMENTS.

Crediton Union.—Charles Broom, M.R.C.S.E., L.S.A., to the Cheriton Fitzpaine District.

Holbeach Union.—James T. Crowden, M.C. Aber., M.B. Aber., to the Gedney Hill District.

Huddersfield Union.—George Davidson, M.D. Glas., M.C., to the Honley District.

Lancaster Union.—John Harker, M.R.C.S.E., L.S.A., L.R.C.P. Edin., M.D. Heid., to the Morecambe District. William Jackson, M.R.C.S., L.S.A., to the Bolton District.

Llanfyllin Union.—E. O. Williams, M.D., M.R.C.S., L.S.A., to the Meifod District Workhouse.

Midhurst Union.—Alexander Yule, M.D., C.M. Aberd. Univ., to the Farnhurst District.

Petersfield Union.—Thomas Moore, M.R.C.S.E., L.R.C.P., L.S.A., to the Second District and the Workhouse.

Salford Union.—James Cran, M.B. Edin., M.R.C.S. Edin., to the Salford District.

Sheffield Union.—George Kemp, M.R.C.S.E., L.S.A., to the Workhouse.

ROBERT CRAVEN, Esq., F.R.C.S., of Belgrave House, Southport, has been made a Justice of the Peace for the County Palatine of Lancaster.

HOSPITAL AT LEEK.—Mrs. Alsop has intimated her intention to build a Cottage Hospital at Leek, Staffordshire, as a lasting memorial of her late husband, Mr. James Alsop.

THE Leeds New Infirmary is now so nearly completed and furnished that it is expected to be ready for the inspection of the public during Whitsun week, and to be opened on June 1.

DR. JOHN ROSE CORMACK has removed from Orleans to Paris in consequence of the death of Sir Joseph Francis Olliffe, Physician to the British Embassy.

THE Secretary of State for India has appointed Arch. H. Hilson, Surgeon Bengal Army, to be a member of the Indian Medical Board in succession to Surgeon-Major Maitland.

DR. BROADBENT, the Senior Assistant-Physician to the London Fever Hospital, is a candidate for the office of Physician, vacant by Dr. Buchanan's resignation. We apprehend that Dr. Broadbent's election is tolerably certain.

BRISTOL ROYAL INFIRMARY.—A mechanical telegraph is now being fixed at this institution for the purpose of communicating orders to all the wards, at a cost of about £250, which will be defrayed by an anonymous friend through Miss Edwards.

CEREBRO-SPINAL FEVER.—A second fatal case of this disease is reported as having occurred during the past week among the Royal Artillery at Hilsea.

A HEALTHY SCHOOL.—At the annual meeting of the Manchester Warehousemen and Clerks' Schools it was stated that no case of serious illness had occurred during the past year, and all the children are now in good health.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the College held on Monday, the 26th ult., John Morgan, Esq., M.A., was elected a Member of Council, in the room of the late Dr. Maurice Collis.

OUR readers will have been sorry to observe in the *Times*, of Wednesday, that Mr. T. Stone, of the College of Surgeons, has been a victim of one of those street outrages now so common in London. Mr. Stone's injuries, we are glad to say, although sufficiently serious to confine him to his room, are not dangerous. Mr. Stone was attacked in Kennington-park-road on Saturday evening, by a man and woman, and knocked down. As usual, no policeman was at hand.

AN adjourned meeting of the Metropolitan Association of Medical Officers of Health will be held this day (Saturday), at half-past seven o'clock in the evening, at the Scottish Corporation Hall, Crane-court, Fleet-street, when the discussion will be resumed on Dr. Letheby's paper "On the Methods of estimating Nitrogenous Matters in Potable Waters, and on the Value of the Expression 'Previous Sewage Contamination' as used by the Registrar-General in his Monthly Reports of the Metropolitan Waters." The chief points for consideration in the paper are the following:—1st. Whether rivers fouled by sewage and manufacturing refuse have or have not a self-purifying power. 2nd. Whether the nitrogenous compounds of river and well waters must necessarily have a previous sewage or manure origin. 3rd. Whether, in describing the analytical facts of water examinations, it is proper to use such a speculative phrase as "previous sewage contamination," and to express the result in tons.

PATHOLOGICAL SOCIETY OF DUBLIN.—The last meeting of the thirty-first annual session of this Society was held in the anatomical theatre of Trinity College, on Saturday, the 24th ult., Dr. McClintock, President, in the chair. Having alluded to the losses the Society had sustained during the session in the deaths of Drs. O'Ferrall and Maurice H. Collis, the President announced that the Society's gold medal for the best essay on "Diseases of the Tongue" had been awarded to that sent in under the motto "Excelsior." On opening the corresponding sealed envelope, it was ascertained that the writer was Mr. Francis C. Crosslé, B.A., of Trinity College, Dublin, who was then called upon and presented with the medal.

POOR-LAW MEDICAL SERVICE. — *Bethnal-green.*— The guardians again refused to consider the application of Dr. Welch for an increase of salary, although Dr. Welch had appealed to the Poor-law Board. *Islington.*—Mr. Turner, of St. Peter's district, is to receive an increase of salary of £25 per annum, his district having been increased. *Holborn Union.*—Dr. Gibbon was granted £40, instead of £75 as before fixed, for his service as vaccination officer for the year. *Mile-end Old Town.*—There were fifteen candidates for the Medical officership, vacant by the death of Dr. Lyell. Mr. Cæsar was elected. The salary is £200 a year; private practice prohibited. *St. Luke's.*—Mr. Pottle was elected Medical officer for twelve months, *vice* Dr. Bruce, resigned. *Islington.* — The Board affirmed their resolution that four vaccinators should be appointed instead of one, notwithstanding the opinion of Dr. Seaton and the Privy Council in favour of one vaccinator for the whole parish.

HEALTH OF NEWCASTLE AND GATESHEAD.—In Newcastle, the weekly numbers (of new cases of disease and injury) have varied between 437 and 362. The average of the four weeks is 399, against 414, the average of January, and 310, the average of the corresponding four weeks of 1868. In Gateshead, the weekly numbers have varied between 151 and 135. The average of the four weeks is 141, against 112, the average of January, and 93, the average of the corresponding four weeks of 1868. The seizures from general diseases, dependent upon a morbid condition of the blood, in accordance with the new nomenclature of diseases, in Newcastle, have continued to decline, and in Gateshead have remained stationary. In Newcastle, the weekly numbers have varied between 55 and 39. The average of the four weeks is 45, against 65, the average of January, and 62, the average of the corresponding four weeks of 1868. In Gateshead, the numbers have varied between 29 and 18. The average of the four weeks is 24, against 18, the average of January, and 16, the average of the corresponding four weeks of 1868.—*Second Report for* 1869, *by G. H. Philipson, M.A., M.D.*

ROYAL SOCIETY.—The following is the list of candidates who have been selected by the Council for election into the Royal Society this year:—Sir Samuel White Baker, M.A., eminently distinguished as a geographer and explorer of distant lands; John J. Bigsby, M.D., distinguished as a geologist and palæontologist; Charles Chambers, Esq., director of the Colaba Observatory, Bombay; William Esson, M.A., distinguished for his acquaintance with mathematics, physics, and chemistry; George Carey Foster, B.A., Professor of Physics in University College, London; William W. Gull, M.D., distinguished as a Physician and as a teacher of the Medical sciences; J. Norman Lockyer, Esq., of the Civil Service, author and editor of works on astronomy and a large contributor to scientific literature; J. Robinson M'Clean, C.E., late President of the Institution of Civil Engineers; St. George Mivart, Esq., Lecturer on Anatomy at St. Mary's Hospital; John Russell Reynolds, M.D., Professor of Clinical Medicine in University College, London; Vice-Admiral Sir Robert S. Robinson, K.C.B., Controller of the Navy; Major James F. Tennant, R.E., late astronomer at Madras; Wyville Thomson, LL.D., Professor of Zoology, Botany, and Geology in Queen's College, Belfast; Col. H. E. Landor Thuillier, R.A., eminent as an Indian geographer; and Edward Walker, M.A., distinguished for his mathematical and literary attainments.

DR. AUSTIN FLINT records, in the April number of the *New York Medical Journal*, a curious case. A patient, aged 49, of dissipated habits, was admitted into Hospital complaining of pain in the right lower limb. A hard immovable tumour was noticed on the back of the neck. This was attributed to a blow received some time before. He had no pain at this time, but about a fortnight after he complained of uneasiness in this part, and on the same evening all his limbs were suddenly paralysed. This paralysis disappeared, but again returned

suddenly. After this there was no pain, and but little sensibility. He was seized on the evening of the 27th, and died on the morning of the 30th. He was quite sensible up to the last. After death it was found that the first cervical vertebra was dislocated forwards, the odontoid process being broken off and carried forward by the atlas. The ligaments between the atlas and axis were much stretched. The left articulating process of the second cervical vertebra was also broken off, and the left posterior half of the body of the vertebra was absent, only one small fragment of bone remaining. It is something extraordinary that the man should have lived some months after an injury such as that described above without showing any indications of its results. How it was inflicted the patient would not reveal. In pursuing the post-mortem examination another peculiarity was discovered—the stomach was found to have undergone post-mortem softening, as had the diaphragm, so that the contents of the viscus were found in the pleura. Yet the man had eaten nothing of importance for two days, and the temperature to which the body was exposed was that of the end of October.

THE NEW SANITARY COMMISSION.—The following are the persons appointed to serve on the Sanitary Commission, issued April 20:—The Right Hon. Charles Bowyer Adderley, the Right Hon. the Earl of Romney, the Right Hon. the Earl of Ducie, the Right Hon. Robert Montagu (commonly called Lord Robert Montagu), the Right Hon. Russell Gurney (Recorder of London), the Right Hon. Stephen Cave, Sir Thomas Watson, Bart., M.D.; Charles Brisbane Ewart, Esq., Lieut.-Col. R.E.; John Robinson McClean, Esq., C.E.; Samuel Whitbread, Esq.; John Tomlinson Hibbert, Esq.; Evan Matthew Richards, Esq.; George Clive, Esq.; Francis Sharp Powell, Esq.; Benjamin Shaw, Esq.; James Paget, Esq., F.R.C.S.; Henry Wentworth Acland, Esq., M.D.; Robert Christison, Esq., M.D.; William Stokes, Esq., M.D.; John Lambert, Esq.; and Francis Thomas Bircham, Esq. The former Commission is revoked, and the present is empowered to inquire into and report on the operation of the sanitary laws in England and Wales, with the exception of the City of London and the liberties thereof, and all places under the jurisdiction of the Metropolitan Board of Works appointed under the Metropolis Management Act, 1855, so far as these laws apply to sewerage, drainage, water supply, removal of refuse, control of buildings, prevention of overcrowding, and other means of promoting the public health. Also to inquire into and report upon the operation of the laws for preventing the introduction and spreading of contagious and infectious diseases, and of epidemics affecting the health of man. Also to inquire into and report upon the administration of the aforesaid sanitary laws, including in such inquiry and report the constitution of the central and local authorities charged with the administration of such laws, and the formation of areas proper to be controlled by local authorities. Also to inquire into and report upon the operation of that part of the registration system which relates to certificates of causes of death. Also to suggest improvements in all or any of the matters aforesaid, and means proper for carrying into effect the suggested improvements.

COMPLIMENTARY DINNER TO DR. ODLING.—On Tuesday, April 20, a number of gentlemen who have been associated with Dr. Odling as past and present members of the Council of the Chemical Society in the thirteen years during which he has filled the office of Secretary, entertained him at a complimentary banquet, at the Albion Tavern, Aldersgate-street. The chair was occupied by Dr. Warren De La Rue, F.R.S., V.P.C.S, who was supported right and left by Dr. Odling, F.R.S., Dr. Tyndall, F.R.S., Professor Williamson, F.R.S. (Pres. C.S.), Sir Benjamin C. Brodie, Bart., F.R.S., etc. The following is a list of those who took part in the entertainment:—Messrs. F. A. Abel, F.R.S.; E. Atkinson; J. Anderson, M.D.; J. Lowthian Bell; G. B. Buckton, F.R.S.; F. C. Calvert, F.R.S.; D. Campbell; A. H. Church, M.A.; W. Crookes, F.R.S.; H. Debus, Ph.D., F.R.S.; F. Field, F.R.S.; D. Forbes, F.R.S.; G. C. Foster; J. H. Gilbert, Ph.D., F.R.S.; J. H. Gladstone, Ph.D., F.R.S.; D. Hanbury, F.R.S.; A. V. Harcourt, F.R.S.; C. Heisch; H. Letheby, M.A., M.B.; G. D. Longstaff, M.D.; N. S. Maskelyne, M.A.; A. Matthiessen, Ph.D., F.R.S.; G. H. Makins; E. J. Mills; Hugo Müller, Ph.D., F.R.S.; W. Marcet, M.D., F.R.S.; E. C. Nicholson; H. M. Noad., M.D., F.R.S.; W. H. Perkin, F.R.S.; D. S. Price, Ph.D.; A. P. Price, Ph.D.; T. Redwood, Ph.D.; W. J. Russell, Ph.D.; J. Denham Smith; A. Smee, F.R.S.; J. A. Voelker, Ph.D.; H. Watts, B.A., F.R.S.; J. Williams; J. T. Way; and J. A. Wanklyn. Letters expressing regret at being unable to attend were read from E. Frankland, Ph.D. F.R.S.; T. Graham, D.C.L., F.R.S.; A. W. Hofmann, Ph.D., LL.D., F.R.S.; H. Bence Jones, M.D., F.R.S.; J. B. Lawes, F.R.S.; W. A. Miller, M.D., LL.D., V.P.R.S.; Lyon Playfair, C.B., M.P., Ph.D., F.R.S.; H. E. Roscoe, B.A., Ph.D., F.R.S.; R. Angus Smith, Ph.D., F.R.S.; E. Schunck, Ph.D., F.R.S.; J. Stenhouse, LL.D., F.R.S.; and Colonel P. Yorke, F.R.S. After the usual loyal toasts, the chairman proposed, in eloquent and appropriate terms, the toast of the evening, "The Health of Dr. Odling;" and a handsome silver tankard, appropriately inscribed, filled with an "ethylic compound of complex composition and high saturating power," was passed round as a loving cup to all present, and then presented to Dr. Odling. The chairman concluded his able speech amid loud and continued applause; and the toast was drunk upstanding, amidst enthusiastic cheers. Dr. Odling replied in feeling and impressive words. In the intervals between the speeches, Professor Abel performed a selection of operatic music on the piano, and songs, comic and otherwise, were sung by Mr. F. Field, and also by Col. Boxer, Captain Goodenough, Col. De La Rue, and Mr. J. C. Brough, who were present as guests. Great credit is due to Messrs. Abel, Müller, and Nicholson, who formed the executive committee, for the admirable manner in which everything was organised.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION. — A quarterly meeting of this Association was held on Wednesday evening last, at the Freemasons' Tavern, Great Queen-street, Dr. Rogers, President of the Association, in the chair. The President delivered an address, in which he complained that the part of the Metropolitan Poor Act, 1867, which related to asylums had been carried out most extravagantly, while that part which related to Dispensaries had been allowed to remain a dead letter until now that a reaction was taking place. He complained that the return as furnished by Dr. Lush did not give the actual remuneration of Medical officers, but a separate return had been promised for the future. It could not be asserted that the vaccination fees were an increase of Medical officers' salaries generally, because in many places these fees passed into other hands. Dr. Rogers then maintained at considerable length, and quoted statistics to prove, that where insufficient Medical relief was supplied the rates constantly increased, and showed how in Ireland a more liberal system had produced most beneficial results. The President applauded the practice at Guildford of recording in each case the cause that led to pauperism, and advocated its general adoption. The President moved the adoption of the report of the Council, in which they detailed their labours during the past three months. Mr. Vinall, of Hackney, seconded the motion, which was carried unanimously. Dr. Dixon, of Bermondsey, disputed the accuracy of the return made on the motion of Mr. Torrens, and showed how in some cases the vaccination fees were included in the salaries, but the number of vaccination cases omitted, making it appear that the Medical officers received much more per case than they really did. Dr. Dixon showed what disparity prevailed by adducing instances, and notably that of Whitechapel, where the Medical officer was allowed 8¾d. per case for attendance and drugs, while in the neighbouring parish of Poplar — where the guardians supply the drugs—the cost of drugs alone is found to be 11¾d. per case. Dr. Dudfield showed how well the Dispensary system and the union of the office of Medical Officer and Vaccinator in one person had acted in Ireland. Mr. Goddard attributed the stamping out of small-pox in Ireland in great measure to the fact of the vaccinator being also the Registrar of Births and Deaths. Dr. King strongly advocated the introduction of the Dispensary system. Dr. Jones (Sydenham) did not think it would act so well in sparsely populated districts. Dr. Pinder moved the first resolution, urging the desirability of enforcing the clauses of the Metropolitan Poor Act, 1867, relating to Dispensaries. Mr. Vinall seconded the resolution, which was put and carried. Mr. Eug. Goddard moved the second resolution, to the effect that the remuneration of Medical officers is mostly inadequate, and that permanence of appointment is necessary to their efficiency. Dr. Welch seconded the motion, which was also carried. Certain by-laws were altered as recommended by the council, and the meeting separated with a vote of thanks to the president, the officers, and the council.

LIPOMA OF THE PREPUCE. — Dr. Schrwald gave an account, at the Dorpat Medical Society, of an unusual example of lipoma which he had observed occupying the prepuce in a recruit 20 years of age. It was stated to have existed during

eight years, gradually increasing to its present size, which is larger than a walnut. It is accompanied by paraphymosis, which, however, the patient states, existed prior to the occurrence of the tumour. A lipoma in the fatless submucous tissue of the prepuce is a remarkable occurrence.—*St. Petersburg Med. Zeit.*, 1868, No. 8.

PLASTER OF PARIS IN HOSPITAL GANGRENE.—In a paper read before the Dorpat Medical Society, Dr. Kleeberg, of Odessa, stated that he has found powdered gypsum a most valuable application in hospital gangrene. Thickly sprinkled over the diseased surface, it was washed off with water once or, at most, twice a day. It gave great relief to pain, and abated the swelling, while the wounds soon took on healthy granulation, healing in from eleven to sixteen days.—*St. Petersburg Med. Zeit.*, 1868, No. 8.

I BELIEVE that malarious disease arises from the use of impure water. I do not of course deny that the poison may be conveyed into the system through the medium of the atmosphere. But as malarious affections prevail on grounds which do not present the characteristics supposed to favour the extrication of the poison, and as all wells and tanks, in such districts, do present such characteristics, the conclusion that water is the medium of conveyance of the poison is not inadmissible. Moreover, we have abundant proof that paroxysmal fevers have followed the use of impure water. It is worthy of remark that ancient authors, as Linnæus, Hippocrates, and Rhazes, asserted fevers and enlarged spleen arose from impure drinking water; and Dr. Piddock states, that he has succeeded in curing intermittents simply from interdicting the use of any but distilled water.—*Marwar, the Land of Death, by W. J. Moore, of the Political Agency, Joudpoor.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Burton, Walsall.—Will Mr. Burton kindly give us some information as to the intended use of his instrument?

A. B. can recover. The production of the "Register" will be regarded as sufficient evidence of qualification.

E. W. J.—We believe the manufacture of Hamburg sherry to be continued, but are not aware whether any of it is made in London.

Studens will not be called upon to produce his indenture of apprenticeship, but the production of a certificate that he has served "five years in the manner of an apprentice" will be deemed sufficient.

A correspondent points out a defect in the New Adulteration Bill. It provides a penalty in the case of any person who shall mix any injurious or poisonous ingredient or material with any article of food or drink, but in reality provides no penalty for adulteration with things that are not poisons.

A Poor-law Surgeon.—The Medical officer of a workhouse is required by statute to report in writing to the guardians any defect in the diet, drainage, ventilation, warmth, or other arrangements of the workhouse, or any excess in the number of any class of inmates, which he may deem to be detrimental to the health of the inmates.

Pro-vaccination.—The person who paid the fine for a chemist who had refused to have his child vaccinated, we are glad to learn, was not a Medical Practitioner, but "a herbalist."

The Peerage.—It is well known that one member of our Profession at least was offered a peerage and declined it. George IV., knowing that Sir Henry Halford was wealthy and a large landholder, offered to make him a lord. Halford's refusal was characteristic of the man. "I must decline the honour, your Majesty, for I should have to abandon my profession. If I became a peer, it would be impossible for me to take the guinea."

Rotherham.—We have seen the letter signed "A Doctor of Medicine" in the *Sheffield Telegraph* on the proposed new Hospital and Dispensary for Rotherham. It is a critical examination and report on the various plans which have been sent in by architects of the intended building. The remarks of the writer show him to be a man of experience and judgment, and it is to be hoped the Committee will take advantage of the suggestions he makes.

Automaton.—It is a matter of arrangement beforehand, and depends upon the position of the Surgeon and the position of the patient. If the fee for the operation itself be a small one—say from ten to twenty guineas—the Surgeon should reasonably be paid an ordinary fee for each visit. On the other hand, if the fee be a very handsome one—a plumper—say from fifty to one hundred guineas—that might include the whole case, both the operation and the previous and subsequent attendance. But, after all, these things are matters of arrangement, and should be clearly understood beforehand.

Undergraduate.—The having passed the first examination for the M.B. degree at the University of London, clearly confers no right to use any Medical title. If any mistake has occurred through misunderstanding in this matter, it had better be dropped.

Small-pox and Vaccination.—Whoever believes that small-pox is a mild disease, and that it is justifiable to neglect vaccination, may read the following account from the pen of an Indian Surgeon, and then, if he please, may join the "Brahminical party" in decrying it:—

"Small-pox, I believe, numbers more victims in Marwar than any other disease. The deaths from this cause I know to be very numerous, but proportionally small when compared with the vast number who live as evidences of the serious sequelæ of this malady. Roughly speaking, from calculations based on counting when passing through the streets of Joudpoor and Palee, 10 per cent. of the population appear to have either totally lost the sight of one or both eyes, or to have received greater or less permanent injury to the organs. Of these affections the great majority may be traced to small-pox. From similar observations it would appear 80 per cent. are pitted by the disease. Contracted limbs, particularly of the knee, produced by abscess after small-pox, are also very common. Nearly every village has its goddess of small-pox in the immediate locality. The people do not pray to escape the affection, unless in seasons when it occurs with more than ordinary violence. They do, however, petition for a mild visitation. But even the loss of an eye does not appear to be viewed as a very serious calamity. 'Is there not the other eye sufficient for all purposes?' remarked a philosopher. 'If it were the leg or hand it would be different, but an eye is immaterial!' The pitting produced by small-pox is by some considered rather an addition to beauty than otherwise; as black patches on the face were among English belles of former days! Moreover, others imagine an attack of small-pox, not proving fatal, demonstrates the favour of the goddess on the fortunate individual. As will be supposed, among people entertaining such ideas the establishment of vaccination is no easy matter. As a rule, the Brahmins oppose vaccination by every artifice and means in their power. The motives of the European are misrepresented, dreadful maladies are prophesied as the result, and the vengeance of 'Mata' is held *in terrorem* over all who seek other assistance. Reasoning either with Brahmins or people is entirely without avail. Even if they admit the force of every argument adduced, they fall back on custom. It is not their 'dustoor' to be vaccinated, and this generally decides the matter. I have myself gone from house to house in the city of Joudpoor, meeting with the most indifferent success. First, the people cannot or will not understand the motives which induce a European to itinerate in such a manner. They see the latter does not benefit for his labour pecuniarily, and they immediately conclude he entertains some hidden scheme of interference in some mysterious manner with their religion. The idea that any European Sahib would voluntarily walk about the streets for the simple purpose of benefiting the people is utterly scouted. The assumption that he has some design on their religion or *caste* becomes a deeply rooted conviction."

Poor-law Prisons for Imbeciles.—The *Examiner and London Review* for April 3 contains an article with the above heading. The writer advocates the system of treating lunatics as practised at Gheel.

"When a patient is sent to Gheel, he is received into the central institution—the Asylum—where he remains only long enough for the authorities to determine the nature of his case. This is a *sine qua non* of the treatment to be administered. Its importance cannot be overrated. Any one who knows anything of diseases of the brain cannot fail to be deeply impressed with the insidious approach and insinuating progress of such infirmities, and, therefore, how necessary it is to be opportune in the treatment that is appropriate. Too frequently the patient with us is only commended to Medical care when 'stark mad;' whereas the first temporary aberrations, or indications of the impending peril of such, should have been promptly met by the skill of the experienced and learned in such matters. Such diseases are so often the product of physical malady that precautions are peculiarly applicable. When the mind is affected by over grief, or joy, enthusiasm, fanaticism, or any other moral or mental action, if the Physician be a good mental philosopher, an observer of human nature, possessing a clear judgment, firm will, and sympathising heart, restoration is generally practicable. All these facts show the importance and superiority of the system pursued with so much success on the Continent. There a minute consideration of the peculiar conditions of each case results in a complete classification of the afflicted, who, dispersed among their humane and rational fellow-creatures, and under individual supervision and control, lose much of that animal cunning and ferocity which is the worst feature of madness, and which our system of aggregation and confinement can only tend to foster and preserve."

Yet there is a good deal to be said on the other side.

USE OF THE WORD "INJECTION."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your number of March 20 you have a good "caution" on the use of the word "injection." I would simply remark it did not occur at all in this case. The direction was entirely in English, thus:—"Inject carbolic acid (1 to 12) with a glass syringe." My direction to House-Surgeon was—"Injeet carbolic acid oil (1 to 12) with a glass syringe; one teaspoonful twice a day. Mind and do it yourself." I am, &c.

College-gates, Worcester, April 14. HERBERT W. BUDD.

THE THEORY OF DEVELOPMENT.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Your last issue contains an interesting note on the principal objection urged against the views of Mr. Darwin. Dr. de Hartsen urges an explanation which I do not think will be accepted by Mr. Darwin, clashing, as it seems to me to do, with his hypothesis of pangenesis. It seems to me that Dr. de Hartsen's hypothesis is scarcely yet necessary, for recent discoveries give us great ground for believing that the "missing links" will yet be supplied. I allude more especially to Dr. Falconer's discoveries in the Sewalik hills, and to the discovery of the archæopteryx. Again, the Neanderthal skull has not lost its importance, despite the explanations advanced to account for the peculiarity of its vault; for although early synostosis might explain the abnormal squamous plate, it would not explain the pitheeoid superciliary ridges. In the admirable chapter on the distinctive characteristics of man in Dr. Carpenter's last edition of the "Principles of Human Physiology," the value of this skull is insisted on. Besides this we have the other instances from the Gibraltar and Portuguese

caves where the square palate and absence of the canine fossa show pithecoid proclivities. "Some readers will object," writes Dr. de Hartsen, "that perhaps no example is known to us of an organism having given birth to an individual of a new species." My impression is that all readers will do so, and I have found nothing in Mr. Darwin's writings to make me believe that he imagines such an occurrence ever took place. Indeed it would be nothing after all but a "special creation," utterly at variance with the idea of development by selection. Is it not time, then, that we gave up altogether the use of the word "species" as a term incapable of satisfactory definition, and therefore one which can only lead to confusion?

I am, &c. LAWSON TAIT.

"HARVEY" MEMORIAL.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Pray help to make known to Medical men throughout the world that in Folkestone, his birth-place, there is no memorial whatsoever to Harvey. Some years ago a monument was talked of, but the subject has been allowed to drop. A good opportunity, however, now offers of doing in his native town something, in the way of an instalment at least, of the justice due to his memory.

The fine old parish church in which he was baptised is about to be restored, under Mr. Ewan Christian, and an east window, blocked up probably soon after his decease, is to be reopened. It would surely be in every way appropriate that when the light of heaven again streams through, it should portray some such scene as the Great Physician healing all manner of diseases, and bear some inscription referring to a discovery for which the whole human race has to be profoundly thankful. Every progressive step gained in Medical science serves only to enhance the value of Harvey's discovery.

Our neighbours at Boulogne have their monument to our Dr. Jenner, and it is not long since that John Hunter's remains were re-interred, and found their final resting-place amongst those whose memories must live for all time, at Westminster Abbey.

A subscription list has been proposed at Folkestone, and we trust there can be but little doubt, when the idea has been well ventilated, that funds will flow in sufficient to accomplish the object. Subscriptions may be paid through the National Provincial Bank, Folkestone, or to

ED. S. DARINS, M.R.C.S., Hon. Sec.

109, Sandgate-road, Folkestone, April, 1869.

COMMUNICATIONS have been received from—

Mr. C. JORDISON; Mr. SPENCER WATSON; Dr. J. W. CRANE; Mr. A. H. HILSON; Dr. E. G. WILLIAMS; Mr. W. TYRRELL; Dr. FRANKLAND; Dr. CARPENTER; Dr. DUDFIELD; Mr. LAWSON TAIT; Dr. FAIRBANK; J. B. S.; Dr. JAMES LITTLE; A SUBSCRIBER; Dr. JOHN BURTON; Dr. EDWARD WATERS; Mr. H. SERGEANT; Mr. R. BOWEN; AUTOMATON; Mr. E. S. DAKINS; Mr. J. H. MOORE; Mr. T. W. BLAKE; Mr. W. HODGES; Dr. A. YULE; Mr. J. W. BARNES; Dr. SAUNDERS; Dr. SANSOM; Mr. T. BAYANT; Dr. MOXON; Dr. B. W. RICHARDSON; Mr. J. CHATTO; Mr. EYERSHED; Dr. CLIFFORD ALLBUTT; Dr. BALLARD; Mr. F. CHURCHILL; Mr. H. SMITH; Dr. GERVIS; Mr. J. B. CURGENVEN; Dr. ROBERTS (Liverpool).

BOOKS RECEIVED—

Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital during 1868—Bloxam's Laboratory Teaching—Purdon on Neurotic Cutaneous Diseases—Marcet on the Falsetto or Head-sounds of the Human Voice—Sagar *v.* the Lancashire and Yorkshire Railway Company—New York Medical Journal, April—Simpson's What shall we do with our Refuse?—Curgenven on Baby Farming—Dr. Alex. Robertson's Notes of a Visit to American Asylums—Surrey County Lunatic Asylum Report—Devon Lunatic Asylum Report—Royal Edinburgh Asylum Report.

NEWSPAPERS RECEIVED—

Australian Medical Gazette, Nos. 2 and 3—New York Medical Gazette—Brighton Herald—Birmingham Daily Gazette—Brighton Examiner—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 24, 1869.

BIRTHS.

Births of Boys, 1134; Girls, 1074; Total, 2203.
Average of 10 corresponding weeks, 1858-67, 2027·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	692	685	1377
Average of the ten years 1858-67	695·5	659·2	1354·7
Average corrected to increased population	...	...	1490
Deaths of people above 90	...	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	1	1	12	1	18	8	3	...
North	618210	...	1	6	...	24	16	2	...
Central	378058	...	5	2	...	15	7	1	...
East	571158	...	4	12	5	15	12	9	...
South	773175	3	7	6	...	25	10	6	...
Total	2803989	4	18	38	6	97	53	21	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·873 in.
Mean temperature	50·3
Highest point of thermometer	66·3
Lowest point of thermometer	32·9
Mean dew-point temperature	45·2
General direction of wind	Variable.
Whole amount of rain in the week	0·25

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 24, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending April 24.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending April 24.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3170754	40·7	2208	1462	1377	66·3	32·9	50·3	0·25	25
Bristol (City)	169423	36·1	127	76	*72	65·5	32·4	48·4	0·17	17
Birmingham (Boro')	360846	46·1	242	175	114	62·1	38·2	48·4	0·79	80
Liverpool (Boro')	509052	99·7	347	295	256	61·9	35·5	48·7	0·52	53
Manchester (City)	370892	82·7	253	210	*188	63·9	32·0	49·1	0·61	62
Salford (Borough)	119350	23·1	105	60	50	62·2	32·0	47·3	0·64	65
Sheffield (Borough)	239752	10·5	163	126	123	62·0	32·7	48·0	0·29	29
Bradford (Borough)	138522	21·0	129	71	65	62·2	34·8	48·0	0·16	16
Leeds (Borough)	253110	11·7	253	129	139	63·0	32·0	47·3	0·35	35
Hull (Borough)	126682	35·6	82	59	57	...	...	...	...	...
Newcstl-on-Tyne, do.	130503	24·5	89	69	53	60·0	33·0	46·8	0·53	54
Edinburgh (City)	178002	40·2	134	86	96	63·7	33·0	48·3	0·10	10
Glasgow (City)	458937	90·6	398	268	329	59·0	35·2	48·3	0·39	39
Dublin (City and some suburbs)	320762	32·9	168	158	151	63·9	36·6	50·1	0·32	32
Total of 14 large Towns	6546587	35·5	4698	3244	3070	66·3	32·0	48·4	0·39	39
					Week ending April 17.	Week ending April 17.				
Vienna (City)	(1863) 560000	...	...	...	375	...	...	60·8	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·873 in. The barometrical reading increased from 29·40 in. at the beginning of the week to 30·00 in. on Monday, April 19.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

May 1. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

ROYAL INSTITUTION, 2 p.m. Annual Meeting.

3. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Casual Communications. Mr. John Lowe, of Lynn, "On a Case of Encephaloid Tumour of the Kidney."

ODONTOLOGICAL SOCIETY, 8 p.m. Adjourned Discussion on Mr. Vasey's Paper "On Gold-filling."

ROYAL INSTITUTION, 2 p.m. General Monthly Meeting.

4. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

ANTHROPOLOGICAL SOCIETY, 8 p.m. Meeting.

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

ROYAL INSTITUTION, 3 p.m. Prof. Grant, "On Stellar Astronomy."

5. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

OBSTETRICAL SOCIETY, 8 p.m. Dr. Saboia, "On a Case of Ovarian Disease treated by the Injection of Iodine." Dr. Grailly Hewitt, "On the Connexion between Adhesions of the Uterus and retained Placenta." And other Papers.

6. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

HARVEIAN SOCIETY, 8 p.m. Dr. Cheadle, "On Exophthalmic Goitre."

ROYAL INSTITUTION, 3 p.m. Prof. Tyndall, "On Light."

7. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ROYAL INSTITUTION, 8 p.m. Captain Moncrieff, "Moncrieff System of working Artillery."

WESTERN MEDICAL AND SURGICAL SOCIETY, 8 p.m. Narration of Cases. Dr. Budd Painter, "A Case of Purpura."

ORIGINAL LECTURES.

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

ON INCREMENT OF ANIMAL HEAT.(a)

GENTLEMEN,—During the past few years we have employed, as practical Physicians, a precise method of Medical research—I mean the method of determining the animal temperature by means of the thermometer, and of estimating the value of these thermometrical readings in the natural history of disease. The research has crept upon us in an insidious way. It has been headed by no single individual as the opening of a new system. There is no Harvey in the case, no Laennec, no Jenner. In one sense the study is, indeed, the oldest in Physic. The word "fever" and the word "inflammation" each alike testify to the antiquity of the research. We, therefore, who of late have been observing the variations of the "calor vitalis" in disease, have been doing little more than refine on the past, assisted greatly in our work—lifted into it, indeed—by those wonderful preliminary researches, in respect to the natural temperature of animal bodies, which John Hunter, Pallas, Fisher, Scoresby, Despretz, Metcalfe, and, above all, John Davy, have left to us.

We have learned, however, for ourselves many new facts of late years. I may call them facts of precision. We have brought our instruments for observation to great perfection, and we have so attentively determined the temperature of the body in many diseases that we know the thermal range of such diseases well.

With all this we have much to learn: we have yet to arrive, in relation to animal heat, at what I may venture to call the engineering part of the question. We not only want to learn the bare fact that in such and such a malady there will be manifested such and such a temperature, but we want to be profoundly acquainted with the meaning of the whole subject. We want to know whether the rise of temperature or the fall of temperature, from the normal standard, is a cause of the other attendant phenomena, a coincidence, or a sequence. We want to learn, above all things, again, what variations from the natural thermal standard, above it and below it, the animal body will sustain; what symptoms will run with each variation; what extremes of temperature will impede or stop the animal mechanism. I hope to elucidate these questions somewhat, and I propose to-day to consider one of them so carefully as to leave on the mind a definite major fact and some minor facts. I propose to inquire what increment of animal heat will positively prevent motion in an animal, and when we have found out satisfactorily I would next try to discover the reason why a certain increment of heat did, as we shall see it will, prevent motion. Before proceeding further, however, let me, having directed the eye to the point towards which we are bending our way, make one or two preliminary explanations.

1. Let me first explain that in speaking of the increment of animal heat I am not speaking of the degree of heat outside or surrounding man or other animal, in which life can or cannot be sustained, but that I am treating of the increment of heat which the animal body itself can bear. I shall, it is true, produce in some instances an increment of animal heat, of heat within the animal body, by the addition of heat from without, but this only as a ready means for learning a fact; for I shall also show, in another lecture, that increment of heat in the organism may be induced in an ordinary temperature or medium by various changes in the body itself, as it is in everyday disease. I press this explanation earnestly, because without it we shall not understand each other: think, then, nothing of the external temperature; think only of actual animal temperature; think of thermometrical readings only as they are derived from the animal body itself—from the mouth, the throat, or other part.

2. Next let me explain that the direct readings of the thermometer which we are able to take from the most accessible parts of an animal—from the open cavities—are not of themselves accurate readings of the mean temperature of the whole of the body. If we take a reading from the mouth of an animal, and another reading from the stomach, or if we take a reading from the lower third of the rectum and another reading from the upper third, we shall find a difference in favour of the more internal part of good 2° Fahr.; or, if we take a reading from the mouth or rectum, and compare it with the reading from one of the serous cavities, or from the centre of the body of a large muscle, we shall again find a difference in favour of the more internal part of good 2° F. If we take our readings from the outside of the body, and compare those readings with the readings from the internal cavities, the difference will be twice greater still, or even more. For these reasons I myself, in research, have given up readings from external parts altogether; and when I read from the mouth, rectum, or, in the bird, from the cloaca, I feel it is necessary, from direct observation, to add 2° F. in order to express the mean of the body at large. When, therefore, I speak of the maximum of animal heat in any given case, it will be understood I speak of the mean degree of heat of the whole body of the animal.

3. In the third place, I would point out that in calculating the increment of heat, however produced, in any individual animal, it is necessary to date, not from a general rule or principle respecting the assumed natural temperature of the animal, but from direct observation made immediately preceding the experimental investigation. It is a common idea that all warm-blooded animals possess and maintain a given standard of animal heat under different conditions. This is an error, which repeated experiment soon puts right. Thus, I find in pigeons kept with every care, well fed, well protected, there are variations of temperature ranging from 106° to 109° F. This range of full three degrees extends to all other animals of warm blood which I have studied, and we may, I think, note as a fact that in animal bodies there is an allowance made for fluctuations of temperature, an allowance for expansion and contraction, if we like to express the matter so, of three degrees on Fahrenheit's scale. Hence, in making any given research, we are bound to note the actual temperature of the animal for a period of an hour, at least, before we induce unnatural increment of heat, and to reckon from the figure thus registered. By this mode of procedure we shall discover in many cases natural differences in animals of the same kind, natural differences of range itself. I have one pigeon, for instance, which has a natural range of temperature running from 107° to 111° F., the mean being 109°. I have another pigeon in which the natural range is from 105° to 107°, the mean 106° F.

4. In considering the temperature of the animal body in different individuals of the same species, age must be carefully taken into account. I believe it will be found in the course of further experimental inquiry that each period of life is marked by a distinct thermal range, and that what would be a natural thermal reading at one period of life would be unnatural at another. In the case of the two pigeons noticed above, age is probably the cause of the difference, for the bird with the lower temperature is three years older than its neighbour with the higher temperature. Metcalfe, who made a series of observations as to the temperature of kids and goats, cats and kittens, and young and old horses, drew a similar inference. Thus in a she-goat three months old, he found the temperature of the body was 107°, while in the mother of the same animal the temperature was 104°. In a kitten two months old, the temperature was 105·5°; in a vigorous, nearly full-grown cat, 104°; in a full-grown cat three years old, and mother of the kitten, 103·5°; and in a cat in the nineteenth year, 102°. In a horse four years old, he found a temperature of 104°, and in a mare twenty years old 100° F. In the human subject, a sufficient number of observations have not been conducted to enable one to speak with precision on the ranges of temperature according to age; but the general fact that there is variation, and that there is persistent decrease in the advanced periods of life, is proved. It will take some years of careful and patient research to observe and write down the all-important details bearing on this subject. It is clear that in the aged there is not merely an objective decrease of heat—that is to say, not a mere decrease of sensible heat—but a decrement also of specific heat, so that the body in advanced life is less able to oppose great fluctuations of atmospheric temperature.

5. The condition of the body in respect to fatness or leanness is another modifying influence to be remembered in estimating animal temperature. As a rule, a body in good condition has

(a) Lecture delivered on March 9, 1869.

a higher standard of temperature than a body that is badly nourished, or than a body that is unduly loaded with fat, and one very important observation deserves to be made in relation to the presence of fat in young and active bodies. The observation is this—that whenever in such subject there is within the organism a cause at work leading to an undue accumulation of heat, there is, owing to the imperfect conductive power of the subcutaneous layer of fat, a more rapid increment of heat. For this reason children who have a thick layer of adipose matter run most risk in acute inflammatory disorders and in exanthematous diseases; indeed, in these the temperature of the body may be raised to the point of dissolving the fatty matter itself, so that the blood may have free oily substance floating in it. As I have already stated in a previous lecture, free fat is often found surrounding fibrinous separations in young children who have died from acute inflammatory disease.

6. Again, let me urge the importance of watching the influence of season on the thermometrical readings of the animal body. In sound states of health there will always be a slight increase of mean temperature of the body during the heat of summer, and a decrease of the mean temperature during the cold of winter. It is true that nature does much to equalise; that the free action of the skin and lungs in the hot, and the slow action of the same organs in the cold months, specially, tends to equalisation. But a difference ranging from one degree and a half to two degrees Fahrenheit must still be allowed, and it must be borne in mind that an extreme increase of animal temperature in the cold months is a much more serious matter than the same increase in hot months of the year. Further, there are some months which are specially critical in these respects; there are months when animal waste is enormous; there are months when animal increase is enormous. Thus the late Mr. Milner, of Wakefield, in a research the most severe and exact of its kind I ever remember to have read, discovered that in the month of March there is a loss of weight in the body equal to 0·95, and in August an increase equal to 0·70, the loss commencing in October and going on to April, and the gain commencing in May and continuing until August, the *great* loss and the great gain being equally sudden and determinate at the close of their periods—*i.e.*, in March and in August. These same periods it is of moment to remember in relation to fluctuations of animal temperature. An unusual rise of temperature during the present month, for instance, when a process of waste is naturally progressing, is specially dangerous; it means increase of waste with diminution of reserve power.

7. Lastly, when we turn from man to different classes of animals, it is essential to bear in mind the differences of arrangement for the conduction of heat from the outer surface of the body. An animal thickly and persistently covered with fur, or wool, or feathers, and which has an imperfect cutaneous mechanism for disposal of water by evaporation, will, *cæteris paribus*, have a higher temperature than another animal which, covered in the same way, does not lose water by the perspiratory process. And again an animal, like man, who has a surface very lightly covered by nature, and at the same time a most elaborate cutaneous excretory surface, will have, *cæteris paribus*, a lower temperature than both other classes. As showing this fact, let me write down a table which includes direct observations of my own, and which gives these observations corrected by those of Dr. John Davy, Pallas, Despretz, and Metcalfe.

Temperature of Animals compared with Temperature of Man.

Mean temperature of	Man . .	98°	Fahr.
,, ,,	Sheep . .	104°	,,
,, ,,	Goat . .	104°	,,
,, ,,	Ox . . .	101°	,,
,, ,,	Horse . .	100°	,,
,, ,,	Cat . .	102°	,,
,, ,,	Dog . .	102°	,,
,, ,,	Rabbit . .	103°	,,
,, ,,	Guinea Pig .	102°	,,
,, ,,	Pigeon . .	108°	,,
,, ,,	Common Fowl	108°	,,
,, ,,	Duck . .	108°	,,

In recording these figures I have placed before you mean results. In the case of pigeons the mean is derived from ninety-four observations, in the human subject from one hundred observations. In all there have been found individual differences, due to external temperature and other disturbing influences; but I believe the general deduction is accurate, and that the table is reliable.

On looking over this table we might, *a priori*, suspect that those animals which have the highest natural temperature will most readily suffer from increment of heat on being surrounded with air heated beyond their own natural temperature. This is the fact; and upon it we may try to determine two distinct points—first the temperature of the external air which is fatal from excess of heat, and secondly the increment of temperature of the animal body which is fatal.

In respect to the first of these determinations, I may state at once that, other things being equal, the power of an animal to live in a raised temperature is proportionate to its power to convey away heat by evaporation of water. Of all animals man, perhaps, possesses this power in the most marked degree. His skin and lungs are so actively called into play in heated air that he can survive in a temperature which seems, on mere statement, incredible. But animals, such as the fowl, the pigeon, and the cat, whose bodies, surrounded by good non-conducting material, eliminate water slowly, are very differently constituted, and are charged with a fatal increment of heat with comparative readiness. For example, I myself entered a hot-air bath, the temperature of which reached 212° Fahr. In this air the albumen of an egg coagulated in ten minutes. I had, however, no difficulty in living under this condition for twenty minutes, and I came out of the ordeal uninjured; but a fowl in the chamber with me, breathing the same air, was struck instantly by the heat, in three minutes was insensible, gasping, tetanic; and, taken out at once into air at 65° F., was unable to recover. At what temperature a man would die from exposure to heated air is not as yet known; but respecting the lower animals the facts are within reach. In the case of the pigeon, the duck, the common fowl, the cat, the guinea-pig, and the rabbit, the temperature of 145° to 150° Fahr. is sufficient to lead to fatal increment of animal temperature. Great variations nevertheless may be observed in the opposition to increment of heat offered even by these animals. If the animals be allowed free motion of body, there is resolution of heat into motion, and therewith a capacity for living action, which may be wonderfully pronounced. In fact, experimental observation based on the temperature of the air only would be fallacious and useless.

To arrive, therefore, at exact facts respecting the increment of heat in animals, we must let the observation of surrounding temperature hold a secondary place. If we take care to impede the radiation of heat from the body of an animal, we may produce fatal effects even from summer heat. If we do not take this precaution, we must increase the temperature. Under either condition we shall do no injury until the body of the animal itself is elevated in temperature up to a given degree; in other words, whatever may be the outer temperature, a certain increment of heat within the body itself must be reached before there is danger.

Can this fatal increment of heat be determined with any degree of exactitude? Is it variable or steady in different animals? Is it marked, in intensity, by outward symptoms or signs?

To these questions — which, indeed, are first principles in the physical reading of disease—I give an affirmative answer. The fatal increment of animal heat is readily determined: in warm-blooded animals it is not more variable than the natural variations of ordinary animal temperature, and it is marked by certain external signs, which, from stage to stage, steadily indicate its degree.

Fatal Increment of Animal Heat.

The increment of heat in a warm-blooded animal which proves fatal is from 11 to 12 degrees on Fahrenheit's scale. I have never seen a recovery under any after condition when once the increment of 12 degrees has been reached, and I have seen a fatal result from 10 and 11 degrees. The rule seems to be subject to so few variations it may be accepted as practically absolute. In animals having naturally a difference of temperature the rule holds equally good. Thus a pigeon having a natural mean temperature of 108° will succumb when the temperature of its body is raised to 120°, and a pigeon having a natural mean temperature of 106° will succumb when its temperature is raised to 118°. A rabbit having a temperature of 104° will succumb when its temperature is raised to 116°, and a cat having a temperature of 102° will succumb when its temperature is raised to 114°. In brief, the 12 degrees of heat on Fahrenheit's scale added to the natural degree of heat of the animal becomes the fatal degree. I believe the same rule applies to man.

In order to determine the fact I have named, an amount of labour and care has been required which at first sight might seem improbable. Judge for yourselves how far possible sources of error have been excluded, and pray, if you see a fal-

lacious step, tell me of it. We use for our research an inner chamber of glass. The chamber is water-tight; it has a movable floor covered with thick felt. It is placed in an outer chamber coated with felt. It is fed steadily with air warmed by passing through a metallic coil, and so accurately does the current of air carry its charge of heat, that for any number of hours the variation of one degree is not observed. The air is, moreover, undergoing the most perfect change, so that the accumulation of carbonic acid is not possible. We place the subject for observation in the inner chamber, surrounding it, gently, with some non-conducting woollen substance, or a soft pillow, and it is unnecessary under such circumstances to make the air in any degree painfully warm or difficult to breathe; for when the conditions for radiation from the body, and for loss of force by motion, are cut off, the accumulation of heat is quick enough, without any forcing of the process against time.

Of the Symptoms Produced by Increment of Animal Heat.

When by the exposure to air of a high temperature under the conditions named above, or when, from any other cause, the temperature of the body itself is increased, a train of symptoms follow which are as simple in their character as any in nature, and which cover whole fields of what is called Medical experience. The first sign we observe is the accumulation of heat itself; the *fever*, I may most properly call it, in order to retain an old and significant name. But the fever is not to be considered as a mere symptom; it is truly a symptom, but it carries with it, when it is properly understood, all the rest of the symptoms. It is primary, the others follow and are dependent upon the primary.

Next to increase of heat, and the first result upon such increase, is increase of involuntary motion, motion of respiration, motion of circulation. This increase of speed in the two grand sets of muscles, the prime movers of the body, is as much a quick driving from excess of heat as is the driving of an engine from heat in the furnace. Thus the pulse increases with the increase of heat in the body, both in tension and in rapidity of stroke, and it falls, with fall of temperature, either in tension or rapidity, or both. This excess of motion in many cases is of immediate service to the organism; it is an equalising process; it prevents to a marked extent the further increment of heat; it employs or uses up the force.

When the accumulation of heat is moderate and slow, the increase of motion is frequently succeeded by free elimination of water from the body; and here again is a most effective equalising agency. Indeed, this process of elimination once started, it is very difficult to sustain or advance increment of animal temperature. By this equalising process of evaporation, we are enabled, in the Turkish bath, to resist those extremes of heat which I have already spoken of as endurable.

But when the accumulation of heat is rapid and determinate, instead of free elimination from the excreting and secreting surfaces, there is the opposite condition of dryness, or, as is commonly said, suppressed secretion. In all acute inflammatory conditions, we know this suppression of secretion to be a bad sign. What is the meaning of it? The meaning is most simple, and is this. Under a given accumulation of heat, as near as I can estimate an increment of from seven to eight degrees, there is an act of contraction of the whole arterial system, and especially of the extreme or terminal parts of the arterial vessels: the vessels resist; there is obstruction—congestion some would call it—and, as a necessary consequence, there is diminished excretion or secretion from the excreting and secreting surfaces. On this follows that accumulation of water in the blood itself, to which I called your earnest attention in my last lecture. Upon the accumulation of water follows that tension of the arterial pulse which runs so steadily with suppressed secretion. Upon this often follows rapid accumulation of fluid in serous cavities, or exudation of fluid in the least resistent organs—the cellular exudations of local upon general inflammation.

At this stage there may be another series of symptoms suddenly developed: as if the rapidly speeding engine had been suddenly reversed, there may be slower motion, gradually falling temperature, and collapse. The change indicates in nearly every instance that there has been separation of fibrine in the heart. The separation has stopped or arrested the current of blood at the main, and, virtually, all is over. In the human subject we recognise by external signs this condition constantly; in the inferior animal we produce it synthetically, and determine it with precision. Here, in illustration, is the dead body of a cat. In this animal there was, during life, an induced increment of heat, or fever. The fever progressed until the mean temperature of the animal had reached an increment of nearly 10 degrees; then the animal began "to sink." She might have struggled on hopelessly for hours, as human bodies do, but we could in her case put her quickly to death, in sleep, by making her inhale the vapour of ether. We did so, and at once we laid bare and laid open the heart. See what has happened. The right cavities are almost filled with a firm separation of fibrine. Of the many similar specimens from the human subject which have been before us there is not one specimen more distinct than the specimen in our hands.

If, in your leisure, you will turn to my work on the coagulation of the blood, you will find that, in the year 1854, I performed the very same experiment I have performed at the present moment. Then, however, I used pure oxygen for the inhalation, and my idea at the time was that the inhalation of *oxygen* was the cause of an increase of fibrine, for I was ignorant of the direct and potent effect of simple increase of animal temperature. Now, with a better knowledge, I know that the oxygen played only a secondary part; that, in fact, pure oxygen is not essential; that no more and no less is required than increase of heat within the organism.

If the increment of animal heat be induced with such rapidity that the fatal increment is reached directly, we have an extension of contraction from the involuntary to the voluntary muscles, and therewith general convulsion, which will soon become tetanic in character. At last there is a general rigidity of the muscles and death from permanent spasm of the muscles of respiration and of the heart.

To complete the history of the symptoms brought on by increment of heat within the body, there are, as the fatal increment of heat is approached, evidences that change is taking place in the nervous centres, for the animal becomes comatose. There is little difficulty in explaining the cause of the coma; it is due to the contraction of the vessels which supply the brain with blood, and to the subsequent changes in nervous matter incident to withdrawal of blood. To use a common expression, the brain and nervous centres die; to use a more accurate expression, their parts sink into molecular rest or inertia.

Such is induced inflammatory fever. We are meeting with the identity of it in every day of practice on the human subject. We never see a case of acute inflammatory disease, but we see the increment of heat. What we have to feel in all its fulness and to appreciate in all its breadth is the grand truth that every symptom, primary or secondary, is dependent on the accumulation of the force we call heat; and, that the whole of the phenomena we observe, up to death itself, are due simply and solely to the inability of the body, from some accident or other, to dispose of that active force which the body in perfect health sets free for the mere purpose and intent of ministering to the production of those processes which are summed up in the term life.

Phenomena after Death from Increment of Heat.

Rigidity.—Animals which have died from increment of their organic heat soon become rigid, the rigidity being strongly pronounced. This is in strict accord with the many previous facts I have noted respecting the influence of heat in bringing on rigor mortis. The rigidity extends generally—wherever, in fact, there is muscular fibre—and it is so determinate in the arterial system that if immediately after death a tube be placed in the aorta, and water be injected, the extremest force, short of a force that will rupture the vessels, fails to push the fluid round the circulation. The rigidity remains also a long time.

Temperature.—At and immediately after death, the temperature of the different parts of the body is, with one exception which I shall name specially, very equal. I have had the thermometer in every important structure within five minutes after death from increment of animal heat, and have watched the rate of cooling for an hour to find a perfect equality of temperature in all parts save one. In the bodies of the large muscles, in the intestines, in the blood, in the heart, in the structure of the lungs, in the liver, in the spleen, in the kidney, the distribution of heat is the same, and the rate of cooling, the conditions of exposure being alike, is the same.

But there is one exceptional fact, and I must refer to it with equal earnestness and caution. It is this fact—that if immediately after death the bulb of a fine thermometer be plunged into the cavities of the trunk of the body, or into the vascular organs, or into the muscles, and at the same moment another thermometer (which has been tested and found to work uniformly with the thermometer employed for the trunk of the body)—if the bulb of this second thermometer, I say, be plunged into the centre of the brain, there will be found a difference of temperature in the brain from that which is found elsewhere. The temperature of the brain is *lower* than that of

any other part of the body. The brain may be found even five degrees lower in temperature than the other parts; and I have many times, by exchanging thermometers—by taking one thermometer out of the brain and putting it into the place occupied by another thermometer in the centre of the pectoral muscle—seen the thermometer in the brain fall and the thermometer in the muscle rise. Nay, I have raised the mercury of a thermometer at one moment by plunging the bulb of the instrument into muscle, and have brought down the mercury at once by removing the instrument from the muscle and plunging it into the substance of the brain.

This fact is, to my mind, very singular. It may point to some unknown physiological law, or it may mean nothing but quick cooling from ready radiation. Yet the brain is not exposed, for the instant the drill has made entrance through the skull, the bulb of the thermometer fills the place which the drill occupied, and if there be more rapid radiation of heat from the brain than from the trunk, owing to the difference of mass (a view which our friend, Dr. Sedgwick, who has watched this experiment with me, maintains), even then the fact is of value, because what occurs after death will also occur during life, and the practical result will be that the brain of an animal living in an atmosphere below the temperature of its own body, will have a lower temperature than the muscles and organs of the trunk of the body. I should add that the observations on the relative temperatures of the brain and trunk were determined on the pigeon, rabbit, and guinea-pig.

Brain.—After death from increment of animal heat, the brain is found, as far as I can say, simply pale. I have never been able to find any exudation or congestion, or other lesion. It seems to me as if by contraction of vessel the organ had been for some time before death deprived of its blood, and this view is borne out by the symptom of coma which precedes death. This absence of blood may be a reason for the lower temperature of the brain immediately after death.

Lungs.—The lungs after death from increment of heat are florid and free of congestion, when, previous to death, there has been no separation of fibrinous mass in the heart. In cases where fibrine has separated on the right side of the heart, the lungs are found pale or white, as is so often seen in the human subject after death from similar cause. I have not found any structural disease of lung.

Heart.—The heart is found in one of two states, varying with the mode of death. In cases where the increment of heat is rapid, and the death occurs from tetanus, the heart is found empty of blood, and so firmly contracted on itself that it feels like a stone. In cases where the death is from separation of fibrine, the heart is often distended with coagulum, but the muscular walls are not flaccid, and they soon pass into rigidity.

Blood.—The blood is found in one of two conditions. In cases where the fatal increment of heat is very rapidly developed, the blood, immediately after death, is quite fluid in the heart and vessels, but on removal it coagulates very firmly, and without any undue delay. In cases where the increment of heat is reached slowly, the blood is found with the fibrine in part separated, as we have seen in the specimen before us. The same facts may be observed in the human body suffering from inflammatory fever, and the recognition of them in the inferior animal, under known conditions, aids us greatly in understanding what seems, without such aid, to be an insuperable difficulty. There may be death in inflammatory fever from rapid increment of heat and extreme contraction of vessel before the fibrine has separated, and before there is accumulation of water in the blood to favour separation of fibrine. There may be death from slower increment, with separation of fibrine as the final and conclusive part of the fatal process.

We were careful in observing microscopically the blood taken during life from animals showing increment of animal heat. We took mixed or capillary blood, and Dr. Sedgwick, with great care and nicety, got specimens of it at once in the field of the microscope. The phenomena are the same as have been so often observed in the blood of men suffering from increment of heat during inflammatory fever. The corpuscles run together in firm rolls, and by aggregation produce a surface almost uniform, through which, in channels made by separation of rolls of corpuscles, a thin exudative fluid freely courses. The appearance, indeed, is like that of blood coursing through the capillary canals in the foot of the frog, and might, at first glance, be mistaken by any one who had not seen the corpuscles aggregate. You will find on the microscope table specimens of the blood prepared for examination by Dr. Sedgwick. Lastly, in respect to the blood, the colour of the venous is raised, under increment of heat, towards the colour of arterial blood.

In every sense—in respect to colour, in respect to separation of fibrine, in respect to running together of the corpuscles, the blood, during induced inflammatory fever, is the same as is the blood of the patient who is suffering from ordinary acute inflammatory fever.

Other Visceral Organs.—The large abdominal organs in cases where the increment of heat is rapidly induced are found free of congestion and rather florid, but they show no indication of physical disorganisation. In cases where the increment of heat is slow, and where there is separation of fibrine from arrest of circulation through the right side of the heart, slight congestion of the abdominal organs may exist. There is congestion of kidney in the cat which we have examined to-day. In the cat and in the rabbit the urine, if any be in the bladder, is found richly charged with albumen. A specimen of this kind, with the albumen precipitated by heat and nitric acid, is on the table.

There are many matters of detail which might be added to what I have now spoken were there time for details. There are also many new paths into which we could strike. I could lead you, for example, at once to the proof of the many ways by which increment of animal heat may be induced without exposing the body to the direct action of air raised in temperature. But to-day I must rest content in endeavouring to bring out, and as I hope clearly, these two leading truths:—

Firstly. That the fatal increment of animal heat is determinable, and may, with very slight variations, be calculated from the natural temperature of the warm-blooded animal.

Secondly. That the phenomena or symptoms included under the term inflammatory fever, when divested of all obscurity, when traced to their cause, are phenomena resulting from accumulation or increment of animal heat, and are differing phenomena according to the degree of increment and the rate of its progress towards the fatal degree.

ORIGINAL COMMUNICATIONS.

ON APHASIA AND THE LOCALISATION OF THE FACULTY OF SPEECH.(a)

By FREDERIC BATEMAN, M.D.,
Physician to the Norfolk and Norwich Hospital.

In an evil hour I yielded to the suggestion of one in authority in this Society to read a paper on the subject which, perhaps above all others, is engaging the attention of the psychological pathologists of the present day—the faculty of speech, its loss and its localisation. My own sense of inadequacy to do justice to this vast subject is enhanced by the consideration that, although one of the most learned scientific bodies in the world devoted the long period of two months to its elucidation, the discussion in the Academy of Medicine of Paris terminated, without a solution of the difficulties which its members had attempted to grapple with.

Considering the short space of time that can be allotted to me for submitting this subject to your notice, I shall deem it more useful to direct my remarks principally to the question of localisation, and I shall only have time briefly to glance at the disputed points of this question, in the hope that what I may say may be freely criticised by members present, and may furnish a subject for such a discussion to-night as may tend to advance our knowledge of this obscure subject—the localisation of the faculty of speech.

I intend to pass over the bibliographical part of my subject, as totally unfitted for the present occasion; besides, I have gone fully into this question in a series of papers in the *Journal of Mental Science*.(b) In the first place, what is meant by the comparatively modern term Aphasia? Few subjects in Medical philology have given rise to so much discussion as the name by which loss of the faculty of articulate language should be scientifically designated. The term "anaudia" was used by the Greek Physicians for loss of speech, and the adjective ἄναυδος is employed by Æschylus. Alalia is used by Sauvages, Frank, and others, and Professor Lordat, in describing his own case, employed the word "alalie," which latter term has been adopted by M. Jaccoud. In 1861 M. Broca, when relating to the Anatomical Society of Paris his two remarkable cases, which have since excited so much interest throughout the scientific

(a) Read before the Medical Society of London, February 1, 1869.

(b) See the author's papers "On Aphasia" in the *Journal of Mental Science* for January, April, and October, 1868, and January, 1869.

world, used the word "aphémie" (ἀ, φημί). This last expression has latterly given way to "aphasia," a word adopted by Trousseau, who is supported in his preference for it by no less an authority than the celebrated Hellenist, M. Littré. Other names, such as aphrasia, aphthongia, aphthenxia, alogia, etc., have been suggested. Aphasia, doubtless from its simplicity and euphony, is now the favourite expression, it is the one I have selected, and I prefer using it in its strictly etymological sense—ἀ, φάσις—and I would thus apply it to all cases where speech is abolished or suppressed, from whatever cause, believing that it is more convenient, for the purposes of pathological research, thus to consider lesion of speech in its general and widest sense, than to limit our study to those cases where the intelligence is unaffected, or at all events but slightly impaired.

If time permitted, I should like to say something about the classification of my subject—something about the different forms in which loss or lesion of speech is met with by the clinical observer. I should wish also to consider the great psychological question of what speech really is; but a mere passing allusion to these points would occupy too much of your time. I pass at once, therefore, to the consideration of the different theories which have been propounded as to the seat of articulate language, omitting, for want of time, all allusion to writers previous to Gall. Those who may desire accurate and precise information as to the various theories which were in vogue as to the seat of speech before the time of Gall, I would refer to an extremely interesting series of papers now being published by Dr. Hunt in the *Anthropological Review*.

The brain is universally considered to be the organ of thought and intelligence, but opinions have been, and are still, divided as to whether we are to consider it as a single organ or as consisting of a series of distinct organs, each endowed with a special and independent function. Out of this last theory has arisen the principle of the localisation of the cerebral faculties, which was first announced in a definite form by Gall, although our own countryman Willis had, in the seventeenth century, conjectured that the various gyrations were intended for retaining the animal spirits "for the various acts of imagination and memory." The circumstance which directed Gall's attention to the possibility of connecting the brain with certain faculties of our moral nature is so well known that I scarcely need allude to it. In his early studies he often found himself surpassed by certain of his fellow-pupils, who he felt were intellectually inferior to him, but in whom a remarkable memory coincided with a striking prominence of the ocular globes. This external prominence led him to the inference that there was an internal cerebral prominence which produced it, and it was the application of this reasoning to other cranial prominences that gave rise to his craniological doctrine.

According to Gall, the brain is composed of various parts, to each of which a special function belongs, and his system embraces the topographical determination of each of these organs. I need not say that any dissertation on this subject would be incomplete without, at all events, a bare allusion to Gall. Gall placed the organs of the memory of words, of the memory of persons, and of the faculty of language in the convolutions which rest upon the floor of the orbit, and which form the inferior surface of the anterior lobe, extending from the fissure of Sylvius to the point of this lobe. The organ of the memory of persons he placed immediately above the inner angle of the orbit, that of the memory of words in the convolution which rests on the posterior half of the roof of the orbit, whilst the organ of language or speech he placed in the convolution which rests on the anterior half of the orbital roof, in front of the preceding faculty.

The minute anatomy of the convolutions was unknown in the time of Gall, and he based his phrenological theories rather on the external prominences of the skull—on cranioscopy—than upon a careful study of the convolutions to which these prominences corresponded; and although his conclusions must be considered in many instances arbitrary and hypothetical, still I would say, sir, "let not the spark be lost in the flame it has served to kindle," for in spite of all that has been said against Gall, and in spite of all that has been written in depreciation of his labours, beyond all doubt his researches gave an impulse to the study of the cerebral localisation of our faculties, the effect of which is especially visible in our own days, and I look upon his work as a vast storehouse of knowledge and as an imperishable monument to the genius and industry of one of the greatest philosophers of the present age.

Gall's conclusions were based purely upon the study of anatomy, but subsequent observers—Bouillaud, Schroeder Van der Kolk, Jaccoud, and Broca—have brought the light of pathological observation to shine upon this obscure subject, and, with the view of testing the soundness of the respective theories advanced by these physiologists, I have recorded seventy-two cases which have been observed by myself or others, in which loss or lesion of speech was a prominent symptom, and I propose briefly to weigh the evidence which has been furnished for or against the four different theories which have in modern times been promulgated as to the seat of speech; and here I would observe that this question will never be settled by mere theoretical speculation, without the aid of that inexorable scrutiniser of facts—necroscopic examination.

I will first allude to the theory which has perhaps found the fewest advocates—that of Schroeder Van der Kolk, who placed the seat of speech in the corpora olivaria, a theory which has lately found a warm supporter in M. Jaccoud. Of the seventy-two cases I have collected, I find that in five only the olivary bodies were stated as having been found diseased after death. The first three cases are quoted by Van der Kolk, and in one of these, in addition to atrophy of the olivary bodies, there was an extremely imperfect development of the frontal convolutions, and also a positively diseased condition of the anterior lobes. In another case, although there was found a grey degeneration of the right olivary body, there was also disease of other parts—namely, in the crura cerebri, the corpus callosum, one of the thalami, the fornix, and also the corpora pyramidalia. In a third case I have quoted from Van der Kolk, as well as in one from Abercrombie, in addition to the disease in the olivary bodies there was also disease in one of the crura cerebelli and in the tubercula mammillaria; and lastly, in a case observed by Romberg, the affection of the olivary body coincided with disease in the right half of the pons Varolii. It must, therefore, be conceded that as in all these cases, in addition to a diseased condition of the olivary bodies, there was extensive disease in other parts of the brain also, they cannot be looked upon as substantial evidence in favour of the localisation of speech in the corpora olivaria; in fact, Cruveilhier, who was the author of all the cases which I have quoted from Van der Kolk's work, was quite innocent himself of drawing any inference as to the connexion of the olivary bodies with the articulation of words.

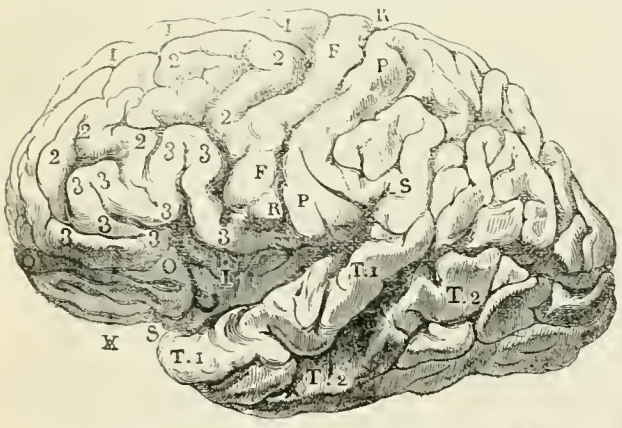
The next theory for consideration is that of Bouillaud, who places the seat of speech in the anterior lobes, and who twenty years ago offered a prize of 500 francs for any well-authenticated case in which the two anterior lobes were destroyed, or more or less seriously injured, without speech being affected. Although this theory has met with less opposition than the others, several cases have been recorded which, to say the least, threw considerable doubt upon its truth. For instance, M. Peter has published a case where speech was preserved, although both the frontal lobes were reduced to a pulp (*réduits en bouillie*). In Trousseau's "Clinical Medicine" is recorded the case of an officer who in a duel received a ball which entered at one temple and made its exit at the other, the patient surviving six months without any lesion of the articulation, and at the autopsy it was ascertained that the ball had traversed the two frontal lobes at their centre. But perhaps the most interesting case that has been recorded as bearing upon the seat of speech in the frontal lobes is the celebrated case of M. Velpeau, which he cited at the memorable discussion which took place at the Academy of Medicine in 1865, and for which he claimed M. Bouillaud's prize. The subject of it was a barber who came under M. Velpeau's care for disease of the urinary passages. With the exception of his prostatic disease, he seemed to be in excellent health, was very lively, cheerful, and full of repartee, one remarkable symptom in his case being his *intolerable loquacity*—a greater chatterer never existed, so much so that complaints were made by the other patients of their talkative neighbour, who allowed them rest neither night nor day. This man having died suddenly, a careful autopsy was made, when it was found that a scirrhous tumour had taken the place of the two anterior lobes. Here, then, was a man who up to the time of his death presented no symptoms of brain disease, and who, far from having any lesion of the faculty of speech, was unusually loquacious, and yet, for a long period prior to his decease, this patient must have had a most grave disease of the brain, which had destroyed a great portion of both anterior lobes. Another case has been recorded by Cruveilhier of a young idiot who could pronounce words distinctly articulated, although after death it was found that there was congenital absence of the two anterior lobes.

I could multiply observations which admit of a similar interpretation to those I have just mentioned, but I hasten on to the consideration of the theory of M. Dax, who places the lesion in

aphasia exclusively in the left hemisphere, basing his theory on the fact that when the subjects of aphasia are at the same time hemiplegic, the paralysis is always on the right side. In 1863 his son wrote an essay confirmatory of his father's views as to the localisation of speech in the left hemisphere, but at the same time he localised it more especially in the anterior and external part of the middle lobe. This is a question that can only be settled by statistical research. In a vast majority of instances, aphasia is associated with right hemiplegia, but the coincidence of loss of speech with paralysis on the left side is, I believe, much more common than is generally supposed. I have lately had an instance of it under my care at the Norwich Hospital, and a large number of cases of left hemiplegia with aphasia are now placed on record. The apparent frequency of lesion of speech with paralysis on the right side of the body may perhaps be explained on physiological grounds, to which, if time permit, I shall allude presently.

I now arrive at what may be termed the *ne plus ultra* of pathological topography, in the assertion of M. Broca that in loss of speech the seat of lesion is in the *posterior part of the third frontal convolution of the left side*. However startling this assertion may be, the high scientific position of Professor Broca naturally claims for any statement of his the greatest possible respect and attention, and a considerable number of cases have been recorded which, at first sight, would seem to substantiate it.(c) To my mind, however, of all the different theories advanced, this, least of all, will stand the test of an impartial scrutiny.

I have frequently heard it asked, What is Broca's region? and what are its precise limits? Now, if there should chance to be any one whose attention has not been specially directed to this subject, I would refer him to the diagram which was sent to me by my friend Professor Broca expressly for the present occasion; and as the minute anatomy of the convex surface of the brain is not, to my knowledge, described by our English authors with the same amount of detail as by M. Broca, I must ask to be allowed to explain the diagram, which represents the convex surface of the left hemisphere.



RR, furrow of Rolando; SS, fissure of Sylvius; 1, 2, 3, first, second, and third frontal convolutions; FF, transverse frontal convolution; PP, transverse parietal convolution; OO, orbital convolutions; T.1 T.2, first and second temporo-sphenoidal convolutions; I, island of Reil.

The only portion of the hemisphere which has reference to our subject is the anterior lobe, the exact limits and relations of which it is extremely important to bear in mind.

The anterior lobe comprises all that part of the hemisphere situated above the fissure of Sylvius, which separates it from the temporo-sphenoidal lobe, and in front of the furrow of Rolando, which divides it from the parietal lobe; in front this furrow is bounded by the transverse frontal convolution, and behind by the transverse parietal convolution. This anterior lobe is composed of two stories or divisions—one inferior or orbital, formed by several convolutions called orbital, which lie on the roof of the orbit, and in which Gall placed the organs of articulate language and of the memory of words and persons; the other or superior division is situated under the frontal bone, and under the most anterior part of the parietal. This superior division is composed of four fundamental convolutions—one posterior, the others anterior. The posterior, slightly tortuous, forms the anterior boundary of the furrow of Rolando; it is, therefore, nearly transverse in its direction, and ascends from the fissure of Sylvius to the great median longitudinal fissure of the brain. This convolution has received the name of frontal transverse. The other three convolutions of this superior story are very tortuous; they have all an antero-posterior direction, and they bear the name of first, second, and third frontal. The first and second frontal call for no further remark; but as the third is the reputed seat of speech, according to M. Broca, its precise relations are worthy of note. It will be observed that its superior border is contiguous to the second frontal convolution in its whole length; in reference to its inferior border, the anterior half is in contact with the most external orbital convolution, whereas the posterior half is free, and forms the superior border of the fissure of Sylvius, which separates it from the temporo-sphenoidal lobe. I would further add that when the two borders of the fissure of Sylvius are drawn away from each other, as represented in the drawing, the island of Reil is brought into view, so that it will be seen from these relations that a lesion which is propagated from the third frontal convolution to the temporo-sphenoidal lobe, or *vice versâ*, must almost necessarily pass by the lobe of the insula, which lobe is thought by Dr. Sanders and others to share with the third frontal convolution the honour of presiding over articulate language.

(*To be continued.*)

(c) In his elaborate paper in the *London Hospital Reports*, vol. i., 1864, Dr. Hughlings-Jackson gives the details of thirty-four cases of aphasia, stating that his observations tend to confirm, generally, the views of M. Broca. In his subsequent papers, Dr. Hughlings-Jackson does not repeat his assertion, and it would be extremely interesting to know whether this painstaking observer is still to be ranked among the supporters of M. Broca's views.

STRYCHNIA IN EPILEPSY.

By WALTER TYRRELL, M.R.C.S.

Since writing my last paper, which appeared in this journal April 18, 1868, I have steadily pursued my observations of the effect of this remedy in the epileptic; and as my field of experience has been larger, I have many facts to communicate, some of which have a most important bearing upon points of treatment. I have been enabled to define more clearly the class of cases which are to be benefited by the remedy, and to point out those for which relief must be looked for in other directions. Speaking generally, however, I may say that my original opinion as to the great value of this remedy in a very large class of cases is much strengthened, and quite borne out by the results I have obtained. I have had under my care in all, during the year, 74 cases, 53 of which I have treated with strychnia or brucia,(a) 18 with bromide of potassium, 2 with sulphate of zinc, and other remedies, and 1 with nitrate of silver. Taking, first, the treatment by strychnia; in 40 cases, the results have been very good. The number of months under which they are arranged shows the length of time since the cessation of the attacks.

Nine months.	Six months.	Three months.
6	9	13

The remaining 12 cases have come under treatment too recently to allow of reliable results. In 13 the results were unsatisfactory, 7 receiving temporary benefit, 6 being unrelieved. Taking the 18 cases treated by bromide of potassium, and classing them in the same manner, the results were as follows:—

Nine months.	Six months.	Three months.
3	3	6

Of the rest, 2 are recent and 2 are unbenefited. The 2 cases treated by sulphate of zinc are slightly relieved. The one treated by nitrate of silver is still under treatment.

Then with regard to the class of cases in which the remedy has been found of most service, any one of any experience of the disease must have seen how frequently it occurs in persons of exalted nervous sensibility, acutely sensitive to every sound or touch, and easily moved by sudden mental emotions. Now, it is where this highly strung nervous condition exists that strychnia seems to produce the best effects. One very large class I may particularise—viz., that in which this nervous condition exists in conjunction with irregular menstrual functions. The attacks have frequently come on at from 12 to 16 years of age, and are often marked by a certain periodicity, being more frequent at or about menstrual periods. They are often violently convulsive, but sometimes seem more allied to hysteria, and take the various forms of that protean disease. Another class of cases in which much benefit may be expected from

(a) Brucia proved a decided failure.

strychnia is when the disease occurs (often in the form of "petit mal") in children—usually girls—and where it would appear to be often congenital, and sometimes coupled with arrested development in one or more limbs. Here it is accompanied by a weak, nervous, and more or less imbecile condition of mind. It is astonishing how much may be done for these cases by a steady perseverance in the use of strychnia. The dose required is not large, and should be gradually increased from the first, and coupled with cold salt-and-water bathing, and a liberal and nutritious diet.

In young persons of either sex in whom the disease has come on at puberty, and where there is much nervous depression, strychnia will be found to be of great service. I may here mention one very curious fact which I think tends to show the great effect that strychnia has in regulating the system, probably through the vaso-motor nerves. I was consulted by a gentleman, aged 40, in whom the attacks had come on at or about puberty, after the stoppage of a periodical epistaxis to which as a boy he had been subject. I placed him under strychnia, and the attacks, which had been violently convulsive and very frequent, yielded in a marked manner to the treatment, and, with their subsidence, the epistaxis was to a certain extent restablished. This is probably the key to the *modus operandi* of the remedy in cases of obstructed menstrual discharge. The observation of this fact led me to another—viz., that in many cases after the attacks of convulsion have given way, it is necessary to establish some form of counter-irritation, which, by acting as a derivative, may relieve the system of the superfluous amount of nervous power thrown upon it by the sudden stoppage of the convulsions.

In several cases of epilepsy, in which the convulsions have been very violent, and the patients of full habit and vigorous circulation, I have used the bromide of potassium with the greatest benefit; but I wish here to narrate two cases in which, after the bromide had failed to relieve the convulsions, strychnia produced the desired effect. I shall also endeavour to show why the latter remedy was successful, and what guided me in recommending its use in those particular cases. The first case is that of S. S., aged 60, a widow. She was always hysterical as a girl. Three years since she lost her husband, at which time she was much distressed, and worried, by want of means. The attacks were very convulsive, from two to three in the month. Has slight warning of the attacks in a general nervous feeling of depression. Soon after the commencement of the attacks she was ordered bromide of potassium in ten-grain doses twice daily. It produced great pain in the head, but no amelioration of the fits. This dose was afterwards increased to ℈j., but with no better effect. I saw her first in the spring of 1868, at which time she was in the following condition:—She was in a very low, depressed, nervous condition, complaining much of pain in the head; her memory was a good deal impaired; appetite poor. I prescribed for her as follows:—℞ strychniæ sulph. gr. ij., acidi sulph. dil. ʒ ij., aquæ destill. ʒ xij. To take one tablespoonful twice daily. The first sign of improvement was a complete cessation of the headache, which had been most distressing, and a more regular action of the bowels, which had been much constipated. From this time she has had three attacks, but of much altered character, having lost their convulsive nature, and being more like syncope. Since October last she has been altogether free from convulsion, and her health has improved in a marked manner. Now why, in this case, should strychnia have acted so well, and bromide of potassium, if not injurious, have been utterly inert? I believe the secret is in the nature of the nervous constitution of the patient, which, in this case, required to be toned and braced, and therefore the sedative action of bromide of potassium was thrown away.

In the next case the result was equally marked.

A. C., aged 21, came under my care two years. She is a nervous hysterical girl; the attacks came on at 8 years of age, but she has suffered much more severely since the appearance of the catamenia, which have been irregular. In this case I first gave strychnia with temporary good effect, as she continued free from attacks for nearly six months. At the end of that time they however returned, when I placed her under ℈j. doses of bromide of potassium; the result was greatly increased pain in the head, but no cessation of attacks. The remedy was now carried up to the ʒss., but with no better result. She has now been taking strychnia in ½ gr. doses with entire relief of the headache, and a cessation from attack during the last four months. In both of these cases I think the reason of the failure of the one remedy and the success of the other is plainly due to their both being of asthenic character; and I should here wish just to restate the opinion I originally expressed as to the distinct nature of the two great classes of epilepsy. I then stated that I believed epilepsy might be reasonably divided into two distinct classes—1st. Sthenic, or that in which the causes of irritation are sufficiently strong to overcome the natural power of restraint possessed by the medulla oblongata. 2nd. Asthenic, or that in which there is a naturally weak medulla oblongata, giving a predisposition to irregular discharge of nervous power. It is then in the first class, or sthenic, that bromide of potassium produces such excellent results by the sedative action it produces on the medulla. In the second class, or asthenic, strychnia is undoubtedly most valuable. It is not in my hands alone that the remedy has proved successful. Many of my Medical friends have been induced to try it, and speak most highly of it. Among others I may mention my friend Dr. West, of Great Malvern, who has used it with perfect success in two cases recently, of which I am promised further details, which I shall hope to be allowed shortly to publish in this journal, together with several others which my limited space will not admit in this paper.

Beresford House, Great Malvern.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASE OF ACUTE PLEURISY—SLOUGHING OF LUNG—ABSCESS IN MEDIASTINUM—PERICARDITIS—JAUNDICE.

The case was that of a man aged 42, who was admitted into the Clinical Ward of Guy's Hospital, but lived only half an hour after admission. The accounts of him that could be procured were very meagre. He was a sailor, and had been quite well until two weeks ago. He had had severe pain in his right chest. He had been somewhat jaundiced for the last few days. After his admission he passed a little high-coloured urine; but he was too ill to be examined, and died without rallying.

The body was that of a well-built man, with black hair and beard and grey iris; he had strongly marked features of a good type; the nourishment was good; he was rather over fat, not much so; there was moderate jaundice, but no signs of cutaneous eruption, or sores or wounds. The cranium and its contents were natural; there were no ante-mortem clots in the sinuses of the dura mater, and both the temporal bones were natural throughout; the brain was healthy. Before opening the chest it was observed that the right side looked fuller, and its subcutaneous tissue was swollen, it was resonant to percussion anteriorly as the body lay, but dull in the dependent parts. On opening the chest a rush of fœtid gas escaped from the right pleural cavity, and this cavity was found to contain, besides the air, four pints and a half of dirty-looking, turbid, purulent, or semi-purulent liquid, which was loaded with shreds and flakes of yellow lymph in its dependent part. The membrane itself was coated with dirty-yellow lymph blended with its tissue, as if from disease of some duration. On attempting to inflate the lung, it was found that two openings existed in the upper right lobe; one in its antero-inferior part, and another in the interlobar fissure. These holes were in sloughing parts of the pleura, which was reduced to slack, fœtid, brown, slimy threads at both points for the space of two square inches. This sloughing state penetrated the lung to a depth of about from half an inch to an inch, the sloughing part being nearly dissolved, and the living part bounded by a sulphur-coloured surface, outside which were some few small patches of suppuration in the tissue. Outside the parietal layer of the pleura were in many parts signs of severe inflammation. At several points the intercostal muscles had pus infiltrated into them, but the chief seat of extra-pleural suppuration was in the anterior mediastinum above the pericardium, where an incipient abscess of the size of a plum existed, the tissue softened into pus, but no wall limiting it. This suppuration was severest immediately under the right pleura, and diminished and was lost as it was followed towards the left. The pericardium was acutely inflamed, coated with rough, firm, adherent lymph, evidently much more recent than that on the pleura. The diaphragm was depressed; its tissue in parts had in it extravasated blood. The left pleura showed early acute pleurisy over the lower three-fourths. The bronchial glands were swollen moderately, and much congested. The

posterior mediastinum was natural. The heart weighed 11 oz., and was healthy, except for the pericarditis. The pulmonary artery had in one of the branches of the left lower division a well-characterised adherent ante-mortem clot. It was lodged at a bifurcation, and extended half an inch into each division. Careful examination of the great veins of the trunk, pelvis, and limbs was made; but no ante-mortem clot was found. The liver weighed eighty ounces. Its upper surface was deeply depressed into a concave form by the thrust of the liquid in the pleura. It was at the same time discoloured. This part was connected to the diaphragm by old adhesions. The gall-bladder contained an ounce of dark bile, which came into the duodenum very freely on pressure; but the first few drops were thicker and more turbid than the stream which followed, as though there had been stagnation in the ducts. The stomach showed slight post-mortem solution in the dependent part of its great end; but the middle region of it had several ulcers or erosions. Some of these were small; others appeared cicatrising; two were of the size of shillings, and of angular form, and these penetrated to the muscular coat. They were in the lesser curvature. The intestines were natural, but congested. The spleen was large and soft, weighing twenty ounces. The kidneys weighed fifteen ounces and a half, and were very dark in colour, dripping with blood on section, and had their pelves spotted with ecchymoses. The bladder was injected, nearly empty. There was no swelling of the joints.

In this case the intensity of the inflammations was most severe. It was a very interesting question, what was the order of occurrence of these lesions? Was the pleurisy set up by the pulmonary gangrene, or the gangrene by the pleurisy? Had the mediastinal suppuration set up the pleurisy, or *vice versa?* There could be no doubt about the pericarditis that it was secondary in time to the other inflammations, because it bore obvious marks of recentness. But a right conclusion concerning the other grave items of the case was a matter requiring careful deliberation. First, as to the mediastinal suppuration, although this was very extensive, yet there were two points that rendered it improbable that it was primary. First, it was not circumscribed by any wall, so that it thus wanted proof of having been of many day's standing: and, secondly, it was not indifferently distributed in the mediastinum, but rather was very significantly lodged just under the inflamed pleura, and was most severe as it was traced towards the pleura; all this looked more as though it had come from the pleura than as though it had gone to it. Again, if mediastinal suppuration had thus spontaneously arisen, it would have been a very curious thing. It is not a common seat of primary phlegmon. Of the three acute cases Dr. Moxon had seen, one was an abscess in the anterior mediastinum, the remains of a pyæmic suppuration of some months' duration. This one burst into the left pleura, causing fatal pleurisy. Another was an extension from phlegmonous suppuration in the neck under the cervical fascia, which excavated the mediastinum, and came forward between the third and fourth left ribs, and the last one only was primary—a very curious case recorded by him in the Pathological Society's *Transactions*, in which there was sub-pleural lymph about the roots of the lungs, and great acute inflammation of the bronchial glands. Thus against the belief that the mediastinal suppuration was first in order, there lie its recentness, its position, and its rarity, or, in other words, improbability. Was, then, the pulmonary gangrene the first change? This was not likely, because there was so little other disease of the lung—only a few small patches of suppuration about the gangrene—and because the gangrene was spread along the surface, and did not penetrate, its width being four or five times its depth, so that it lay as belonging to the pleural surface rather than the pulmonary tissue. Circumscribed gangrene of the lung is common enough as the result of pyæmic infection of the blood when the primary source of infection is a necrotic bone or a gangrenous wound; but there was no such primary source, and further, the distribution did not correspond; such secondary gangrene is symmetrical, and affects chiefly the lower lobes. Gangrene from acute pneumonia has the appearance of a fœtid demolition of the hepatised lung, the hepatised part being found about the gangrenous part; but there was no hepatisation here. Dr. Moxon alluded to a remarkable case which came under his notice, in which, after an acute illness of short duration, he had found the substance of the tracheal and bronchial mucous membrane in a state of suppuration, being raised in yellow patches charged with pus. In this case there were numerous little gangrenous patches throughout the lungs, and there was acute pleurisy. This case somewhat resembled the present, for here also the trachea and bronchi were intensely inflamed; but there were greater differences than likenesses. The shallow patch of subpleural gangrene pointed in this case rather to extension of disease from the pleura, as did the position of the mediastinal suppuration; still it was remarkable, if so, that the extension should occur in the interlobar fissure. Again, as proving that the pleurisy tended to infect the tissues underlying the pleura in this case, there were the formations of pus in the intercostal muscles, and the extravasations of blood in the diaphragm. On the whole, then, this remarkable case appears to be one of excessively intense pleuritis, reaching such a severity as to lead to suppuration and even gangrene of the underlying parts. As to its cause, here unfortunately the history is imperfect. There was no source of purulent infection, and no sign of fever; but it is difficult to suppose that acute pleurisy from exposure would put on so severe a form without some internal cause aggravating its severity.

THE INFIRMARY FOR EPILEPSY AND PARALYSIS.

ON THE USE OF GALVANISM IN THE TREATMENT OF CERTAIN FORMS OF EPILEPSY.

(Under the care of Dr. ALTHAUS.)

(*Continued from page* 438.)

Case 2.—*Irregular Attacks of Petit Mal—Galvanisation of both Hemispheres, and of Medulla Oblongata.*

JOHN F., French polisher, aged 36, married, admitted November 27, 1866, has for the last six years suffered from irregular attacks of petit mal, which come on in the following manner:—While he is at his work, or maybe at dinner, and without any apparent cause, he suddenly feels severe pain at the back of the head, and a thrilling sensation seems to go through him, as if he were going to die. Sometimes it appears to him "as if a vapour rose on his brain and muddled him." This lasts only about a second, and he then quite loses his consciousness for about a minute. While he is in this condition, he generally does something odd—for instance, he scratches the plate with the knife, or tears up paper or his clothes, or pulls a handkerchief over his head, or, if in the street, puts mud on his clothes, etc. When he comes out of these attacks, he feels very confused, and sees double for two or three minutes. Within an hour or two he has quite recovered himself. These fits come two or three times a week, generally only one in one day, and only very rarely two or three at a time. He attributes his illness to a great deal of trouble and anxiety. He also had a great fright some years ago, when he was awoke by an alarm of the house being on fire. He has never drunk or smoked to excess. Mother was hysterical, father died of consumption. Digestion out of order; has lost flesh lately. Four years ago was operated upon for fistula in ano. No tubercle in lungs, but general emaciation. Ordered ol. morrh. ℥ ss. bis die, and argenti nitr. gr. ss. bis.

January 8, 1867.—Digestion improved; has gained flesh; looks much better; fits much the same. Continue ol. morrh.; argent. nitr. gr. j. bis die.

February 5.—Is now in good general health, but petit mal no better. Discontinue ol. morrh. and argent. nitr.; ordered zinci sulph. gr. ij. ter die.

March 19.—Zinc has gradually been increased to gr. xxx per diem, but has had no effect except to confine the bowels. Continue it for another fortnight, taking pil. coloc. co. for constipation.

April 2.—Petit mal the same. Ordered misturæ amaræ (consisting of extr. quass. gr. iij. to the ounce of water) ℥j. bis, and galvanisation of both hemispheres and medulla oblongata twice a week.

May 7.—Since galvanism was commenced has had only one fit, in which he tore his waistcoat. Rep. mist. amar. and galvanism.

October 15.—Has had altogether fifteen applications of galvanism, and no fit during the last four months. Ceased attendance.

Case 3.—*Epileptic Fits, with Aura starting from Epigastrium—Frequent Auræ without Fits—Galvanisation of the Solar Plexus.*

Harriet S., aged 26, unmarried, admitted April 25, 1866. Eldest child; works at a sewing machine. Says that she had an aunt and a cousin who died of fits. When she was a child of about 4 years they gave her a "roundabout" at a fair, after which she was first taken. When she was 15 the fits became worse. She was only menstruated at 18, and the fits then began to occur chiefly about the menstrual period, although she was by

no means quite free "between times." She has now generally a series of six or eight fits about the time of the catamenia, and two or three off and on between. The fit is the usual epileptic one, with biting of tongue, and convulsion for about five minutes. It is ushered in by an aura running up from the epigastrium to the head, lasting a minute or half a minute. She describes it as a sort of creeping or crawling, which gradually proceeds upwards, and she loses consciousness when the crawling arrives at the head. Aurae frequent without a fit—sometimes four or five in one day. She fears the aurae very much, as they leave her breathless and in a state of excessive alarm. She says that they are worse at full moon. She sleeps very badly, and is sometimes so restless at night that she is obliged to take "a penn'orth of laudanum," which makes her stupid the day after; dreams a good deal, generally of horrible things; is irritable and low-spirited: says that the least thing upsets her so, "as if she had the palsy;" appetite ravenous; bowels costive. Ordered potass. brom. gr. xv. ter die, with mx. of tinct. hyoscyami; emplastr. lytt. to epigastrium.

May 23.—At last menstrual period had only two fits instead of six or eight as usual, and none "between times." Feels better in herself; aurae not diminished in frequency, although blister has been repeated three times. Ordered a lotion of equal parts of tincture of iodine and water to be freely applied to starting-point of aura. Continue bromide.

June 16.—Has had one fit since, but says that "sensations have been dreadful." Ordered pure tinct. iodi to be applied to the epigastrium.

June 30.—Iodine has blistered the skin; aurae no better. Positive pole of twenty cells, with large conductor, to solar plexus, negative to ganglion cervicale superius of cervical sympathetic, first at right, then at left side.

July 7.—Was five days without an aura after application of galvanism; had two yesterday, but they had not nearly the same effect upon her as usual. Rep. galvanism, continue bromide.

August 4.—Has had neither fit nor aura; mental health wonderfully improved.

October 9.—Has had altogether eleven applications of galvanism. Neither fit nor aura for three months. Ceased attendance.

Case 4.—Convulsive Seizures—Aura within the Range of the Left Cervical Sympathetic—Galvanisation of that Nerve.

William R., aged 36, married, a blacksmith, admitted February 26, 1867. Eldest child. Mother has been paralysed for ten years, father "has had touches like this." When he was 7 years old two brieks fell on his head, and he was very ill some time after. Had his first epileptic fit when 18 years of age, and since then has hardly been free from them for a single month. During the last two years they have been more troublesome, and he has now three or four every week, which are of the usual epileptic character. The fit is preceded by what he calls "a rush." Something seems to rise up from his heart to the left side of the neck and head; these parts begin to tingle and to throb; he gets very hot there; left side of face and neck "looks like pickled cabbage." The other side of face and neck never participates in the disturbance. "Rushes" come on frequently without a fit; he feels as if he were "going off," but does not. He always feels very bad after a "rush;" is bathed in perspiration; "the whole body is in a steam." Is altogether very nervous, often feels giddy, and is afraid of being left alone. Tongue yellow, appetite bad; bowels do not act without medicine; urine contains sediment of urates. Ordered argent. nitr. gr. ¼ bis die; pil. aloes cum myrrha at bedtime.

March 26.—Digestion improved; bowels more regular. Fits and aurae the same. Argent. nitr. gr. ss. bis.

April 23.—General health much better; no improvement in fits and rushes. Arg. nitr. gr. ss. ter.

May 21.—Same report. Discontinue arg. nitr., take potass. brom. gr. xv. ter die.

June 18.—Feels well in himself, but no change in fits and aurae. Potass. brom. gr. xx. ter die.

July 23.—Fits less numerous and less severe. "Rushes" very troublesome. Rep. mist.

October 15.—Has not attended quite regularly since, but has been a good deal better as regards fits. Rushes the same. Rep. mist.

November 26.—No improvement in aurae; no fits since was here last. Galvanisation of less cervical sympathetic; continue bromide.

December 10.—No rushes since galvanism was first applied.

January 28.—No fits nor aurae since. Ceased attendance, after having had ten applications of galvanism.

Case 5.—Epileptic Attacks—Aurae starting from the Mucous Membrane of the Nose—Galvanisation of the Olfactory Nerve.

Richard S., aged 42, unmarried, a carpenter, admitted September 18, 1866. Twenty years ago he went to South America, where he had a sunstroke, and remained very ill for some time afterwards. Since then he has been, off and on, subject to epileptic fits. At first they came at very long intervals, but now he has generally one or two every week. They are preceded by the perception of an abominable smell, either of tainted meat or fish, or rancid fat. Sometimes there is an interval of six or eight hours between the first perception of the smell and the fit, while at other times the fit occurs close upon the smell becoming perceptible. Occasionally, however, he has a bad smell and a pain across the nose without a fit. The convulsions last two or three minutes. General health tolerable, but he cannot masticate very well, as all his teeth were knocked out by blows he got on board ship. Ordered calc. hypophosphitis gr. v. ter die.

October 23.—No change, although the dose has gradually been increased to gr. xxx. per diem. Potass. bromidi gr. xv. ter die.

November 27.—Feels clearer in head, and sleeps better. No change in fits and aurae.

December 11.—Has had headache and palpitations of the heart. Fits the same. Potass. bromidi gr. xx. ter die, with gr. v. of ferri et quin. citr.

January 22.—Feels not so well; is rather weaker than usual. Fits the same. Ferri et quin. citr. gr. x. without potass. brom. An insulated sound with metallic top, and connected with the negative pole of fifteen cells, is introduced into the cavity of the nose, the positive pole being placed to the mastoid process of the same side, two minutes to the left, and the same to the right side.

29th.—Has had no fit since and no bad smells. Rep. mist. et galvanism.

March 26.—Has had eight applications of galvanism, and only two fits since it was first used. Smells have become less annoying and strong.

July 9.—Has had altogether fifteen applications of galvanism. Smells have quite disappeared, and no fits during the last two months. Ceased attendance.

Such results as these are very encouraging, but it should be added that they are not always so satisfactory. It would appear, indeed, that in some cases which seem to be very well suited for the application of galvanism it nevertheless produces little or no benefit, while in two cases which have been under Dr. Althaus's care, the remedy seemed to disagree with the patients. The following is one of the latter kind of cases:—

Caroline B., aged 27, single, admitted March 2, 1868. Had her first fit eight years ago after a violent storm. With the exception of an attack of "inflammation of the bowels," which she had ten years ago, has always been in tolerable health. No family history of nervous affections. Fit is ushered in by an aura starting from the epigastrium, similar to that in Case 3. Galvanism was used in her case three times. After the first application "she had such curious sensations that she did not know what to do;" she felt reeling and giddy, as if she had been drinking. A second shorter application had the same effect, and after the third she had a bad headache and felt unable to do anything for a day or two. It was therefore given up. Such idiosynerasies must, however, be very rare, as amongst sixty-four epileptics in which Dr. Althaus has used galvanism, the application of it disagreed with only two. Further observations will show whether the immediate benefit which is perceptible in the large majority of cases will be permanent; but there is now sufficient experience to show that, in well-selected instances, a judicious use of the continuous galvanic current may be of essential service.

LEEDS GENERAL INFIRMARY.

NOTES ON SOME CASES OF DISEASE OF THE NERVOUS SYSTEM.

(By Dr. CLIFFORD ALLBUTT.)

The following cases of disease of the nervous system have recently been, or are still, under the care of Dr. Clifford Allbutt. The first is, perhaps, an almost unique case of speechlessness. John Wood, of Drighlington, a healthy man of about 30, was struck down in a row, and fell with his left temple against an iron plate. He was stunned and sick for a time, and was taken home to bed. He quickly recovered from this, but was then found to have entirely lost the power of speech. It is

reported that there was some drawing of the face to the left for a day or two; but this is doubtful. On admission into the Infirmary under Dr. Allbutt his appearance was that of a vigorous and active man of about thirty years of age, with a bright intelligent manner, fully alive to all that was going on about him, whether words or deeds, and presenting no palsy or weakness of any kind except almost complete loss of speech. "Yes" and "no" he was able to say, and said them appropriately, though drawlingly and hesitatingly, and in addition to that he had one of those meaningless interjectional expressions which Dr. Jackson has described as perhaps issuing from the right hemisphere. He would say "just once," pronounced in a very drawling way, and this was the only reply to be had to any question not admitting simply and directly of "yes" or "no." There was a scar upon the left temple, the part struck. Dr. Allbutt showed the patient to Professor Laycock, to Dr. Crichton Browne, and several other Medical men. The only treatment seemed to be to teach him to talk, and he was accordingly placed under the tuition of another patient, who gradually instructed him in his alphabet, and in counting twenty. In counting twenty he constantly confused numerals and ordinals—thus, "one, twice, three, etc.," trying to puzzle the words out, and shaking his head in a bewildered way when he could not manage them. Fortunately he had been taught to write his name before the accident, and when asked soon after admission to do it, he readily took up the pen, squared his elbows, and set to work in a masterly manner, but only brought forth a series of irrelevant marks, made, however, as laboriously and carefully as though they were full of meaning. When he had been in the house about a fortnight and had some practice, he wrote his name so much better that an acute bystander who did not know his name at last puzzled out "John Wood" to the patient's evident delight. Since that time he has learnt to write his name more clearly. The case was one which greatly exercised the natives of Drighlington, who were disposed to see a special interposition in the matter. When he went home, Mr. Sykes, under whose care he had previously been, took charge of him again, and reported slow improvement in his speech. The patient called to see Dr. Allbutt again about eight weeks after the accident, and when asked how he was getting on he replied after some effort "first-rate," but he could make very few replies, and these only after much hesitation.

By the kindness of Mr. Sykes Dr. Allbutt was again able to observe this patient, after the lapse of five or six months. He had had several "fits" in the interval, but Mr. Sykes had not seen any of them and cannot therefore describe them. He thinks they were epileptiform. The most interesting fact, however, is that he now presents decided paralysis of the right arm and some little weakness of the right leg. This, he says, was left by the fits. He has been readmitted into the Infirmary. His speech is very little better, but he counted twenty slowly and carefully with but two mistakes, one of which was "four times" in place of "four."

The next case is a curious instance of instability in the olfactory centres probably due to deterioration of tissue, due in its turn to diseased vessels.

Ann M., aged 50, was first admitted into the Leeds Infirmary on Sept. 4, 1868, under Dr. Allbutt. Two years before, when in good health, she was seized by a fit in which she struggled very much, and from 10 a.m., the time of this fit, she had "struggling fits" alternating with insensibility until 4 p.m. For ten months after she enjoyed tolerable health, when she had again convulsions, said to be bilateral.

A few weeks after this, again, she had a seizure such as she now has frequently. A terrible smell, "like rottenness or drains," and almost insupportable in its abominable impression, comes on and lasts for about two minutes, when she "goes right off" into unconsciousness without any struggling whatever. At first she had about two a week; now she rarely passes a day without one. Since these attacks began her memory has given way a great deal, and is getting worse and worse. After the attacks her speech is much affected; she tries to speak, and *has a mental vision of the words*, but cannot speak them. She is quite intelligent of incoming language. In about two hours her speech returns gradually. The right optic disk is whitish, and with this eye she can only read No. 10 Jäger. The left optic disk is decidedly atrophied, and the vessels very fine. She cannot read any print with this eye.

The following case is very interesting. A gentleman lately consulted Dr. Allbutt for these symptoms:—Mr. B., a slight, but not unhealthy-looking, man, of about 30, who had been much harassed and overworked, but who was not apparently suffering from constitutional ill-health, was seized some time ago in the following way, and the same attacks have often occurred:—In the first place there is tingling in the right arm and hand; this is followed by absolute blindness. The blindness lasts for at least twenty minutes, and sometimes for an hour, when it passes off, and speech is then totally lost for perhaps another hour or more. The speechlessness is complete, the patient, who is an intelligent person, being quite dumb, though in full possession of all the instruments of articulation, and fully perceptive of incoming language and *able to summon up words before his mental vision*. Again, although there is no spasm or paralysis of the arm except the initiatory tingling, he is yet quite unable to perform those movements of expression which we usually register with a pen—in a word, during this time, he cannot write down the simplest sentence. After the time stated he is slowly released from his thraldom, is often sick, and then, some drowsiness excepted, returns again into a normal state, the speech being ready and intelligent and the eyesight quick and sufficiently strong. Periodic instabilities of this kind are not confined to the encephalon. The spine may fail in the same way, as in the following case of a gentleman who was sent over to consult Dr. Allbutt by Mr. Knight, of Rotherham. Mr. ——, a young and otherwise healthy man, of steady and trustworthy habits and disposition, was attacked in November, 1863, without apparent cause, with tetanus, which has frequently recurred up to the present time. It commences with formications in the extremities, sometimes with shivering, and then follow violent tonic contractions of the muscles of the back and limbs.(a) Then he throws himself forwards, and quickly again becomes arched backwards in complete opisthotonos. Sometimes there has been prolonged rigidity. The attacks sometimes continue for hours, and leave him much exhausted. Heat and other depressing causes increase their frequency; but sometimes three or four months have passed without an attack. There is perfect consciousness throughout, sight, optic disks, etc. unaffected (except extreme myopia, which is permanent). The hearing during the attacks is too acute. At first he used to be sleepy after the fits; now he seldom is. It seems clear that there is no sexual cause for these paroxysms, and all the functions are normal during the intervals. Mr. Knight has tried all sorts of treatment with little permanent effect. Is this case due primarily to tides in the blood-vessels of the spine?

Cerebral Concussion and the Optic Disks.

The following case is important on the negative side of ophthalmoscopy. Dr. Allbutt has so often found changes of the disks after railway and similar accidents that he thinks this case of great importance as showing that a person may receive a violent blow on the head so as to impair vision, but not to cause neuritis or anything like it.

Hannah H., aged 41, healthy, fell into a cellar upon the back of her head. She was picked up, and remained in bed for two days "between waking and sleeping." Some weakness of the lower extremities was complained of when seen (about ten weeks after the accident), also fretfulness and irritability of temper, loss of memory, unreasonable fears, drowsiness, and partial loss of vision. The heart is healthy, and there is no albumen in the urine. The disks are perfectly healthy, and there is no strabismus or other obvious abnormity of the eyes. She has been attending at the Infirmary off and on for eighteen months, and has slowly recovered. The disks were healthy throughout. Dr. Allbutt fears that in this case, had there been any object in malingering, as in the case of a railway accident, the negative ophthalmoscopic evidence would have led him to doubt the patient's veracity. The partial loss of vision continued for six or eight months. Unfortunately the field of vision does not seem to have been noted. Accommodation and refraction were normal.

The Stockton Board of Guardians have passed a resolution to establish a Fever Infirmary, and that no cases of fever shall be removed to the workhouse in future.

John Stephens, a carrier, has been fined £5, at the Devonport Petty Session, for unlawfully having in his possession, in a van, four quarters of a cow, which flesh was diseased and unfit for food.

(a) In a recent letter, Mr. Knight says that the premonitory symptoms no longer occur. He finds the internal use of chloroform most valuable for the severe attacks, and zinc with belladonna most valuable for subsequent slight ones, which generally continue for a day or two. Hypodermic injection of morphia gave no relief, and the introduction of the needle set up violent spasm. Mr. Knight has frequently examined the urine, which is normal, and contains no excess of phosphates at any time.

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Medical Times and Gazette.

SATURDAY, MAY 8, 1869.

THE WATER DISCUSSION.

The large attendance, both of visitors and members, at the adjourned meeting of the Metropolitan Association of Medical Officers of Health last Saturday, the eagerness to speak which was manifested, and the vehemence of the tone in which the discussion was carried on, illustrate remarkably the importance which Medical men and chemists alike attribute to the subject of the sewage contamination of potable water. We give part of the discussion in another column, and feel it almost unnecessary to ask our readers to study it carefully.

Let us, to avoid vagueness, begin by stating in the most succinct manner we can the real points of issue in the present controversy. We do this even at the risk of some repetition, because the subject is so wide and branches out in so many directions that there is no chance of forming a definite opinion upon the statements now before us except by excluding with rigour all irrelevant topics. Things stand thus:—The Registrar-General, or rather Dr. Frankland, advocates a particular method of water analysis, and denies the accuracy and trustworthiness of other methods. Dr. Letheby, on the contrary, maintains that Frankland's methods are not trustworthy, and that those which he himself described in his paper the other day are so. Dr. Frankland believes that the oxidised nitrogen found in potable water, *minus* a certain calculable quantity introduced by rain, is in the main derived from animal sources. Of course, he does not assert that none of this nitrogen is introduced from other sources, but he believes that any such other sources are insignificant, and may safely be neglected. Hence he infers that the oxidised nitrogen found in a water is a measure of the amount of animal impurity which has undergone oxidation in it. To give a concrete form to this measure, he states the amount of average London sewage which would yield such a quantity of nitrogen; and this is the precise meaning of the term "previous sewage contamination." Dr. Letheby denies that the oxidised nitrogen of a water is entirely or mainly derived from animal sources, and maintains in particular that the nitrates often found in chalk water have no connexion with previous animal impurity. Of course he deduces from this belief the argument that the oxidised nitrogen is no measure of the animal contamination of a water, and that the use of the term "previous sewage contamination" is therefore erroneous and dangerous. Lastly, Dr. Letheby believes, and has stated repeatedly, that all noxious matters are oxidised in a water which is not contaminated with more than 5 per cent. of sewage, and which has flowed for ten or twelve miles down a river. Here Dr. Frankland demurs. He does not by any means deny the oxidising power of running water, but he ascribes to it a much less rapid action than Dr. Letheby assumes, and holds that it is utterly unsafe to trust to this self-purifying power for the removal of sewage from water. It is important to understand Dr. Frankland's argument upon this point clearly, because many of the speakers at the recent discussion beat the air by multiplying proofs that sewage was oxidised in water. Of course it is; otherwise, where would be the sense of the term "previous" in regard to sewage contamination? Dr. Frankland is constantly reporting that the organic matter in such and such a water is entirely, or almost entirely, oxidised before it is delivered for use. If he held that no oxidation took place in water, he would have to believe that all sewage contamination was "present," and his system would become an absurdity, a main part of his system being simply an attempt to infer, from the oxidised, the probable amount of unoxidised animal matters which the water has received.

These, then, are the chief points in dispute, and to these we shall confine ourselves, taking them in the order in which we have presented them to our readers. And first comes the question of the respective accuracy of the rival methods. Those described by Dr. Letheby are well known to all chemists. He does not appear to have introduced any new ones, or to have modified in any material manner those suggested by others. He mentioned the incineration method, but only to remark on its untrustworthiness, and we are therefore led to conclude that he relies on the permanganate process, on the determination of ammonia and nitric acid, to some extent on Messrs. Wanklyn, Chapman, and Smith's ammonia method, and, lastly, on the indications of colour, taste, and smell. These last may be put aside as merely qualitative, and only applicable to very bad water. The processes for ammonia and nitric acid are good in themselves, though it may be asked what is the use of estimating these compounds in a water if they give no clue to the animal contamination of the water? Professor Wanklyn has himself demonstrated that his method of analysis only indicates a part of the real contamination of the water. It is true he maintains that it is a constant fraction of the whole, but this has yet to be proved to the satisfaction of chemists, and is very improbable. The accuracy of the permanganate process, which had long been doubted by chemists, has been so completely demolished by the researches of Frankland and Armstrong, that it would hardly be too much to say that Dr. Letheby is the only chemist of repute in England who now uses it as a means of ascertaining the amount of organic matter present in a water. As an auxiliary test many still think it useful; but even considered in this light, the question naturally suggests itself, Auxiliary to what?

On the other hand, the method of Frankland and Armstrong pretends to no more than the determination of a few of the ingredients of a water. Total solid, ammonia, nitrates and nitrites, and organic carbon, and nitrogen are estimated with an accuracy which, considering the difficulties to be overcome, is marvellous. Mr. Heaton pointed out that in ten trial experiments recorded by the authors the error in the estimation of carbon never exceeded 5 per cent., and that in the estimation of nitrogen, with the exception of one manifestly bad experiment in which the error was nearly 12 per cent., it was never more than about 2 per cent. Messrs. Wanklyn and Chapman have, indeed, remarked that the absolute error in these trial experiments is greater than the amount of nitrogen and carbon usually found in potable water, and have argued that the method was therefore untrustworthy; but to this Mr. Heaton replied that the argument was founded on the fallacy of assuming that the absolute error observed in the trial experiments would remain the same in the estimation of smaller quantities of the elements. The *percentage* error might perhaps be greater, but the *absolute* error must of necessity be less. On the whole, most chemists are

agreed that the new method, though not by any means perfect, is immeasurably superior to all others in use, and that its results, as far as they go, may be safely trusted.

The origin of the nitrates in potable water, and the consequent suitability of the term "previous sewage contamination," involve the consideration of at least two distinct cases which have been too much mixed up during the discussion. There is, in the first place, the case of the chalk well-waters and the nitrates they contain, and in the second that of the water of the Thames, the Lea, and other rivers. In the first the origin of the nitrates is a matter of inference. Dr. Frankland, seeking in vain for any evidence of the formation of nitrates from vegetable substances, and knowing the ease with which they are yielded by the oxidation of animal bodies—knowing, moreover, the great porosity of chalk-beds—attributes their origin exclusively to the previous presence of some form of animal matter. It is an entire mistake to suppose that he assigns it in all cases to *sewage* in the ordinary sense of the term. It may be due, he argues, to the oxidation of animalcula, of extinct animals, or of land drainage which has infiltrated from the often-manured lands above. In any case his argument applies equally well. While Dr. Letheby denies such an origin for the nitrates of chalk waters, he fails to account for their presence there. We may conclude that he has no evidence to prove the formation of nitrates from vegetable matters, and if he alleges that the salts are natural constituents of the chalk, we naturally ask why it is that nitrates are not *always* found in such waters, and why it is that, when they are found, it is always in places where drainage infiltration might naturally be expected to occur. It appears to us to be highly probable, though not certainly proved, that all the nitrates of chalk waters have had such an animal origin; but whether it is desirable to measure this previous contamination by the same test that is applied to the water which has received the sewage of a town is a different question, and one which may well be doubted. For the previous contamination, whatever it may have been, cannot in every case be proved to have been sewage contamination, and although we perfectly appreciate and have endeavoured to explain the sense in which the expression is used, and although we admit the great advantage of having a common standard by which to compare waters derived from different sources, we are compelled to believe that the phrase is an unsuitable one as applied to such waters. The whole course of the recent discussion showed how liable it is to misconstruction, and in spite of every advantage we find it impossible to forget that it groups together under a common name phenomena which are essentially different. For even admitting with Dr. Frankland that the present putrefaction of animals long dead would be as likely to prove injurious to human beings as that of the animals of to-day, we must remember that the great objection to sewage lies not in its liability to mere putrefaction, but in the probability that recent human excretions may convey into the water the germs of epidemic disease. Putrefaction is bad enough, but the other danger is tenfold worse.

In speaking, moreover, of the *porosity* of chalk, and its consequent power of filtration and oxidation, we must not forget that chalk has fissures and faults; that it is often made to absorb house sewage by means of *dead* wells; and that it may suck up vast quantities of polluted river water if a fault lie across its course. Geologists say there is such a fault across the Thames from Dartford to near Grays. We see nothing impossible in the idea that nitrates from animal sources may pollute any chalk well near a river. We should like, by the bye, to know the amount of *common salt* contained in various chalk waters.

With regard to the case of river water and well water known or strongly suspected to be contaminated with sewage, our criticism is very different. In the case of the Thames, the Lea, and the surface wells of London, for instance, there can be no reasonable doubt that the nitrates, nitrites, and ammonia found, do arise mainly from the oxidation in the water of sewage matters. The thing scarcely requires proof. We know that nitrogen-containing sewage is introduced into, and is oxidised in the water, and if no analysis of the water had ever been made, we might safely have asserted the existence of the oxidised forms of nitrogen in it. Other sources of nitrogen in Thames water must be utterly insignificant compared with the mass of human excrement which we know are daily thrown into it. To describe the previous contamination of such water as *sewage* contamination is to state a bare fact, and the standard of average London sewage is the best that could have been selected. It is perfectly true, as Dr. Letheby argued, that water which has been largely contaminated with sewage may, by the purifying action of vegetation, have so completely lost its nitrates as to indicate no previous sewage contamination when judged by Dr. Frankland's standard; but that only points out the necessary and admitted imperfection of the new method. As Dr. Frankland stated expressly, his method only indicates the *minimum* of contamination. If the products of oxidation have passed out of the water, it is obvious that they cannot be used as a measure of anything. All that is asserted is that the previous contamination *could not have been less* than the quantity indicated, although in many cases it must have been much greater. We may mention incidentally that this consideration explains the apparent anomaly indicated by Dr. Carpenter in regard to Croydon, where Dr. Frankland's method indicated a smaller sewage contamination in the water after actual admixture with sewage and filtration through the soil than it did in the same water as drawn from the well. The land removes the nitrates from water, and it might therefore happen that the previous sewage indication might be less instead of greater.

The only point that remains to be considered is the power of running water to purify itself. We have before remarked that no one doubts that power, and that the only question is in regard to its extent and rapidity; and here we have to observe that the burden of the proof in this matter lies with Dr. Letheby. He makes a positive statement. He says that sewage diluted with twenty volumes of water will all be oxidised in a run of ten or twelve miles. We all know that the poison goes in, and we very naturally want proof that it is always and completely destroyed under the circumstances indicated by Dr. Letheby. The dangers to which sewage-contaminated water is liable were so clearly summed up in the masterly speech of Dr. Ballard that we need not recapitulate them. In the face of such dangers we have a right to look for irresistible evidence of the removal of all noxious matters from our water, and without such irresistible evidence the Medical Profession cannot and ought not to be satisfied. Dr. Letheby denounced, in terms so strong as to draw from the President a gentle hint that he was verging upon the "unparliamentary," what he called the alarmist language of the Registrar-General, and was eloquent on the dangers with which such language was fraught. He must excuse us if we retort some of these charges upon himself—if we remind him that no danger is so great as an unreal guarantee of safety, that no prophet is so much to be dreaded as he who cries "Peace, peace!" when there is no peace, and should be none.

THE REGISTRAR-GENERAL'S WEEKLY RETURNS FOR LONDON AND THE PARIS "BULLETIN DE STATISTIQUE MUNICIPALE."

We have before us a volume of the well-known "Weekly Returns of Births and Deaths in London, published by the authority of the Registrar-General," which has, we believe, been continued for twenty-seven years; and the Paris "Bulletin de Statistique Municipale," published every month by the orders of Baron Haussmann, Prefect of the Department of the Seine, which has just completed the fourth year of its existence.

From the nature of the subject, both contain much in common; yet the differences are striking and typical. The London Return is weekly; the Parisian Bulletin monthly. The London reaches us every Wednesday, and contains an enumeration of every death and the cause thereof registered up to the previous Saturday night; the Parisian does not generally reach us till four months after the date of the events recorded, and those for November and December, 1868, have but very lately been issued. On the face of it the Parisian is more imposing and imperial, its luxurious printing and quarto size being a contrast to the eight hastily printed octavo pages of the London Returns; but then it must be remembered that the latter are supplemented by elaborate summaries every quarter, and by an annual preface, not to speak of the space which London occupies in the Annual Reports of the Registrar-General. It is hence no wonder if the Paris monthly Bulletin seems at first glance a completer work. Each number contains articles on topography, on population, and an appendix of *Variétés*—that is to say, of miscellaneous information on various statistical subjects. Under the head of topography we have a most complete set of observations, meteorological and pluviometrical, relating to Paris, Versailles, St. Maur, and Auhervilliers. These are very minute, and include the *length* of each day, the *absolute* temperatures at six various hours each day, the *mean* temperature of the day and of the twenty-four hours, with its *relation* to the normal mean as determined by twenty-one years of observation; the barometer and hygrometer, the direction and force of the winds, the state of the sky, the amount of rain, the general state of the atmosphere throughout France, and general remarks relating to the meteorology of Europe for each day. To this follows the measurement of the rain at eight stations in Paris; the temperature of the various potable waters as distributed for consumption; the height and quality of the Seine water; and the quantity of water delivered over Paris from eight centres of distribution. The Bulletin in all these matters is more minute, and enters into more details, than the Returns; but be it observed in this, as in other points, the Paris Bulletin can *command* information, while in London it is supplied voluntarily, if at all. Then follows a table of births in each quarter and arrondissement, specifying the total number, sex, legitimacy, of the births for each day. Amongst other things, it is recorded of *natural* children whether they are *reconnus* or not; and the *reconnus* are to the non-*reconnus* as 3·5 to 11·8. Next follow marriages; then deaths, in every mode of classification—the number each day of either sex and in each arrondissement; deaths arranged as to their causes, and arrondissement, and ages; the ages in days of infants who die; the proportion of deaths from the most fatal groups, as phthisis, pneumonia, bronchitis, apoplexy, etc., etc.; and the account of stillborn infants. Under the head of "Variétés," the number of matters treated of is surprisingly large: the number of tenants to the water companies; the number of bakers; the prices of bread, and quantity consumed; the quantities of all articles of consumption whatever introduced into Paris—such details, in short, as can be obtained only under a *strong* government with an *octroi* at every inlet into the city. Altogether, the Bulletin is a most complete work, creditable to the powerful government under whose auspices it is compiled, and to the able statisticians who execute the task. If more perfect, however, from its containing much that cannot be obtained at all here, and because it combines the functions of our Quarterly and Annual Returns, there is one point in which it clearly belongs to a different type from the London Weekly Returns. The Bulletin is merely statistical, colourless, unimpassioned; it is a magazine of enumerated facts for the philosopher at his leisure; it has no immediate use: we cannot imagine any one waiting impatiently for it, and acting at once on the information it brings. Not so with the Returns. They are part of our everyday life and feelings. They are not Imperial, but popular; and whilst they may show grounds for legislation in the future, they teach people to protect themselves now. The Bulletin gives no one personal or local datum less than an *arrondissement*; the Returns tell us actually the number of the house, all but the name of every person who has died under circumstances which may be dangerous, or which ought to be a warning, to the public. Amid all the exquisite pluviometrical details of Paris, there is not a word as to the chemical composition of the waters. There is for a free people, accustomed to act for themselves, no boon so great as immediate publicity. We thank Heaven that we want no paternal Government to treat us as imbeciles, to hide or deny pestilence, and so allow us to breathe infected air and drink infected water without knowing it. As for the cholera time of 1866, when, with no other motive or reward than the consciousness of doing his duty, the Registrar-General and his officers organised a system of daily immediate publication of the time and place of every death amongst our population, it is impossible to estimate the comfort afforded to the London community, whether private citizens, Medical Practitioners, and, above all, to Medical Officers of Health. Those daily Returns were the terror of hotels, lodging-houses, and owners of small property, and equally a protection to lodgers and tenants. Travellers had some reasonable guide as to whether they should come to town, or to what part of it. Health officers knew where to look for and stamp out the seeds of disease. Above all, on the East London water question the acuteness and courage of the Registrar-General's officers were shown in a manner not yet recompensed, but not soon to be forgotten. They isolated the disease, scrutinised causes, and then fixed upon the waterworks as guilty, defying a powerful, astute, and resolute combination of proprietors, who would leave no stone unturned and not neglect any means of rebutting the charge and retaliating on their assailant if they could. We should expect no such function as this to be performed by the "Bulletin," and we can but congratulate ourselves that the London "Returns" have a flexibility, a feeling, a power of blending themselves with the human interests of the day, and are capable of unbending the rigour of cold statistical science in order to save the poor and heedless from death by sickness or violence.

ARMY HOSPITALS AND SURGEONS.

In many of the essays on army Medical administration that have recently appeared, two separate questions have been mixed up, and treated as if they were only one. Whether a system of general Hospitals shall be established throughout the service, to supersede the regimental, and whether the present division of staff and regimental Medical officers shall cease by the total abolition of regimental Medical appointments, are questions which have now to be treated as one, instead of being discussed separately and on their respective merits. With regard to general Hospitals, the necessity for such establishments at or near ports where troops either in times of peace or war embark or disembark is fully acknowledged, but the fact is no less acknowledged by almost every officer of experience that such institutions, with their peculiar and burdensome system of routine and administration, their staff of governors, "captains," purveyors, nurses, registrars, and so on, are utterly unsuited to other than a stationary existence—that they are unadapted for the actual purposes of an army in active service against an enemy, and, being so, are, in fact, properly speaking, scarcely entitled to be considered military Hospitals at all, as that term is usually employed. Under all circumstances, they must during a campaign be entirely subordinate to regimental and field Hospitals. On the subject of regimental *versus* staff Medical officers, it is to be feared that the teachings of the past have in some measure been lost sight of. In the desire now so apparent to withdraw Medical officers from, and only attach them to regiments, it may not be generally known that, instead of introducing really a new and improved system, we are but taking a step backwards to conditions that more than seventy

years ago were found to be untenable. Towards the latter end of the last century it was found necessary not only to have regimental Medical officers, but also that none but regimental Medical officers who had thus become acquainted with army routine, the peculiarities and requirements of soldiers, should be promoted to the higher ranks. Even now the same necessity exists, and although there is manifested a remarkable tendency in some quarters to adopt into our service the usages of France, the fact really is that French army Medical officers themselves are loud in condemnation of that very system. Because a system is French it by no means follows that it is therefore superior to one indigenous to Britain.

There also appears to exist a desire even on the part of some Medical officers themselves to ignore the fact that on entering the army they cease to be only Medical *men* on the footing of civil Practitioners; they would apparently forget that from the day they join the service they have not only to practise the Profession for which they had already received special training, but that, besides doing so, they must take their part in the general administration of that service, learn the management, interests, and peculiarities of all ranks, become themselves amenable to discipline, learn to maintain it in others, and finally become accustomed to the management, treatment, and disposal of men under all conditions of service. Inasmuch as the knowledge possessed by a civil engineer does not fit him to perform the duties of an officer of Royal Engineers, neither does the pass examination at the Hall and College qualify the Surgeon as an Army Medical Officer. The social status in regiments of late withdrawn from Medical officers is adduced as an argument in favour of their *disestablishment*. That a mistake has been committed in such withdrawal is generally acknowledged, and this being so, the natural course should be to remedy that mistake—to revert to the original conditions. For it must be borne in mind that what the public looks to is the mere question of efficiency—what gives most effective work for money paid; and if, as is undoubtedly the case, the deprivation of status does impair the efficiency of Medical officers, the course is clear enough. John Bull knows or cares nothing as to whether an officer who drills and punishes a whole regiment is or is not more of a gentleman than another who looks after the health of the same body of men—not forgetting their wives and children—and treats them when sick.

As matters now are, staff Medical officers doing duty with regiments never obtain the confidence of either men or officers. They are looked upon as mere *externes*. If, as is proposed, we are to have stationary Hospitals and Medical men, how about field service, India, the West Indies, etc.? How are officers who break down in health abroad to be replaced? How are Medical officers to be trained for administrative appointments? It is asserted that few regimental Medical officers remain five years in their respective corps. This is a mere question of calculation, and can easily be decided. That many leave their regiments against their own will, however, is a circumstance for which they have to thank the regulation that forces them either to the staff, or to half-pay—the greater of two evils—if, at the expiration of six months, disease contracted on service has not been removed.

But what do military officers say on the subject of having no regimental doctors? With very few exceptions, all those who have seen active service—and only such can form trustworthy opinions—are loud in condemnation of the *staff* system. They know well the advantages to be obtained when the interests of the Medical officers of a regiment are bound up in those of the corps like those of any other officers, when a Surgeon learns the particular routine of the regiment, and when he has served sufficiently long in it to exert his personal influence through all grades belonging to it, for no officer so much as the regimental Surgeon can, if he has the will, exert an extensive influence for good. To a mere outsider temporarily attached to, but not of, the regiment, this would be impossible, and the service thereby greatly the loser.

Doubtless amidst all the contemplated changes in army administration, the Medical department will not escape; we should remember, however, that all *changes* are not *improvements*, and that great caution should be exercised before sweeping alterations are made in a department which has so direct a bearing upon the efficiency of our army as that entrusted with its health. The question is important and extensive in its bearings, and one which, considering the different views expressed regarding it might be well submitted to decision by a Royal Commission.

THE WEEK.

TOPICS OF THE DAY.

Men of science are a *genus irritabile*, and it is not to be wondered at that Mr. Lowe's announcement to the Scottish Meteorological Society, as an excuse for not granting them Government aid, that the Government already grant the Royal Society £10,000 per annum for meteorological purposes, gave rise to a chorus of indignation from all ranks of F.R.S. *in esse* and *in posse*. If the Government really granted £10,000 per annum to the chief scientific society of Great Britain for the purpose of furthering any or all of the sciences, most people would not think it proved anything more than ordinary liberality and enlightenment—at least it could not be quoted as a thing about which particularly to boast. It would be just an instalment of what the British Government ought to do to foster science and encourage its cultivators. We are not now considering the question how far the independence of the Royal Society would be imperilled by such a subsidy. The fact, however, is that the Government of this country are debtors of the Royal Society for assistance and advice on all scientific questions, and also for administering the fund in question, which is no boon given by the Government to that Society—never, indeed, passes into its hands—but is a grant the expenditure of which is regulated by a committee of the Society, called the Meteorological Committee, who simply have to report to the Board of Trade. These facts have been brought out by a published correspondence between several Fellows of the Society, who are indignant at Mr. Lowe's view of the matter, and Professor Sharpey, the Secretary of the Society. The Fellows say:—

"We have further understood that when the Society consented to superintend the application of the grant referred to it was conferring a favour on the Government, and we never entertained the idea that the Government could so far mistake the position of the Society as to imagine that the latter was thereby accepting a boon."

To this Professor Sharpey replies on the part of the President and Council of the Society:—

"The views which you express of the relations between the Government and the Society, as well as of the grant for meteorological purposes, are perfectly correct."

The mistake is the more glaring as it has been made not only by the Chancellor of the Exchequer, but by the member for the University of London, who ought to be the champion of the scientific interest.

It is a healthy sign that the modern Hospital and Dispensary mania is beginning to attract attention in the non-Medical journals of the day. We call it the modern Hospital and Dispensary mania, for assuredly it has been a madness on the part of the Medical Profession, who have suffered, and still suffer, both in material advantage and in public respect from obtruding their services on the public gratuitously, and equally a madness in the alms-giving public who have so answered the "appeals" made to them, that one out of every four people who are met in the street gets doctored and physicked every year for nothing—that is, is so far pauperised. Considering the chances that neither of the other three requires either doctor or physic, can we wonder that the Medical Pro-

fession is no longer a profession to get rich in, but only a profession for the rich? We have so recently discussed the subject that we will not reiterate what we have often dwelt on. The evils of special Hospitals; the waste of time on the part of the patients and the waste of time and energy on the part of the Practitioner who has to see and prescribe for a hundred or two of patients at a sitting; the bitter mockery of charity in the guinea subscription by which people get all their servants, including the governess, and their poor relations, doctored; the farce of the governors' letters, kept by the hall porter for all applicants—these and many like features of the case are only too familiar to Medical Practitioners, who know to their cost that it is too late for them now to attempt to remedy it. Disunited on this, as on almost every other subject, the Profession will not, if they could, join to put down all unnecessary and questionable Hospitals and Dispensaries, and let any young Surgeon or Physician chivalrously determine to lend no helping hand to the present system, and he must prepare to be more or less shelved for life, as "no worker," and "not connected with any Hospital." The fact is that the only remedy which can check the evil is one which will be surely and certainly applied if the eyes of the public once get enlightened. When subscribers really learn that their benefactions go to demoralise the population, to encourage idleness, oftentimes to spread by contagion disease, to foster too often quackery in place of legitimate Medicine, and to injure the ordinary members of a Profession second to none other in learning and utility, we believe that the advertising columns of the *Times* will not be found so productive. We therefore were heartily glad to see the admirable letter of Mr. Holmes Coote in the *Times* of Wednesday. We may probably make it the text for some further remarks. But equally valuable, we think, is a letter which appeared in the next day's paper from the Rev. Brooke Lambert, vicar of St. Mark's, Whitechapel, not for the plan of people paying sixpence at the first visit to the Dispensary, which the writer recommends, but which would in a very small degree meet one part of the evils of the case, but because he acknowledges that "the receipt of Medical relief is to many the first step towards the receipt of other relief." This is a truth which has, so far as we know, had hitherto no expounder out of the Medical Profession, and we are heartily glad to find it thus enunciated. Mr. Lambert, we may add, argues in favour of the taxation of Hospitals up to their full annual value, *because they tend to increase pauperism*. Of course in all that we have said we do not attack anything more than the modern system of multiplying these institutions in the supposed interest of Medical aspirants—of floating reputations on special Hospitals specially built for the purpose—in fact, of all the evils which arise from the degradation of that noble thing and word, charity, to private ends. Our time-honoured London Hospitals, and several of the recent ones in neighbourhoods where they supply a real want, require no eulogy from us, and are not included in our remarks.

Of the three seats which will be declared vacant at the annual meeting for the election of Councillors in the Royal College of Surgeons, it is highly probable that two at least will be filled by new men. Mr. Mackmurdo, we believe, retires, and, judging from the last election, it is more than probable that Mr. Gay will succeed to his vacant seat. It is more doubtful whether Mr. Solly or Mr. John Adams will be re-elected. They are both men of high professional standing, and we believe have done good service in the Council and the Court of Examiners; but life is short, and there are many other Surgeons of high reputation both in the provinces and in London who would willingly accept the cares and sweets of office. If Mr. Erasmus Wilson should again present himself, we trust that his very considerable claims in early professional life as an anatomist and teacher, and in later life as a successful Practitioner, will not be forgotten by the Fellows.

At the next meeting of the Council of the College, which is held on Thursday next, it is understood that the formal acceptance of Mr. Wilson's gift for the foundation of a lectureship on skin diseases and of the series of models illustrating skin diseases for the Museum will take place.

Mr. Goldney's Bill for amending the law relating to the office and appointment of county coroners, on which we have already commented, besides altering the mode of election by vesting the power in the Lord Chancellor or in the Home Office, has several provisions for improving the conditions of coronerships. A superannuation allowance is to be made to coroners disabled by age or infirmity. The coroner's salary is to be calculated on the average amount of fees, mileage, and allowances, and the number of inquests held during the five years preceding December 31, 1868, and in case there is any disagreement between the justices of the county and the coroner as to the amount to be paid, an appeal is to be allowed to the Secretary of State for the Home Department, who is to fix the amount, having regard to the same data and "the circumstances of each case." The Bill does not include city and borough coroners, and it extends to England and Wales. We have already said that we should be sorry to see the power of election transferred to the Lord Chancellor, as we fear the arguments in favour of legal, as compared with Medical, coroners would appear overwhelming to the legal mind, but we should gladly see the appointments made by the Home Secretary. Of the present mode of election, recollecting the exhibitions which ever and anon are made in coroners' courts, we can only say with Dogberry that it is sufficiently "senseless and fit."

We are glad to see that Professor Humphry, of Cambridge, has been elected an Honorary Fellow of Downing College,

Dr. Corfield has been elected to the new Chair of Hygiene in University College. Amongst the unsuccessful candidates were Drs. Ballard and Anstie. It is generally supposed that the Council of University College have paid Dr. Corfield the high compliment of making a place for the purpose of retaining so promising an alumnus on their staff. This of course they were at perfect liberty to do. But at least they should not have advertised the chair as open to the world, and have led people to suppose that the election would be decided on ordinary principles.

THE SPECIAL MEETING OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THERE could hardly be afforded a better illustration of the unbusinesslike habits of our Profession than the meeting of this society on Monday evening last. One question was so mixed up with another, and Fellows would so often insist on speaking as to what was not before them, that the whole evening was consumed in the discussion of the preamble and the first clause of the Council's report, which we have already published. The only thing, therefore, settled was that a union of all the existing special societies was desirable; that for this purpose a new society should be formed, and that it should be called the Royal Society of Medicine. It is satisfactory to have got such a length, but it must be confessed that some of the Fellows of the Society showed anything but a liberal spirit, maintaining that the property and charter of the Society could not be touched while one man opposed it, and Mr. Charles Hawkins went so far as to say that he would never consent to the proposed innovations. It was also evident that the scheme was not so popular outside among the other societies as it might be, for, without doubt, many of the officials who now hold posts of dignity and honour in the special societies will object to see them swamped in the general changes which are proposed. The question of finance will also no doubt constitute a difficulty which will not be very easily got over. Altogether the prospects of amalgamation are not very bright if we consider what has been done, and all that remains to be done. The spirit which, however, animated Dr. Fuller, and which found a

cordial echo in the Society, is not one to be overlooked by those who are opposed to fusion. Dr. Fuller held that the Society should put itself in a position to pursue the scheme whether all the other societies united with them or not; for, were there a Royal Society of Medicine formed, any other which might be left out in the cold would only be too glad to join them afterwards. There was manifest on the part of the majority of the Fellows a determination to act up to this view, and from this fact alone are we inclined to augur well of the prospects of the Royal Society of Medicine. We cannot refrain from bearing testimony to the admirable manner in which the chairman fulfilled his extremely arduous duties, and how arduous they were those only who were present could conceive.

THE POOR-LAW BOARD AND THE WORKHOUSE MEDICAL OFFICERS.

We published a few weeks back the text of a memorial from the workhouse Medical officers to the Poor-law Board relating to the new duties imposed upon them by the general order of the Board dated April 4, 1868. On Monday last a deputation waited upon Mr. Goschen, by appointment, in the tea-room at the House of Commons, to present the memorial, which had received the signatures of no fewer than 122 workhouse Medical officers. The deputation consisted of Dr. Lyon Playfair, M.P., C.B., by whom it was introduced, Dr. Brady, M.P., Sir John Gray, M.P., Dr. Lush, M.P., Sir George Jenkinson, Bart., M.P., and Drs. Joseph Rogers and Dudfield. The questions raised in the memorial were fully discussed, the President giving a patient and courteous attention to the facts brought before him. At the conclusion of a lengthened interview Dr. Playfair thanked the right hon. gentleman for his kindness in receiving the deputation, the members of which were much gratified by his evident knowledge and interest on the subject.

THE NEW ATKINSON MORLEY CONVALESCENT HOSPITAL.

This Hospital, so named after the founder, beautifully situated on slightly elevated ground close to the Wimbledon Station, and accessible by half an hour's ride by railway from London, is now so far advanced that it will be opened in a few months. It is built on the pavilion and corridor plan combined, the larger wards being in blocks at both ends, separated by a long central building with three receding portions. There are three floors over a basement, and a part in the centre is carried up one floor higher. The ground-floor and the principal entrance at the back are arranged in arcades, with an ample porch and balcony overhead. The stairs are of stone, with iron railings. The large wards on the first floor are 80 feet long, 25 feet wide, and 15 feet high, affording 1500 cubic feet to each patient; each ward has five opposite high sash windows reaching near to the ceiling; the walls are plastered and whitewashed; the floors fireproof. The wards are warmed by chimneys and hot-water pipes, a pair of them running along the walls near to the floor. Two large chimneys standing back to back in the centre of the room are provided, instead of smoke-shafts, with four columns of terra cotta similar to those of Addenbrooke's Hospital, Cambridge, which, when warmed, retain the heat and throw it out gradually. Fresh air is admitted through gratings near the ceilings and in the centre of the floor. The foul air is expected to escape through openings in the ceiling and air-shafts. But as no continuous draught is caused in the shafts artificially, they are likely to become sometimes inlets instead of outlets, notwithstanding the arrangements for preventing this. Over some of the entrance-doors louvres are found. Nurses' rooms adjoin these wards, overlooking them. Bath-rooms, with enamelled earthenware baths encased in wood, are on the other side of the corridor. The corridors at the back of the central building are warmed by hot-water pipes running near to the ceilings on the ground-floor, forming coils on the first floor, but uncovered by gratings. The central part has on each floor two moderately sized wards with four windows on one side only, the corridor being on the other, and between the wards a room with a bow window corresponding to the centre of the whole. Self-acting waterclosets and lavatories are in the projecting portions at the back. The lavatories have glazed iron basins encased in wood. Slate slabs might have been provided with small increase of expense. Lifts and linen-shoots are well placed. In the centre at the back is the chapel, with corridors running at each side, leading to a number of single rooms facing the road for the use of the superintendent. The kitchen is in the basement. The water will be provided by an artesian well. A laundry and stabling are separate, and in the former will be done all the washing for the house and the patients, of whom about 100 will be received. No doubt this Hospital, being in connexion with St. George's, will neither lack good nursing and suitable diet, nor supervision by competent authority.

THE EVENTUALITIES OF GREENWICH HOSPITAL.

(*From a Correspondent.*)

The Greenwich Hospital Bill introduced into the House of Commons last week by the Civil Lord of the Admiralty scarcely fulfils the expectations that have been raised in the minds of the public, and specially of those most interested in this important subject. "It speaks, yet it says nothing." We are told that this vast pile of buildings is to be completely emptied, and that the pensioners now within its walls are to be relegated to Haslar and Plymouth, or pensioned off at the rate of eighteenpence a day, and permitted to go or to be carried where they please. We are left to presume that the gates will then be locked, that the Greenwich Hospital Estimates will be represented by the wages of a night watchman, and that moss and ivy will, ere long, adorn these kingly quarters. It appears, indeed, that the energetic endeavours of the Seamen's Hospital Society, under the direction of their very able Secretary, Mr. Kemball Cook, have secured to them a prospective offer of the Infirmary. This building will suit the purposes of the *Dreadnought* authorities very fairly indeed, and its tenure by them will do much to cement a certain wholesome cordiality between sailors of the Royal and mercantile navies of this country. As, too, this Hospital has always a more cosmopolitan set of inmates than any other in or around London, its benefits as a clinical school should, when residence is obtained on shore, be much more extensively utilised than at present. But, having satisfied the requirements of the mercantile marine by a loan of the Infirmary, is it possible that the Bill indicates nothing as to the future of Greenwich Hospital proper, and that the promoters of the Bill actually intend to leave this splendid position unused, and the buildings thereon to desolation and decay? The Bill (as we are informed by Mr. Trevelyan) is, with the exception of a sop to the mercantile marine, of a purely negative character, and it would appear that the genius of demolition rather than of invention at present reigns at the Board of Admiralty. It is natural that we, representing naval Medical interests, should advocate the establishment of a Naval Medical School, for which the *Dreadnought* patients would furnish a very admirable clinique. But many other propositions, good, bad, and indifferent, have appeared, out of which (if, as it seems, originality of action is at a discount at Whitehall) something useful might be taken and adopted. It is necessary that something positive should be done, or the Bill will be justly ridiculed, and is likely to come to grief altogether, for the public naturally expect that princely charities shall be administered by the trustees of those charities for the good of the nation and the country at large.

FROM ABROAD.—CONDITION OF SEMEN IN DISEASE—HYDROPHOBIA.

M. Liégeois, at the last meeting of the Société de Chirurgie, concluded a paper on the "Condition of Semen in Disease" in these terms:—

"1. All men in good health, whether adolescent, adult, or aged, having neither anomalies, vices of conformation, or any

traces of former affections of the organs of generation, have in their semen spermatozoa, the material elements of fecundation. 2. Acute, chronic, or constitutional diseases, unconnected with the genital organs, do not seem to exert any influence on the spermatic secretion in the adult by giving rise to azoospermia. In aged persons, on the other hand, this is a frequent consequence. 3. Blennorrhagic epididymitis, which is the most frequent of all affections attacking the internal organs of generation, almost always, when bilateral, definitively arrests all excretion of spermatozoa, and thus leads to sterility. When unilateral, it induces sympathetically a diminution in the functional activity of the other testicle, diminishing the amount of spermatozoa furnished by this, and thus exerting an injurious influence on the fecundating properties of the semen. Epididymitis, whether unilateral or bilateral, which does not arise from blennorrhagia, is far from exerting so injurious an influence on the secretion and excretion of spermatozoa. 4. Affections of the parenchyma of the testicle are always very serious in relation to sterility, whether affecting only one or both of the glands. Of all such affections, chronic syphilitic orchitis is the one concerning which most is to be hoped for, for the infertility which generally it gives rise to may be remedied by appropriate treatment. 5. Peritesticular, periepididymary, and perideferential lesions do not seem to exert a notable influence on the spermatic excretion, with the exception of varicocele, which, when it has attained a certain degree, leads to atrophy of the testis and consequent aspermatozoa. 6. Spermatorrhœa, as a general rule, does not modify the spermatic secretion; but in some subjects aspermatozoa may exist without their having attained the degree of marasmus that often leads to this condition."

M. Millard, at a recent meeting of the Paris Hospital Medical Society, read a very interesting case of hydrophobia, which has since been published in full in the *Union Méd.* for April 27. He observed that in the great majority of cases hydrophobia is easy of recognition, especially as the Physician's attention is usually called to the fact of a bite having preceded the symptoms observed. But when this has been so slight that all recollection of it has passed away, and the patient seen so early that mere dysphagia is the only symptom present, a mistake may easily be made. In the present case the patient was a workman, 20 years old, who died within twenty-four hours after his admission into the St. Antoine, his disease not having been recognised to the last. He was admitted under the idea that he had simple angina. During the night he exhibited certain procedures which ought to have caused suspicion. Thus, he kept spitting abundantly around him; when the tisane or other liquid was offered him, he overthrew it without tasting it, and rose from his bed to walk backwards in order that the air might not strike his face. These circumstances were deemed only strange, and when M. Millard saw him in the morning he was prepared to see an hysterical or hypochondriacal subject. Still, he was struck with the extraordinary brightness of his eyes, which constantly wandered from side to side in a most restless manner, the great dilatation of the pupils, and the general and causeless terror—a kind of *pantophobia*—to which he seemed a prey. But the most striking feature was the convulsive upheaving of the thorax, due to involuntary and sensibly painful efforts at deglutition, and which, interrupting and strangling the voice, gave to it a strange, almost "sinister" hoarseness. Questioning him as to whether he had been bit was impossible. On conveying a portion of bread to his mouth, one of the painful spasms raising the larynx and chest came on, and he said that although he was hungry he could not eat. M. Millard then called out for a glass of wine, but the patient, to the horror of all around, became as if mad with terror, rushed to a neighbouring bed and seized a tin pot with the intention of hurling it at those interrogating him. This state of excitement soon passed into one of furious delirium, which ceased only with death. Between four and five months had elapsed since he had been bitten. Chloroform gave little or no relief. During the twenty-four hours he was in the Hospital he took no food of any kind, and passed neither fæces nor urine. The results of the autopsy were quite negative.

In the discussion which followed M. Bucquoy observed that it is generally supposed that certain classic symptoms are found united in cases of hydrophobia; but this is far from being always true, so that, without a knowledge of the antecedents, error may easily arise. He related an interesting case which occurred in his own practice. A woman who had been bitten by a dog, but thought no more of it, on being questioned concerning the results was seized, although quite well just before, with absolute inability to drink. She willingly made the attempt, but the fluid was always immediately and violently rejected. The inability was, however, intermittent, for sometimes the pharynx tolerated the passage of liquids. This was regarded as a case of "nervous hydrophobia," but hemiplegia and paraplegia soon came on, followed by symptoms of asphyxia, and in forty-eight hours she died. M. Dumontpallier thought that any one who had once seen the disease could never mistake a case were it only from the characteristic appearance of terror exhibited by the patient. In regard to the difficulty of diagnosis, M. Guérard referred to a case under M. Woillez's care at the Necker. On June 1 a man, aged 54, was badly bitten in the hand, so that the wound was not healed until the 23rd. On July 10 he was seized with noctural agitation and restlessness, and on the 14th he came to the Necker, where the respiration was found excessively rapid (90 per minute), tumultuous, and irregular, the pulse being 120 and small. The cicatrices were red and somewhat tumid. Intellect and senses were undisturbed. The patient was able to drink a glass of water without any difficulty save that arising from spasm of the pharynx, and without any sign of hydrophobia. In the evening all the symptoms were aggravated; delirium of the merry kind set in, and there was abundant sputation; but no disturbance was caused either by the motion of the air or the sight of liquids. In a few hours he died, and nothing remarkable was found at the autopsy. M. Lailler observed that he had seen a good many cases of hydrophobia, and the more he has seen the more he has become convinced that in a certain number of these diagnosis is impossible in the absence of the history of the case. Among other affections with which it may be confounded is *delirium tremens*, in which with the delirium we may have sputation and hyperæsthesia. M. Lallier referred also to the cases of two workmen who had been bitten one after the other by the same dog. One of them at the end of five or six weeks became mad, and his comrade, in order to deaden himself to the fate that he supposed awaited him, continued drunk through three entire days, and never suffered from hydrophobia.

PARLIAMENTARY.—PHARMACY ACT (1868) AMENDMENT BILL.

On Thursday, April 29, in the House of Commons, on the order of the day for going into Committee on the Pharmacy Act (1868) Amendment Bill, Dr. Brewer moved that the House go into Committee upon it this day six months.

Mr. Newdegate objected to the Bill, because it extended the exemptions in favour of veterinary Surgeons to ordinary farriers, who had no diploma.

Mr. W. E. Forster hoped that the hon. member for Colchester would allow the Bill to go into Committee.

Dr. Brewer said he could not resist anything the Government thought right. (A laugh.)

The amendment was withdrawn, and the Bill went into Committee.

Mr. Pochin said that the Bill did not meet the defects of the Act of last year. Some more radical change in that Act was required. (Hear.) He moved that progress be reported.

The Lord-Advocate said that the Bill was merely brought in to correct a mistake in the Act of last year, by which the word "apothecary" was substituted for "legally qualified Medical Practitioner."

After some conversation,

Mr. Whalley supported the motion to report progress on the ground that the legislation of last year upon this subject had caused the deaths of many persons. (Laughter.) The question before the Committee was evidently one of life and death, and if it came to a vote he should be quite at a loss to know whether he would be voting for the life or death of a person. ("Hear, hear," and laughter.)

The motion to report progress was rejected without a division, and the Bill passed through Committee.

REVIEWS.

De la Kélotomie sans Réduction, Nouvelle Méthode Opératoire de la Hernie Etranglée. Par le Dr. Marc Girard, Lanréat et Médaille d'or de l'Ecole de Médecine de Bordeaux, interne des Hôpitaux de Bordeaux, etc. Paris: Baillière. 1868. Pp. 276.

M. Girard, finding that the statistics which he had collected indicate a mortality of 52 per cent. of those subjected to the ordinary operation for strangulated hernia, sets himself in this work to inquire at what stage of the operation the source of danger is to be found. In the earlier chapters he engages to prove that up to, and including the liberation of the strangulated portion, the operation is nearly free from danger to life, whether this may immediately arise from hæmorrhage, tearing of the bowel, or peritonitis, but that nearly the whole of the danger of the operation lies in the reduction of the bowel by its return into the abdominal cavity. This inference is based upon a careful consideration of the circumstances which resulted in the death of twelve out of fifteen patients operated upon in the Hôpital St. André of Bordeaux, and of the general recorded experience of the Profession. After relating these cases, M. Girard relates twenty-seven cases in which, for one reason or another, the reduction of the intestine was not effected; of these only seven died, the remaining twenty having been cured. The following are the conclusions arrived at by the author from the entire discussion:—"1. The operation for strangulated hernia, as usually practised, gives disastrous results. 2. In the immense majority of cases the operation itself must be regarded as the principal cause of the want of success. It is desirable to point out the part which each step of the operation plays in the production of the mortality. 3. The first step in the operation, the incision into the envelopes of the hernia, is almost absolutely harmless. 4. The second step, the opening of the hernial sac, plays but a very small part in the production of the mortality. 5. The third step, the division of the stricture, does not bring after it any disastrous consequences, unless very exceptionally. 6. The fourth step of the operation has for its object the reduction of the intestine. This fourth step is a frequent cause of the persistence of the symptoms of strangulation; it is the most active cause of the peritonitis so commonly met with after the operation. It provokes and produces the extravasation of intestinal matters into the abdominal cavity. It is a proceeding not only irrational, but also opposed to the laws of prophylaxis against complication. 7. The reduction of the intestinal coil after the division of the stricture is the sole cause of numerous instances of want of success. 8. It is not a proceeding of primary necessity, and does not meet any one indication. 9. The leaving of the intestinal coil in the wound does not bring after it any disastrous consequences. 10. In the operation for strangulated hernia, reduction of the intestine should not be proceeded with, it ought to be left in the wound, and the fourth step of the operation should be altogether abandoned. 11. Non-reduction is not met with as a general method in the performance of the operation of herniotomy. 12. The non-reduction assures and hastens the cessation of the symptoms of strangulation. 13. It is a prophylactic measure of great value as against peritonitis in cases of this operation. 14. It relieves the operator from the dangers resulting from extravasation, whether immediate or consecutive. 15. It does not induce fatal gangrene of the portion of intestine left behind. 16. Non-reduction constitutes a new method of operating on strangulated hernia; it is kelotomy without reduction. 17. Unlike the ordinary operation, it is one applicable to all cases, and has one single object and fixed rule." (P. 270.)

Report on Lunatic Asylums. By Frederic Norton Manning, M.D. Sydney: Richards. 1868. Pp. 287.

In the course of our labours we have had brought under our notice from time to time, and we have read with more or less profit and satisfaction, government reports innumerable, but we do not call to mind one more profitable for study, more complete and elaborate, and yet, for the amount of information it contains, more free from useless verbiage, than this which now lies before us. It reflects the highest credit upon the Government of New South Wales, by whose authority a most extended inquiry was instituted into the arrangements for the care of the insane in nearly every part of the world, and upon Dr. Manning himself, to whom the task of investigation and report was intrusted. Let us first of all do honour to both—to the colonial Government on the one hand, for the high sense of duty which impelled it to institute the inquiry with the noble object of ascertaining the very best plan of managing institutions for the care of the insane in order to introduce it among the population it superintends; and to Dr. Manning, on the other hand, for the admirable manner in which he executed his roving commission, and the ability with which he has carried out a most difficult task, arranging systematically a mass of materials which few men could look at without consternation, and producing from them not only a readable book, but one, we believe, without its parallel in the whole literature of insanity. The following were his instructions:—"You will visit the chief asylums in the United Kingdom, on the Continent, and in the United States. You will direct your inquiries in these visits to the principles on which the buildings have been erected, and the sanitary precautions adopted in their construction. You will carefully observe the different methods of treatment, and obtain statistical evidence of the results in separate cases, so far as is practicable. You will examine the working of different systems of management and discipline, and endeavour to ascertain the effects of the different forms of administrative organisation on the condition of the patients, and in relation to efficient supervision and economy of expenditure. In all cases it will be desirable to obtain plans as well as accurate descriptions of the buildings, particulars of the number of inmates allotted to rooms of a given size, and the quantity of pure air considered as indispensable to a given space. You will obtain from the institutions you visit copies of all regulations, dietary scales, and reports. It will also be within the compass of your duties to procure for the Government copies of all recent and important statutes, state papers, and departmental reports relating to the treatment of lunatics." And the end to which all this information is to serve is "a reorganisation of the lunatic asylums of the colony on the basis of a correct knowledge of the improvements carried out under more favourable circumstances in other parts of the world." Accordingly we have given us a list of asylums visited by Dr. Manning:—Twenty-five in England, besides lunatic wards in various institutions; nine in Scotland, besides lunatic wards in several poor-houses; fourteen in the United States, nine in France, four in Germany, five in Belgium, and one in Holland. Of all these institutions reports more or less comprehensive were drawn up, and such points in the construction and organisation noted as might be useful in remodelling the asylums of the colony. From data thus collected the author of the "Report" has compiled his description of the various existing methods of providing for the insane, discussing separately those adopted for the pauper class, for non-paupers, criminal lunatics, idiots, and inebriates, and, finally, has drawn from the whole a series of "suggestions" which there is every reason to hope and believe will operate beneficially in the interest of the population of New South Wales. These suggestions, too, although primarily intended for application to the peculiar necessities of our brethren at the antipodes, cannot be ignored safely even at home, based as they are upon so broad a field of observation and experience. In the appendix will be found copies of numerous dietary tables, forms of returns, and plans of numerous asylums and of various of their arrangements, both in the United Kingdom and abroad. Having said thus much of the origin and plan of the "Report," we must leave it in the hands of the Profession, especially of those engaged or likely to be engaged in conducting or in advising upon arrangements for the insane, earnestly recommending it to their close and attentive study.

Pettenkofer and some others also hold the opinion that cholera will not prevail on rocky sites. Where there is no porous soil or subsoil water to become impregnated with the products of organic excrementitious decomposition, it has been thought cholera would not prevail. The occurrence of cholera in the city of Joudpoor does not, however, endorse the opinions of those who imagine the disease cannot be propagated on rock. As before described, a large portion of the town is built on the steep slope of a sandstone range. Moreover, when cholera has occurred, the disease has always been more severe in the south-west quarter of the city, which is literally founded on the rock. The latter is indeed much softer than granite, and consequently somewhat porous, but scarcely sufficiently so to absorb filth and *débris*. Even should varieties of sandstone not belong to that class of rock on which cholera is not propagated, it is nevertheless curious that the most rocky sites of Joudpoor should be those where cholera has prevailed with greatest severity.—*Marwar, the Land of Death, by W. J. Moore.*

FOREIGN CORRESPONDENCE.

FRANCE.

LETTERS ON THE SOUTH OF FRANCE.—WITH AN APPENDIX ON SODEN IN GERMANY.—No. V.

Cannes, April 22.

I have been informed by a friendly observer that my former letters on the South have been very unfavourably received by the Medical Faculty of Cannes. Not only was it thought that those letters would unjustly do harm to the prosperity of Cannes, but I was even accused of having written with that purpose, and was said to be inspired by ill-will towards its Doctors. The sensation seems to be so great that there was question of nothing less than an "anti-*Medical-Times*-letter meeting" of the Cannes Faculty—a meeting concluded, perhaps, by an expedition, armed with the terrors of Lynch law, against the malevolent author!

Now, it is not my object to retract a single assertion of what I said, and it would be unpardonable to do so even if my life was in peril.(a) But I do not wish to do unnecessary mischief, and therefore I observe what follows.

If my anecdotes are taken almost all from *Cannes*, it is only because I live at this place, and know it the best. But by no means do I pretend that Cannes is worse than other places of the kind. It is far from me also to pretend that the life of a Doctor of the South is nothing else but an uninterrupted series of acts of charlatanism and extortion. I know very well that it is possible to deviate sometimes from the narrow path without being a bad man; and if we were to make a list of the good and kind acts of Cannes Doctors we should certainly find much to say. The only thing I would say is that the stranger should not be too trustful.

It is a sad thing that I am obliged to assert all this; but the public read often very inattentively even the *Medical Times and Gazette*, and are inclined to draw unjust conclusions. I therefore could not abstain from saying this.

Generally there is, not only among doctors, but in our entire social organisation, a great deal of corruption still. We may be proud and thankful when we look upon bygone times; this is true. And astonishing is the progress we have made in the last century. But still there is much left to be done. Too many things in this world are done by slyness, intrigue, and hypocrisy. To fight against these things is, to my mind, the duty of every man: and it is not sufficient to abstain from committing them yourself—you ought to check and blame them even in your best friend. In France and Holland this system is sanctioned by what I call the abominable oath of Medical secresy. According to the Code Napoleon, if one of my patients suffering from a syphilitic disease wished to marry with another of my patients, I should not be allowed to warn this latter person. I should be bound by oath to make myself an accomplice to a shabby act. No law to my mind can be more tyrannical and in open war with the freedom of conscience. Certainly, if a man suffers from a contagious disease, we must do all we can to deliver him from it; but we must not allow him to bring mischief upon innocent beings. In France the fear of publicity is extraordinarily great. There is here a law which even forbids you to write about "private doings"—very indefinite term—of your neighbour. Very useful to bad consciences. And what becomes of biography in that way? In many countries even religion is abused as an instrument of political machination. I see by a newspaper that in Hanover clergymen are compelled by the police to pray on command for the King of Prussia! Certainly I do not envy the mighty King of Prussia.

We are preparing for our departure from Cannes. Our experience of mountain air (b) does not tempt us to try that again. Now we are going to Soden, near Frankfort-on-Maine, a place which has done me much good on former occasions, and ought to be known in England.

Soden lies at the foot of the Taunus mountains. It is half an hour by railway from Frankfort-on-Maine, and you can easily make excursions from it to Homburg, Wiesbaden, Schwalbach, and Heidelberg. The town itself is not beautiful, and the shops are not worth much; but there are pretty villas and beautiful forests in the neighbourhood, good music, and good society. The inhabitants are generally a very good and kind set of people.

The great advantages of Soden are its calming air, quietness, valuable milk and whey, and Medical treatment. I do not know many doctors in Soden, but I know that Thilenius is capital. As to the waters, they may be very good for many people; (c) but as to the majority of chest invalids, I should not like to make them get up very early in the morning and drink much before breakfast. Perhaps there has sometimes been abuse made of these waters, just as has been done of every other mineral water. The best season for Soden is from May 1 to July 1. In the middle of the summer it is generally too hot for *poitrinaires*.

One disadvantage in Soden used to be that the food was of very inferior quality, but measures will now be taken to remedy this evil. It seems that the Prussian annexation has been a very good thing for Soden.

I do not like to put my name forward unnecessarily, but as my letters on the South are making me enemies, I must urgently beg you to reveal it to everybody who shows the slightest wish to know it.

(a) It is said that in this country you can get rid of any person you like by giving a certain amount of francs to a willing Piedmontese *ouerier*.

(b) Mountain air may be useful in incipient cases of tuberculosis; not so when the capacity of the lungs is considerably diminished.

(c) There are different kinds of waters. Some contain much chloride of sodium, some contain iron, and some hydrosulphuric acid, etc. In many cases they may replace the waters of Homburg and Kissengen.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Special Meeting.—Monday, May 3, 1869.

Dr. Burrows, F.R.S., President, in the Chair.

This meeting was summoned to consider the proposition for the amalgamation of all the Medical Societies into one grand body. A scheme of amalgamation having been drawn up by the Council of the Royal Medical and Chirurgical Society was then submitted to the general body of the Fellows. This scheme has already been published.

The President said that the Council had thought it right to summon this special meeting to consider a scheme of union which they hoped would benefit both Medicine and the Medical Societies. He thought that all were agreed as to the good which would arise from the closer union of the now existing Medical societies, so that these might co-operate with each other, but at the same time, as far as possible, retain their autonomy. It would be more economical had they one common hall where their meetings might be held; and, apart from this, there were other advantages, which, however, were matters for discussion. A scheme of union had been framed by last year's Committee. It had been framed with great care, and he trusted that the Fellows would act calmly and deliberately, and in no narrow spirit. They had to see whether the scheme might not do good to all men pursuing scientific Medicine.

The preamble as to the propriety of uniting all the Societies was then read, and moved as a resolution by Mr. Solly, Dr. Pitman seconding.

Mr. Solly thought that it was unnecessary to say anything in support of the motion beyond what had already been laid before the Society.

Dr. Pitman thought it good that some new reasons should be given for again taking up a proposition very similar to that which had been before them nine years ago. This proposition had been then fully considered and approved by the Society, but since that time new societies had sprung up, some of them similar in purpose to the Medical and Chirurgical. The terms of incorporation of this Society were the promotion of Medicine and Surgery and the branches of science connected with them. Since its incorporation the Medico-Psychological, the Pathological, the Epidemiological, the Obstetrical, and the Clinical Societies had been instituted for the pursuit of some or all of the above purposes, so that they in many respects superseded the Medico-Chirurgical. This Society had in consequence suffered both in the number of its members and their attendance. The Clinical Society, started only last year, had as many members as the Medico-Chirurgical had after an existence of thirty-five years. If this was because the Profession in London had so greatly increased, the Medico-Chirurgical Society should have increased in due proportion; but this was far from being the case, for in each of the last three decades the number of new members had gradually decreased. So, also, with regard to attendance; twenty years ago 1450 Fellows attended the

meetings annually; last session only 983 had done so. No doubt the reason of this was the institution of these new societies. The annual subscription of three guineas was too much, if other societies gave the same opportunities for less money. Then, again, new societies were constantly asking for the use of their rooms. Surely it would be better in this respect if they were all united. The reason why the last scheme failed was perhaps because it was submitted to the other societies before being approved of by this Society; it was not so with the present one. The scheme he now proposed was also full enough. They invited discussion, that it might be seen whether or not it was possible to adopt it.

Mr. Charles Hawkins rose and begged forbearance till he could explain why he could not join with this project. Nine years ago he moved such another scheme. Even before that he had moved for pathological evenings, which were instituted but not carried out; had they been so, the Pathological Society would, in all probability, never have been formed. They were met here to-night to propose that the Royal Medical and Chirurgical Society should cease to exist, or, at least, that it should change its name. There were two reasons why people generally wanted to change their names—either they received some property along with the new name, or they had done something which led them to think of changing it. (Here Mr. Hawkins was stopped by the President as being out of order and speaking to something the resolution did not contain.)

Mr. Henry Lee thought the first thing to be done was for the Society *to receive* this scheme which had been sent down to them by the Council.

Dr. O'Connor held that Mr. Solly should have read a portion of the first resolution as well as the preamble, when Mr. Hawkins would have been quite in order.

Mr. T. Holmes thought the course proposed was the correct one.

The motion was then put from the chair and carried by a majority.

Dr. Greenhow thought that many gentlemen were anxious for union on fair terms, but many of the details of the scheme could not be entered into that night. He therefore thought that the name of the proposed society might be left to the consideration of the Council. He added that as the sinews of war were the most important matter for discussion he would direct attention to Clause XXI., for until this was modified he was sure the measure could not pass.

Here it was pointed out that no resolution even as to the formation of a new society had been passed, so that such a proposition as Dr. Greenhow's could not now be discussed.

To facilitate business, Mr. C. Moore moved, and Mr. Brodhurst seconded, the motion that the whole twenty-three clauses be adopted.

Mr. Curling objected to this, as the Fellows would thereby be prevented from discussing details.

Mr. T. Holmes thought they were in danger of getting into a haze; it would therefore be best to take one clause at a time, and that the first should be taken first. He begged to say that the Council did not read Clause XXI. as Dr. Greenhow did. What was intended by that clause was that each section should have an absolute right to one half of their income; but it did not follow that more than this, or even the whole or more, might not be devoted to the production of their *Transactions*. But this was to be at the disposal of the General Council. No doubt many might be glad to substitute the words "a certain proportion hereafter to be settled" for the words "one half." In the original scheme a definite financial system was included, but, as this met with opposition, it had been withdrawn.

Mr. Curling remarked that, while talking of sections, they forgot that they had not yet determined to have a new society at all.

Mr. Birkett thought they had better take the clauses in regular order.

Mr. Solly accordingly proposed the first clause as a resolution, to the effect that they should constitute a new society to be styled the Royal Academy of Medicine.

Dr. A. P. Stewart seconded. He did not mean to say that the Medico-Chirurgical Society had done anything to make them ashamed of its name, except perhaps that they had been guilty of the neglect which rendered the act necessary. Had the Society done its duty, there would not have been so many societies as there now are. The number of these was really a great burden to Medical men, for it was a great evil to have to go to half a dozen places instead of one. They should have concentration instead of diffusion. The Society was making the *amende honorable* to the others in thus trying to unite them a second time; and they should not ask them to join under the old name. A new designation might be selected which would suit all.

Mr. Curling objected to the term "Academy," as implying in this country the notion of instruction. That of Paris, on the other hand, was a very select body, which this would not be. He thought the term "Royal Medical Society" would suit all. Under the new system there would be neither fewer societies nor fewer *Transactions*.

Dr. Dobell proposed, as an amendment, that the word "Society" should be substituted for "Royal Academy of Medicine," so as to leave the name one for future discussion.

Mr. C. Hawkins, at the invitation of the President, resumed his speech. He said the Medical and Chirurgical Society's charter determined the name of the Society and its functions, and as long as there was a Fellow of the Society unwilling to give up the charter nothing could be done, and none of the property could be touched. Further, they could not take away this charter without an Act of Parliament. If subscriptions ceased, the whole of the property fell into the hands of the life members, now forty in number, and of whom he was one. He thought it only fair and frank to say that for one he would never consent to give up the charter. It would have been wiser to have consulted a lawyer in the first instance, for as soon as any steps were taken with regard to the Society's property, a bill would be filed in Chancery against the President.

Mr. Spencer Smith said they had come to a dead-lock. He was within a very little of being a life member of the Society, but he would be extremely sorry to be one of these gentlemen were they to take up the position adopted by Mr. Hawkins. He was sorry no longer to find himself by the side of his old friend Mr. Hawkins. If the Society was willing to give up its property for the good of the Profession, there would be no difficulty in obtaining a new charter.

Dr. West said he was one of the forty alluded to, but he would not obstruct whatever the Society wished to do. Still, a babe was not named before it was born, as they now proposed doing with regard to their new society. Neither did he think that the object intended would be attained in the way proposed. When the Obstetrical Society was formed he declined joining because he thought it better that all the societies should be affiliated. There did not appear to be much union in the scheme proposed; there was union, but no vitality in the union; it was just like a bundle of sticks. Each section would pursue its own way as before without the healthy influence of those engaged in different branches of Professional research. The Obstetrical Society would not be influenced by those practising Medicine and Surgery; those engaged in pathologic research would not be influenced by those engaged in clinical investigation, and so on.

Dr. Althaus thought they should make themselves acquainted with the legality or illegality of the proceedings.

Mr. T. Holmes said the proceedings could not well be illegal, since they were only discussing abstract propositions. They would only want a new charter if the Medical and Chirurgical were willing to give up the old one. One individual would hardly stand in the way as Mr. Hawkins proposed doing. He heard what Dr. West had said with a good deal of regret, as the Committee had tried to bind them together as tightly as possible. No other way was possible as far as he could see.

Mr. Barwell thought that the meeting was losing time in discussing any proposition without knowing whether the Medico-Chirurgical Fellows were willing to give up their charter. Each Fellow should be asked.

Mr. Curling seconded Dr. Dobell's motion.

The President said that on consulting a lawyer they could easily get an opinion quite the reverse of that adduced by Mr. Hawkins. They could discuss questions and pass resolutions within the law.

Dr. Drysdale thought that if the proposed name were changed the resolution would be more readily accepted. The Academy of Medicine in Paris was something quite different from the Society proposed, and its name should not be appropriated.

Dr. Sansom coincided in this opinion.

Mr. Heath asked what was the difference between this scheme and that proposed in 1860.

Dr. Pitman said that it was not then proposed to change the name.

Dr. Barclay remarked that the difficulty then was the difficulty now. Then the Society proposed to retain its old name; the others took umbrage at this, and refused to join. They object to the ascendency of the Medico-Chirurgical Society.

Dr. Murchison suggested, as a title, the Royal Medical Society of Great Britain, and moved that this be adopted.

Dr. O'Connor seconded.

Dr. Wynn Williams had heard no very good reason for changing the present title.

Mr. Solly said the present name was barbarous, and not understood among the public. Were the name changed, the Society and its officers would have a better standing.

After some conversation, the addition of "Great Britain" to the title was dropped, and the name "Royal Society of Medicine" adopted.

Dr. Greenhow thought the term "new society" objectionable. It should rather be that the several societies be invited to co-operate with the Royal Medico-Chirurgical to form the Royal Society of Medicine.

Dr. Sankey seconded Dr. Greenhow's motion, thinking that by it all difficulties would be obviated.

Dr. Fuller would invite all the societies to unite and to lend a hand in the formation of the new society. Still they should be in a position to go on with the scheme should any of them refuse. They might do so at first, but would not if the Royal Society of Medicine was formed.

Dr. Greenhow's motion was lost, and the first clause, with the change indicated, was passed by a large majority.

The Society then adjourned for a fortnight.

THE PATHOLOGICAL SOCIETY.

Tuesday, April 6, 1869.

R. Quain, M.D., President, in the Chair.

(*Concluded from page* 473.)

Dr. Moxon also showed a Testicle Cancer recurrent in the scrotum after removal. The very perfect glandular and cartilaginous structure which the microscope reveals in this recurrent tumour was of interest. There was cartilage in small quantity, also fibro-cartilage and another tissue in which cells appeared to have partially encapsulated themselves, as if cartilaginous state were imperfectly developed. Further, there were tubes and recesses lined by a well-formed epithelium, and larger spaces into which bud-like growths projected, as in proliferous cysts. All these different textures were held together by a tissue composed of beautiful nucleated cells provided with processes that extend from cell to cell, joining all into a delicate cellulo-fibrillar network. It is very rare for such a growth to return in the place whence it was removed, and it is interesting to find that it should return with its peculiar characters so perfectly retained. The case tends strongly to prove that the two elements are equally parts of one disease. The cartilage has recurred as well as the sarcoma in this case, and it is interesting to note that the cartilage is present in very minute portions—almost microscopic—although it is very perfect cartilage. Such microscopic portions of cartilage may have escaped notice in some of the cases described as examples of recurrence of the sarcoma without the enchondroma.

Mr. De Morgan showed a specimen of Recurrent Cystic Sarcoma. In 1866 he had removed a testicle affected with cystic sarcoma and containing cartilage. The mass was large, and the man never had good health after its removal. In another year it came back, when there was also a large tumour in the abdomen, and he exhibited pectoral symptoms. There was œdema of the legs. He died, and there was found cystic disease of the abdomen, associated with cartilage and spindle-celled sarcoma. In the groin was another mass, almost entirely cartilaginous. There were cysts, some containing cartilage, in the lung. In the interior of the lung were many fringes of simple-celled material, along with some tubercle—in fact, the new growth was completely disseminated through the body. At first view, this would support the notion of cancer. Virchow would make the enchondroma primary, the cysts secondary. A very important point was its relation to cancer as a blood disease. It showed that various materials might be disseminated through the body—in fact, dissemination was only a question of degree. If we extend our notion of cancer to such growths, it would do away with many of the special ideas. It would favour early and extensive operation, as thereby giving an increased immunity. Even fatty tumours might become hereditary.

In reply to Mr. Thomas Smith, the author stated that there was no evidence of cancer or any other form of tumour being a blood disease, as in tubercle. In tubercular subjects one could predict its occurrence. Not so with cancer, which may occur in healthy people, although after a time the blood does become affected even in it.

Mr. T. Smith said that if cancer in its earlier condition was not a blood disease, the advocates of this notion should be able to show cases different from those generally seen.

Mr. C. Moore said that small-pox was a blood disease, but it had to be put into the system. The virus was not formed from healthy blood. There was no evidence to show that the blood had any tendency to form any special tumour. Tumours in the breast from great irritation are extremely common, and these may become cancerous. He would rather look to reflected nerve irritation as a cause. Many so arose, but not all.

Dr. Moxon said in the discussion it appeared to be assumed that the only alternatives are these:—First that cancer is originally local, and then infects the blood; or, second, that it exists primarily as a blood disease. He did not think the question could be limited to that alternative. It does not follow that cancer must either arise locally or else have its seat in the blood. The relations of the members in the organism are not maintained through the medium of the blood's circulation only, but they have a relation of another sort, which is not so easy to think about or to state, but yet is equally real. It surprised him that Dr. Darwin's theory of pangenesis, now published for some time, had not been applied by pathologists to aid them in their difficulties. That theory might be stated somewhat thus:—The body is composed of cells, every one of which gives to and receives from every other, each cell discharging and receiving an infinite number of buds wholly beyond our conception in minuteness and delicacy, and by these means the relations of like and unlike parts are kept in current perfection, and by them the parts influence each other. Such a view as this, which affords us a means of realising the relations between like and unlike tissues of the body, is very useful to explain those remarkable cases which had not been alluded to by Mr. De Morgan, in which the cancerous growths attacked the same system of tissues, especially the bones. Thus Dr. Moxon had recently inspected a case where the sternum, many ribs, many vertebræ, the cranium largely, and both ilia were the seats of distinct cancer growths, yet very little other cancer was present. Such a case offered great difficulties, both to the view of local origin with subsequent blood disease and to the view of primary blood disease, but it required and supported the belief that there is a special communication between the elements of allied tissues, creating, if he might so speak, departments of control and societies of union for the several systems, so that the tissues extend their changes to similar or correlated tissues in preference to those that are comparatively indifferent to them.

Mr. C. Moore said he now saw a lady one of whose breasts had been removed by Sir W. Lawrence, who was extremely careful as an operator. The other was removed by another Surgeon. The disease never recurred in the former; but of the latter a portion had been left, and the disease speedily recurred.

Dr. Moxon showed a specimen of "Pacchionian Glands" on the Liver. The specimen was a part of the liver of a man, aged 24, who died in Guy's Hospital of cardiac dropsy. On inspection the mitral orifice was found to be very closely contracted, so that it was not larger than a shirt-buttonhole. The left ventricle, as usual in such cases, was quite small, but the left auricle and right heart were very greatly dilated and hypertrophied. In cases where congestion of the liver from heart disease has been very prolonged and severe, the liver is, as it were, peppered over with what looks at first glance like little tubercles; but, on examining them, they are found to be flocculent outgrowths from the peritoneum and subperitoneal tissue. They have a very beautiful structure, being covered over with epithelium and furnished with a capillary loop, which in some instances is seen coiled into a spiral form and occupied with clot, so as to look like a little pellucid worm. His reason for bringing them forward was to suggest a comparison with the "Pacchionian glands" on the membranes of the brain. Circumstances go to prove that these latter bodies are caused by congestion. This specimen was an instance of growths sprouting from an apparently homogeneous membrane, as the hepatic peritoneum is when that membrane is subjected to a congestion that must affect all its parts equally.

Mr. T. Smith exhibited some Calculi removed from the kidney.

Dr. Beigel exhibited a case of Fibroma of the Spleen, remarking that he brought the specimen under the notice of the Society because he found in the works on pathological anatomy stated fibroma of the spleen, particularly in the shape of round small tumours, to be rare. In his specimen there were three such tumours, the largest of the size of a millet-seed, distributed over the surface of the spleen, lying underneath the capsule, with which they were intimately connected.

The microscopical appearance was somewhat peculiar, the little tumours consisting of broad, flat, well-defined bands, similar to those of some elastic fibres, having a very regular arrangement, and leaving spindle-shaped spaces along the contours of adjacent bands. The specimen was taken from a woman, aged 65, suffering for the last eight years from chronic arthritis, the history of which does not bear on the above specimen.

Dr. Kelly exhibited a specimen of Ruptured Chordæ Tendineæ. The posterior flap of the mitral was entirely separated from these. Two or three were also separated from the anterior division. Vegetations were abundant, by which, indeed, the structure of the cords would seem to have been destroyed.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Adjourned Meeting, Saturday, May 1, 1869.

Dr. Druitt, President, in the Chair.

The adjourned debate was resumed on Dr. Letheby's paper "On the Methods of estimating Nitrogenous Matters in Potable Waters, and on the Value of the Expression 'Previous Sewage Contamination,' as used by the Registrar-General in his Monthly Reports of the Metropolitan Waters." The chief points for consideration in Dr. Letheby's paper were the following:—1. Whether rivers fouled by sewage and manufacturing refuse have or have not a self-purifying power. 2. Whether the nitrogenous compounds of rivers and well-waters must necessarily have a previous sewage or manure origin. 3. Whether, in describing the analytical facts of water examinations, it is proper to use such a speculative phrase as "previous sewage contamination," and to express the result in tons.

It began with a short paper by Dr. Ballard "On the Practical Aspect of the 'Previous Sewage Contamination' Question." He commenced by explaining that he interpolated this paper in the discussion, with the permission of the President, partly because it appeared to him that in the turmoil of chemical controversy the Association was likely to lose sight of the special interest to them, as practical men, of all such inquiries as they were now engaged in—namely, to discover whether a water was or was not wholesome, and partly because the term "previous sewage contamination" had not been used by both parties in the discussion in the definite sense which the words imply. He considered that no other sense should be given to it than the admixture with a water at a sufficiently recent period of veritable town sewage matter. He did not think the term ought to be employed as synonymous with the presence of nitrates in a water. And, giving this strict definition to the term, the necessary composition of sewage matter, as derived from an acquaintance with the sources whence it derives contributions, is a kind of knowledge more important to a Health Officer, when the fouling of drinking water with such matter is in question, than the composition of sewage as expressed in terms such as those in use by chemists. In other words, its proximate physical and chemical composition is of more practical interest than its ultimate chemical composition. Regarding sewage, then, as a mixture of domestic and manufacturing refuse, much of it of a fatty, organic, and even organised character, of the excreta of men and animals, together with the ova and larvæ of the parasites which infest them, and the specific discharges from diseased surfaces, many of these matters being in a process of primary decomposition and constituting a ferment-like element in the mixture, and assuming that there is danger in drinking water mixed with such matters, the question naturally first arises as to where precisely the danger lies. The author thought that this question might be brought within narrow limits by observing that for a water to be potable at all it must not be disgusting, as it would be if the sewage matters were not so far diluted by the water they had mixed with as to destroy the more palpable evidences of the fouling the water had undergone. Accordingly, he fixed upon the three following sources of unwholesomeness in such a water, viz.:—1. Matters chiefly of an animal or excrementitious origin undergoing primary decomposition, and possessing more or less the faculty of promoting a similar change in other matters capable of it—matters, therefore, chemically of *the nature of ferments*, and unless controlled in their operation by the antiseptic power of the secretions of the alimentary canal, likely to operate on its contents within the body as on similar matters outside the body. Probably many of our summer bowel disturbances have some such origin as this, and although there is no reason to believe that ferments can be absorbed unchanged into the blood, the habitual ingestion of such matters in too minute quantity to produce acute disease may be believed to operate in a chronic manner, by disturbing digestive changes, upon the general health. 2. There can be no question that *certain products of primary decomposition* of sewage when existing in water render it dangerous to drink, as is shown by the mischief experience has shown to arise from the absorption of sewer gases in London water cisterns. 3. Specific and other *discharges from diseased surfaces* inevitably find their way into town sewage, and when we consider what the nature of these matters is individually, the mind recoils with indescribable loathing from the idea of drinking water, as of a stream, with which they have become mixed. Nevertheless, putting the idea of disgust aside, there is no reason to believe that *all* of them are capable of exciting in those who drink water thus contaminated their corresponding diseases. Some viruses can only operate when introduced directly into the blood, and are harmless when swallowed. The most dangerous of all are the morbid discharges from the digestive canal. Nor, considering the similarity of structure of the mucous and cutaneous membranes, and the fact that water supplied for drinking is also used for other purposes, is the admixture of small-pox virus, or perhaps also scarlatina virus, to be regarded with anything but suspicion, although there may be no facts to support it. Modern inquiry also tends to the doctrine either that these viruses are themselves of the nature of living germs, or that they operate on the system through living agencies. 4. There are the ova and larvæ of the entozoa and other parasitic germs, which must enter in myriads into any water with which town sewage is mingled. This is no fanciful danger; some larvæ of entozoa have their natural habitat in water until they find their appropriate host, and the danger is not to be ignored because we do not know its precise extent. The author then proceeded to inquire how far nature provides by oxidation and the action of plants and animals for the purification of a water thus fouled—not from the chemist's, but from the Health Officer's point of view. When water mixed with sewage sinks into a soil, it is more or less filtered from suspended matter, and in such a process the excessively minute particles of virus and entozoal ova must be about the last things arrested. Neither is there any reason to believe that humus, while it deodorises, has any power whatever to disinfect at the same time—that is, to deprive the several viruses which come in contact with it of the power to propagate disease. Experience, indeed, is all on the other side. The author referred, in support of his view, to the absence of any such power to render innocuous the discharges from cholera or cattle plague, to the observations of Dr. Clouston at the Carlisle Asylum and those recorded by Professor Rolleston and Dr. George Johnson in respect of Moule's earth closets. As respects the power of oxidation which both in soil and water has been claimed as the general purifier, he thought that the chemists who most earnestly maintained its efficacy would nevertheless concede that oxidation was more or less elective, and that an order would be observed in the oxidation of the constituents of sewage. The oxidation would probably first take effect upon the inorganic oxidisable matters present, next upon dissolved dead organic matter, next upon the undissolved dead organic matter, and last of all upon those matters which we may believe to be living matters—the viruses of disease. This view of the case would furnish the following rule for judging of the wholesomeness of a water with which it is known that sewage matter has been mingled—viz., that there can be no satisfactory assurance that oxidation has rendered innocuous the matters which may be believed to render the water unwholesome and dangerous, so long as (1) chemical examination shows that the ordinary products of organic decomposition are not destroyed, or (2) the presence both of a ferment and decomposable matter is shown by the putrefaction of the water on being left to stand in a warm place, or (3) the microscope shows the minute *débris* of organised substances still present, or living infusoria, which can only exist where there is that on which they can feed. But even on the application of these tests being satisfactory (and it is questionable if they ever could be absolutely so), there still remain the ova and larvæ and germs of parasites which no oxidation or action of water plants can be believed to affect. The author then laid down the rule that a *reasonable suspicion* of continued unwholesomeness should deter us from sanctioning the use of a water thus once contaminated, as the only one consistent with the maxims which guide practical men at all times in their dealings with disease, and that we should neither wait for nor expect absolute demonstration of unwholesomeness. Admitting that the strict application of

this rule would be tantamount to condemning as not absolutely safe many, perhaps nearly all the stream waters from which large towns are supplied, he observed that in this world and in the condition of society which civilisation involves, we live amidst compromises. We are surrounded by dangers on all sides, dangers resulting from the very instincts of our nature, which prompt and compel us to dwell in communities. The very air we breathe is loaded, like the water of a sewage-polluted stream, with organic matter, infusorial germs, and the specific products of diseases which scourge our neighbours and our own households. From these we cannot escape, and as in the latter instance, so in the case where necessity compels the use of a stream water once polluted with sewage, not only should every effort be made to improve the character of the supply, but measures of domestic and social hygiene should be employed to render the population supplied less susceptible of invasion by disease. In concluding, the author observed that while gratefully acknowledging the great services rendered by chemistry to sanitary science and sanitary art, we must as yet decline to receive its dicta without qualification as the last pronouncing of science upon subjects relating to health and disease. Useful as are unquestionably the revelations of chemical analysis as applied to a potable water, there are methods of inquiry, rougher and ruder, to us as practical sanitarians for the present more useful still, and revelations more valuable in their relation to disease than any that can be made by the test-tube.

The PRESIDENT said that he had received valuable communications on the subject of the debate from several very eminent members of the Profession, which it was his duty to lay before them. With regard to the actual state of rivers which receive sewage, Mr. Middleton, of Salisbury, describes the Avon (Wilts) as receiving the drainage of the city at one point below it, then irrigating a series of fine meadows for seven miles, till it reaches the town of Downton, where it is perfectly pure, not hurtful to man, and decidedly good for trout. On the other hand, Dr. Barter accuses the Avon (Somerset), which receives the drainage of six towns above Bradford, and then that of Bradford, after which it flows nine miles to Bath, of being "never pure" above that city, and very offensive below it. Dr. Wilson, of Cheltenham, referred to the impurity of the Severn above Tewkesbury, seven miles lower than Upton, and sixteen below Worcester. He speaks of the very offensive state of the Chelt after it has received the overflow of the Cheltenham sewage works. Dr. Rumsey doubts whether river water fouled by sewage ever becomes quite free from impurity. He believes in the general animal origin of nitrates even in deep well water, and justifies the term "previous sewage contamination," not as logically correct, but as "useful in pointing out the most common and obvious and most dangerous kind of pollution." He doubts if any limits of safety can be laid down with regard to the destruction of living germs in running water, and is sure that river water polluted by sewage may produce disease after a flow of some miles. He is most emphatic in his belief that disease is propagated along the Chelt since it has been fouled by the odious system of water-closet drainage. Sickness has increased in the lower part of Cheltenham since it was sewered; and the want of a public general register of sickness is to be deplored, as thus only could the amount of mischief be shown. Professor Acland is positive that disease can be communicated by river water, but confesses want of data for fixing the limits of danger and safety. Dr. Angus Smith believes largely in the purifying virtues of time, distance, water, and air; but "between the water-closet and putrefaction there is an unknown something to which in the present state of our knowledge we must subject no man." "None of our rivers," he adds, "are sufficiently large to purify the sewage from large populations with the requisite rapidity." Professor Haughton is "very sceptical as to the water theory of contagion." Dr. Sutherland believes that the organic matter poured into the Thames is not entirely oxidised, though it varies considerably from time to time; and he believes that no attainable length of river in England would be sufficient to oxidate the sewage poured into it by a town. If drinking-water must be had from a river, that should at least be protected from pollution by every available means. He regards the "propagation of disease by living germs as mere hypothesis, and believes that dead and decaying organic matter is the cause of diarrhœa, dysentery, paroxysmal fevers, etc., and that the use of such water by the sick, cholera-stricken, and others, adds pre-eminently to the danger." Dr. Ballot, of Rotterdam, speaks in the most positive manner of the common production of diarrhœa by the use of the polluted river water of the Netherlands; he believes in the propagation of typhoid, and thinks that of cholera extremely probable. He gives particulars of the dates of appearance of cholera in various epidemics at successive points down the river where sewage-polluted water is used for drinking. This letter must be published entire.

(To be continued.)

MEDICAL SOCIETY OF LONDON.

MONDAY, APRIL 12, 1869.

PETER MARSHALL, Esq., President, in the Chair.

DR. MORELL MACKENZIE read a paper on Syphilitic Disease of the Throat, drawing the attention of the Fellows of the Society to the subject of the differential diagnosis between syphilis, phthisis, and cancer in the larynx. The following were the principal distinctive features:—They might be divided into, first, the general character of the pathological process, and, secondly, into the situation of the disease. Under the first we observe—*a*. In syphilis the ulceration is generally extensive, and may take place without much thickening; loss of tissue is its distinctive sign. *b*. In phthisis a more or less uniform thickening is the principal characteristic; this thickening always precedes ulceration. *c*. In epithelial cancer there is generally a very great amount of irregular thickening and displacement. As regards site:—*a*. Syphilis most frequently and first attacks the epiglottis, and there are signs of former ulceration in the pharynx. *β*. Phthisis most frequently and first attacks the neighbourhood of the arytenoid cartilages, where it produces pyriform swelling. When it attacks the epiglottis it generally produces thickening, and the subsequent ulceration is often of a worm-eaten character. *γ*. Epithelial ulceration generally attacks the posterior surface of the arytenoid cartilages and the corresponding wall of the pharynx. The secretion from the various ulcerations is distinctive. In syphilis it is thick, yellow, and very tenacious. In phthisis it is thinner and frothy. In cancer the secretion is scanty, except in a very advanced stage. In addition to the above, the previous history, present constitutional condition, temperature, pulse, and state of the lungs, all greatly assist in forming an accurate opinion. Dr. Mackenzie's treatment of the ulcerations of tertiary syphilis consisted in cleansing the ulcer with a dry, stiff, but soft camel's-hair brush, and then applying a very strong solution of nitrate of silver or, better still, the solid nitrate fused on to aluminium rods. In addition, he administered iodide of potassium in ten-grain doses in combination with ammonia, and largely diluted. He considered the local treatment in these cases of the very first importance; without it, in spite of the most able constitutional treatment, it was often impossible to arrest the disease. In protracted cases a change of local treatment was often advisable. Dr. Mackenzie frequently substituted copper for silver as an application.

NEW BOOKS, WITH SHORT CRITIQUES.

Laboratory Teaching; or, Progressive Exercises in Practical Chemistry. By C. L. Bloxam, Professor of Practical Chemistry King's College, London, etc. London: John Churchill and Sons. Pp. 227.

*** This is one of the most complete little volumes on practical chemistry it has been our fortune to encounter. It begins at the beginning; it presupposes no knowledge of chemistry, and the first thing a man is taught to do is to dissolve a substance for analysis, to clean a test-tube, to filter a solution, how to add a test to a solution, and so on. Then follow notes giving reasons why certain substances are added—in short, the volume contains a vast deal the student has hitherto had to pick up for himself or go without. Above all, it is fully illustrated; every little process is shown in the various stages of its accomplishment. Nor does the author limit himself to the detection of mineral substances, but many vegetable and other organic products, not ordinarily treated of in such works, are dealt with, and their characteristic properties and the means of elucidating them are here given. Exercises appropriate to various stages of progress are also given. In short, Professor Bloxam has conferred a benefit on the student race. As is well known, Mr. Bloxam objects to abandon the old notation till he sees a new one settled on, so that the old terms are here used—symbols are not employed.

A House and its Furnishings. By Mrs. Warren, Author of "How I managed my House on £200 a Year." London: Bemrose and Sons, 21, Paternoster-row. Price one shilling.

*** Contains some very useful hints about the healthiness of houses, and is intended to show for how small a sum a frugal young couple can furnish a house, and on how small an income they can live. It is not every young man, however, who would venture to ally himself to such a dragon of economy and virtue as Mrs. Warren describes in the shape of the mother-in-law in the book before us, and it is worth knowing how daughters can receive such an education as is described out of so small a family revenue.

Lessons in Elementary Chemistry. By Henry E. Roscoe, B.A., F.R.S., Professor of Elementary Chemistry in Owens College, Manchester. New Edition. London: Macmillan and Co. Pp. 458.

*** We gladly welcome a new edition of this little work, which we unhesitatingly pronounce the best of all our elementary treatises on Chemistry. A considerable number of questions for examination are now added.

MEDICAL NEWS.

UNIVERSITY OF GLASGOW.—List of Degrees in Medicine conferred by the University since July 31, 1868:—

DOCTORS OF MEDICINE.

John Fulton, M.B., Scotland.
James Adamson, Ireland.
John Campbell, Scotland.
Robert Wardrop Forrest, M.B., Scotland.

BACHELORS OF MEDICINE AND MASTERS IN SURGERY.

Allan, James W., Scotland.
Arthur, Hugh ,,
Armour, Andrew ,,
Borthwick, Charles J. ,,
Cameron, Evan ,,
Crawford, William ,,
Dougall, John ,,
Drew, John ,,
Forsyth, Robert ,,
Gardner, James ,,
Gray, James St. Clair ,,
Haining, James ,,
Huggins, James P., Trinidad.
Hutcheson, George, Scotland.
Leckie, David ,,
Logan, Archibald, B.A. ,,
Moffat, James, Scotland.
Moore, James T., Ireland.
M'Casland, Peter B., M.A., England.
MacIntyre, Peter, Scotland
Macnaughton, John ,,
Osborne, James ,,
Paul, James ,,
Rankin, Malcolm A. ,,
Rodger, Robert ,,
Rogers, William ,,
Smith, Edward ,,
Sutherland, Arthur ,,
Taylor, James J. B., England.
Templeton, Archibald, Scotland.
Weir, Andrew ,,
Wyllie, William ,,

BACHELORS OF MEDICINE.

Arrol, Charles, Scotland.
Pitts, James, B.A., Nova Scotia.

MASTERS IN SURGERY.

Fielding, Thomas, M.D., England.
Dick, James, M.D., Scotland.
Johnstone, Alexander, M.D., England.

The following gentlemen were named as entitled to Special Commendation and to Commendation, on account of distinguished merit at the various examinations for the Degrees of M.B. and C.M.:—

I.—*Special Commendation.*

Armour, Andrew, M.B., C.M.
Cameron, Evan, M.B., C.M.
Gray, James St. Clair, M.B., C.M.
Rogers, William, M.B., C.M.
Taylor, James J. B., M.B., C.M.

II.—*Commendation.*

Allan, James W., M.B., C.M.
Crawford, William, M.B., C.M.
Leckie, David, M.B., C.M.
Logan, Archibald, B.A. M.B., C.M.
M'Casland, Peter B., M.A., M.B., C.M.
MacIntyre, Peter, M.B., C.M.
Rodger, Robert, M.B., C.M.
Sutherland, Arthur, M.B., C.M.
Wyllie, William, M.B., C.M.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a general meeting of the Fellows, held on Thursday, April 29, the following gentlemen, having undergone the necessary examination, were duly admitted Members of the College:—

Gould, Franklin, M.D. Edin., 26, Charlotte-street, Bedford-square.
Kempthorne, Henry Law, M.D. Lond., Bethlem Royal Hospital.
Legg, John Wickham, M.D. Lond., 11, South-street, Park-lane.
Lackersteen, Mark Henry, M.D. St. Andrews, 28, St. Stephen's-road, Westbourne-park.
Shaw, Thomas Claye, M.D. Lond., Middlesex County Lunatic Asylum, Colney-hatch.
Squarey, Charles Edward, M.B. Lond., University College Hospital.
Hope, William, M.B. Aberdeen, 42, Curzon-street, Mayfair.

At the same meeting, the following gentlemen, having undergone the necessary examination, and satisfied the College of their proficiency in the science and practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

Baines, Albert Henry, Leicester.
Barton, Edwin William, Market Rasen.
Bird, William Valentine, Bootle.
Cheesman, Henry, Widnes, Lancashire.
Crew, John, Higham Ferrers.
Dresser, William, Coventry.
Hartill, John Thomas, Willenhall.
Hiron, William Nathaniel, Westminster General Dispensary.
Hoar, Charles Edward, Maidstone.
Moseley, Litchfield Jones, 156, New Kent-road.
Pearless, Charles Durrant, Sevenoaks.
Pollard, Frederick, St. Thomas's Hospital.
Powne, William, Billingborough, Folkingham.
Rugg, Baron Alfred, 1, Grove-road, St. John's-wood.
Rundle, Henry, Plymouth.
Sells, Charles John, Guildford.
Turner, Duncan, 2, St. Peter-street, Islington.
Walker, James, Leeds.
Willcox, Robert Lewis, Wareham.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 29th ult., and when eligible will be admitted to the pass examination:—

Brierley, J. B., of Edinburgh.
Chilcot, James, of University College.
Coleman, H. W., of Leeds.
Curling, William, of the London Hospital.
Davidson, John, of Aberdeen.
Deshon, Frederick, of Charing-cross Hospital.
Dodd, T. A., of Newcastle-upon-Tyne.
Eagar, R. T. S., of Manchester and Edinburgh.
Eager, T. C., of the Westminster Hospital.
Fenton, George, of the Westminster Hospital.
Freeman, E. W., of the London Hospital.
Harrison, Thomas, of Liverpool.
Hunt, Joseph, of Birmingham.
Jago, Thomas, of St. Bartholomew's Hospital.
Johnston, John, of Newcastle-upon-Tyne.
Kennedy, W. J., of Edinburgh.
Mallen, H. K., of Newcastle-upon-Tyne.
Martin, R. J., of Manchester.
Rogers, C. C., of Middlesex Hospital.
Slaughter, W. B., of St. Thomas's Hospital.
Swan, R. J., of Dublin.
Sylvester, K. F., of St. Bartholomew's Hospital.
Taylor, G. T., of Leeds.
Thornton, W. P., of University College.
Tucker, J. K., of Guy's Hospital.
Turner, F. C., of Cambridge and Guy's Hospital.
Watson, W. G., of St. Mary's Hospital.
Williams, Josiah, of University College.

It is stated that of the 108 candidates admitted to their primary examinations on the 27th, 28th, and 29th ult., twenty-two failed to acquit themselves to the satisfaction of the Court of Examiners, and were referred to their anatomical and physiological studies for a period of three months.

The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 4th inst.:

Attwater, Arthur William, Brondesbury Lodge, Kilburn, of St. Bartholomew's Hospital.
Broom, Henry John, Llanelly, South Wales, of University College.
Cheyne, William R., Nottingham-place, of University College.
Darby, John Thomas, Derby, of University College.
Edwards, William Henry, Antigua, West Indies, of St. Bartholomew's Hospital.
Etheredge, George Ernest Frederick, L.S.A., Starston, Norfolk, of St. Bartholomew's Hospital.
Harris, Andrew, Manchester, of the Manchester School.
Hart, John, Calcutta, of Calcutta and University College.
Hartell, John Thomas, L.R.C.P., Willenhall, Staffordshire, of St. Bartholomew's Hospital.
Kennedy, Edward, Manchester, of the Manchester School.
Kibbler, William Ambrose, Hackney, of the London Hospital.
Kipling, William, L.S.A., Romaldkirk, Yorkshire, of University College.
Parsons, Thomas Edward, Islip, Oxon, St. Mary's Hospital.
Plaxton, Joseph William, Hull, of the Hull School.
Reynolds, John, Brixton, Surrey, of Guy's Hospital.
Ringer, Beverley Stewart, John-street, W.C., of St. Bartholomew's Hospital.
Sewell, Allen, L.S.A., Euston-square, of University College.
Ticehurst, Augustus Rowland, L.S.A., Hastings, of Guy's Hospital.
Wade, George Herbert, Plymouth, of St. George's Hospital.

Two out of the twenty-four candidates examined failed to acquit themselves to the satisfaction of the Court, and were referred for a period of six months' further Professional study.

The following passed on the 5th inst.:—

Betts, James, Oliphant, L.S.A., Calcutta, of University College.
Calantarients, Johannes A., Erivan, Armenia, of University College.
Caldecott, Randolph, Rugby, of King's College.
Davies, William Henry, L.S.A., Newbridge, Monmouthshire, of University College.
Edwardes, Lewis, Wimbledon, Surrey, of Guy's Hospital.
Fielding, James, M.D. Toronto, of Toronto and St. Thomas's Hospital.
Fleming, David Gibb, M.D. Toronto, of Toronto and St. Thomas's Hospital.
Harris, Robert, Hackney, of Guy's Hospital.
Hosford, Thomas Stroud, Clapton-park, of the London Hospital.
Howse, Frederic, L.S.A., Kilburn, of Charing-cross Hospital.
Hughes, Arthur H., M.B. Toronto, of Toronto and St. Thomas's Hospital.
Kenyon, John Kilshaw, L.S.A., Ditton, of St. Mary's and Guy's Hospitals.
Moor, Alfred, Durham, of Guy's Hospital.
Parkinson, C. H. W., Wimborne, Dorsetshire, of Guy's Hospital.
Pughe, John Eliot Howard, Liverpool, of the Liverpool School.
Robathan, George B., Risca, Monmouth, of St. Thomas's Hospital.
Shaw, Josephus, Rees, near Manchester, of St. Bartholomew's Hospital.
Shewen, Alfred, Sevenoaks, of University College.

It is stated that only one out of the twenty-three candidates examined failed to acquit himself to the satisfaction of the Court of Examiners.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, April 29, 1869:—

Adcock, Hugh, Abbey-street, Bermondsey.
Durant, Edmund, Winchester.
Ekens, Joseph William, Wimbledon.
Hart, Eugené John, High-road, Lee, Kent.
Hyde, John Knowler, Witney, Oxon.

Park, Robert, Glasgow University.
Taylor, William Bramley, Camberwell-green.

The following gentleman also, on the same day, passed his First Examination:—

Fryer, John, Leeds School of Medicine.

APPOINTMENT.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Middlemist, R. P., M.R.C.S.E.—Obstetric Surgeon to the St. George's and St. James's Dispensary.

NAVAL AND MILITARY APPOINTMENTS.

Admiralty. — The following appointment has been made:—Michael O'Hurlstone, Assistant-Surgeon, to the *Jackal*.

Madras Army.—Medical Officers to be Surgeon-Majors, Surgeons John Robert Theobald and George Trimnell. To be Surgeon, Assistant-Surgeon Thomas Gwynne Howell.

Bombay Army.—Medical Officers to be Surgeons, Assistant-Surgeon Thomas Miller, M.D., Assistant-Sugeon James Lalor, A.B., and Assistant-Surgeon Rustomjee Byramjee, M.D.

7th Dragoon Guards.—Staff Assistant-Surgeon Ninian Alexander Williamson, M.D., to be Assistant-Surgeon, *vice* Richard Hall, M.D., who exchanges.

Medical Department.—Surgeon Edmund Humphrey Roberts, from the Royal Artillery, to be Staff Surgeon; Assistant-Surgeon Richard Hall, M.D., from the 7th Dragoon Guards, to be Staff-Assistant-Surgeon, *vice* Ninian Alexander Williamson, M.D., who exchanges.

31st Staffordshire Rifle Volunteer Corps.—William Frederick Marsh Jackson, gentleman, to be Honorary Assistant-Surgeon.

Prince of Wales's Own Royal Regiment of Wiltshire Yeomanry Cavalry.—Assistant-Surgeon James Blake Maurice, to be Surgeon, *vice* Price, resigned.

The surname of the Surgeon mentioned in the *London Gazette*, December 31, 1867, should be "Binsteed" and not "Bursteed" as therein stated. The date of rank of Surgeon Henry Wakefield (Bombay), should be February 14, 1867, and not January, as stated in the *London Gazette* of July 5, 1867.

BIRTHS.

Daly.—On May 2, at 101, Queen's-road, Dalston, the wife of Frederick H. Daly, M.D., of a daughter.

Hutchinson.—On April 30, at Eastbourne, the wife of Dr. J. A. C. Hutchinson, Bengal Medical Service, of a son.

Jones.—On April 29, at St. Thomas's-street, Southwark, the wife of Sydney Jones, M.B., F.R.C.S., of a daughter.

Lewis.—On April 29, at 43, Upper Gloucester-place, Dorset-square, the wife of Frederick Lewis, L.R.C.P., of a daughter.

Robbs.—On May 1, at Grantham, the wife of C. H. D. Robbs, M.D., of a daughter.

MARRIAGE.

Hearle-Cock—Parkin.—On April 29, at St. Paul's Church, Devonport, Francis Hearle-Cock, Esq., of Truro, to Caroline, daughter of Henry Parkin, Royal Navy, M.D., F.R.C.S., Inspector-General of Hospitals and Fleets.

DEATHS.

Atkinson, Janey Janette, the beloved wife of Lieutenant S. E. Atkinson, Adjutant 19th M.N.I., and youngest daughter of John McKenna, M.D., Inspector-General of Hospitals, Madras Army, at Kurnool, East Indies, on April 3, aged 18.

Blackett, Mrs., widow of Powell Charles Blackett, Surgeon, R.N., at 23, Green-street, Grosvenor-square, W., on May 2, in her 68th year.

Blair, Caroline Louise Simonette, widow of the late D. Blair, M.D., Surgeon-General British Guiana, at 16, Ampthill-square, on May 2, aged 46.

Dunglison, Robley, M.D., for thirty-two years Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College, Philadelphia, United States, at his residence, Girard-street, Philadelphia, on April 1, in the 72nd year of his age.

Harding, Joseph James, M.R.C.S., L.S.A., second son of the late James Harding, Esq., of Newcastle-on-Tyne, at his residence, 4, Prince's-terrace, Regent's-park, on April 26.

Ligertwood, Emma, the beloved wife of Thomas Ligertwood, M.D., late 8th Hussars, fourth daughter of the late Francis Laking, Esq., of Wilton-place, Belgrave-square, at the Royal Hospital, Chelsea, on May 2.

Maysmor, Humphrey Leveaington, M.D., only surviving son of the late R. P. Maysmor, of Teddington, Middlesex, at 3, Osborne-villas, Clifton-ville, on May 2, aged 36.

Miles, Charles, the eldest surviving son of John Miles, M.D., of Eastbourne, formerly of the Charterhouse, London, at his residence, Craven-road, Hyde-park, on April 19.

Perkins, John, M.D., at Brussels (in which city he had resided fifty years), on May 1, aged 74.

Robinson, Henry, son of the late Dr. Robinson, of Swinton-park, Manchester, on May 2.

Semple, Jane Sophia Elizabeth, beloved and second daughter of Dr. and Mrs. Semple, of 8, Torrington-square, London, after a long illness, on April 27, aged 17.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Castlebar Union.—Medical Officer for the Castlebar Dispensary District. Candidates must be legally qualified. Applications and testimonials to J. C. Larminie, Esq., Spencer-park, Castlebar, on or before the 15th inst.

Denbighshire Infirmary and Dispensary.—House-Surgeon and Secretary; must be duly qualified, conversant with the Welsh language, and unmarried. Applications and testimonials to J. Davies, Secretary.

Eastern Dispensary, Bath.—Resident Medical Officer; must be duly registered, and have both Medical and Surgical qualifications. Applications and testimonials to Mr. Edmund Smith, Hon. Sec., on or before May 10. Approved candidates will receive notice of the day of election.

Hartlepool Hospital.—House-Surgeon and Secretary; must possess both Medical and Surgical qualifications, and be registered. Applications and testimonials to James Rawlings, at the institution, on or before May 18.

Hospital for Consumption and Diseases of the Chest.—Resident Clinical Assistant. Candidates to send their applications and testimonials to the Hospital on or before the 10th inst., and to attend the Medical Committee the following day at 4 o'clock, with certificates of their Medical qualifications.

Leamington Provident Dispensary.—Dispenser; a married man without family preferred. Applications and testimonials to the Honorary Secretary, 15, Charlotte-street, Leamington.

Lincoln County Hospital.—Physician; must have a diploma from one of the Universities of Great Britain or Ireland, and be F. or M.R.C.P. Lond., F.R.C.P. Edin., or F.K.Q.C.P. Applications and testimonials to Mr. John William Danby, the Secretary, Lincoln, on or before May 17. Election on May 20.

London Fever Hospital.—Physician; must be F. or M.R.C.P.L. Applications and testimonials to the Secretary, London Fever Hospital, Liverpool-road, N., on or before May 8.

Metropolitan Free Hospital, Devonshire-square, E.C.—Surgeon; must be F.R.C.S. Applications and testimonials to the Committee on or before May 20.

North Riding Infirmary, Middlesborough-on-Tees.—House-Surgeon; must be unmarried, and be F. or M.R.C.S., and possess a Medical qualification recognised by the Medical Council. Applications and testimonials to the Secretary on or before June 1. Election on July 1.

Notting-hill and Shepherd's Bush Dispensary.—Resident Medical Officer; must be registered. Applications and testimonials to the Hon. Secretary, at the Institution, Portland-road, W.

Retford General Dispensary.—House-Surgeon and Apothecary; must have both Medical and Surgical qualifications. Applications and testimonials to the Dispensary Committee on or before May 8. The duties will commence on July 1.

St. Mary's Hospital and Dispensary for Women and Children, Manchester.—Resident Medical and Surgical Officer; must be M.R.C.S. and L.S.A., or M.R.C.P., and be registered. Applications and testimonials to the Secretary on or before May 20.

Sheffield General Infirmary.—House-Surgeon; must be M.R.C.S., or a Licentiate of the Faculty of Physicians and Surgeons of Glasgow, and L.R.C.P.L. Applications and testimonials to J. Kirk, Secretary, on or before May 22. Election on June 2.

Sheffield Public Hospital and Dispensary.—Honorary Physician; must be a graduate in Medicine of a University, or F. or M.R.C.P., not practising Midwifery or Surgery. Applications and testimonials to the Honorary Secretary. Election on May 26.

West London Hospital, Hammersmith.—Dispenser; a Member of the Pharmaceutical Society preferred. Applications and testimonials to the Secretary. Candidates will receive notice requiring their attendance.

POOR-LAW MEDICAL SERVICE.

APPOINTMENTS.

Haltwhistle.—Edward B. Pellew, M.R.C.S. Eng., L.R.C.P. Edin., to the Western District.

Hexham Union.—Hugh McLean, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Eighth District.

Martley Union.—Thomas Markby, M.R.C.S.E., L.S.A., to the Martley District and the Workhouse.

Shipston-on-Stour Union.—Henry Stubbs, M.R.C.S.E., L.S.A., to the Halford District.

Tendring Union.—John Will Cook, M.D. Aber., M.R.C.S. Eng., to the Parish of Ardleigh.

West London Union.—Frederick William Wilson, B.M. Univ. Lond., M.R.C.S. Eng., L.S.A., to the Supplemental Workhouse, Thavies Inn.

Worksop Union.—John Housley, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Cuckney District. Arthur James F. Russell, L.C.S. Ire., L.C.P. Ire., to the Whitwell District.

University of London.—Examiners for 1869-70.—The following gentlemen were elected at the meeting of the Senate held April 28:—Classics: Rev. Hubert Ashton Holden, LL.D., M.A., and Mr. F. A. Paley, M.A. The English Language, Literature, and History: Rev. Joseph Angus, D.D., and Mr. J. G. Fitch, M.A. The French Language: Rev. P. H. Ernest Brette, B.A., B.D., and Professor C. Cassal, LL.D. The German Language: Mr. Frederick Althans, Ph.D., and Professor Buchheim, Ph.D. The Hebrew Text of the Old Testament, the Greek Text of the New Testament, the Evidences of the Christian Religion, and Scripture History: Rev. Samuel Davidson, D.D., LL.D., and Rev. J. J. Stewart Perowne, B.D. Logic and Moral Philosophy: Rev. Mark Pattison, B.D., and Professor G. Croom Robertson, M.A. Political Economy: Professor W. Stanley Jevons, M.A., and Professor T. E. Cliffe Leslie, LL.B. Mathematics and Natural Philosophy: Mr. Edward John Routh, M.A., and Professor H. J. S. Smith, M.A., F.R.S. Experimental Philosophy: Professor W. G. Adams, M.A., and Professor G. Carey Foster,

B.A. Chemistry: Mr. William Odling, M.B., F.R.S., and Professor A. W. Williamson, Ph.D., F.R.S. Botany and Vegetable Physiology: Rev. M. J. Berkeley, M.A., and Mr. Joseph Dalton Hooker, M.D., LL.D., F.R.S. Geology and Palæontology: Mr. Archibald Geikie, F.R.S., F.G.S., and Professor T. Rupert Jones, F.G.S. Law and the Principles of Legislation: Professor Mountague Bernard, B.C.L., M.A., and Mr. John Richard Quain, LL.B. Practice of Medicine: Professor J. Russell Reynolds, M.D., and Mr. Samuel Wilks, M.D. Surgery: Mr. John Birkett, F.R.C.S., and Professor Le Gros Clark. Anatomy: Professor William Turner, M.B., F.R.S.E., and Mr. John Wood, F.R.C.S. Physiology, Comparative Anatomy, and Zoology: Professor Thomas H. Huxley, LL.D., F.R.S., and Mr. Henry Power, M.B. Midwifery: Mr. John Braxton Hicks, M.D., F.R.S., and Professor William Overend Priestley, M.D. Materia Medica and Pharmaceutical Chemistry: Professor Alfred Baring Garrod, M.D., F.R.S., and Mr. Samuel Osborne Habershon, M.D. Forensic Medicine: Mr. E. Headlam Greenhow, M.D., and Mr. Thomas Stevenson, M.D.

Mr. F. S. Haden, who was elected from Westminster School to Christ Church, Oxford, on Tuesday last, is a son of Mr. Seymour Haden.

Dr. Lake, of Southampton, has had his elbow dislocated, and received other injuries, on being thrown from his carriage, caused by the horse suddenly bolting and overturning it.

The Anglesey Board of Guardians have resolved not to confirm any order given by the Medical officers "for wine and meat, unless the same are first presented to the relieving officer for his approval and signature."

A new Fever Hospital is to be built at Bradford, Yorkshire, to accommodate 48 patients, and be capable of extension. The building will cost £8500, and the site, roads, fencing, &c., £4000 more.

The British Lying-in Hospital.—The controversy which has been going on for some time between rival sections of the governors of this charity seems likely to be brought to a close. We hear that Dr. Edmunds has resigned his appointment as Physician to the Hospital and all connexion with it and the Female Medical College has been, for a time at least, severed.

The usual monthly meeting of the Metropolitan Association of Medical Officers of Health will be held at the Scottish Corporation Hall, Crane-court, Fleet-street, on Saturday, the 15th inst., at 7.30 p.m., when a paper will be read by Dr. B. W. Richardson, F.R.S., "On the Registration of Disease in England."

Last week at Retford, whilst Mr. Henry Hutchinson, a veterinary Surgeon, was playing with his children, he put a dog's tooth in his mouth, and allowed it to slip down his throat. At the time he thought very little of the occurrence, but finding the tooth stuck, and was inconveniencing him, he sought the advice of a Surgeon, who did all he could to reach it, but without success. On Thursday Dr. Barber, from Sheffield, was sent for, to open the windpipe; but before he arrived Mr. Hutchinson was dead.

Medical Benevolent Fund.—At a special general meeting of the subscribers, held at Mr. Churchill's, on Tuesday, April 27, Mr. Jonson in the chair, the laws as recently amended were adopted, and ordered to be printed with the report for 1868, which is about to be issued. Edgar Barker, Esq., of 9, Oxford-square, was elected a Vice-President. At the committee meeting held immediately afterwards Dr. Broadbent, the late Hon. Secretary, was unanimously elected an honorary life member, in recognition of the great services he has rendered to the fund during the past four years. Twelve cases of distress were presented, and the sum of £95 was granted for their relief.

Odontological Society.—The monthly meeting of this Society was held on Monday, May 3, the President in the chair. The discussion on Mr. Vasey's paper on filling teeth with gold was renewed. The subject is of great importance to both the public and the dentist, and an animated discussion took place. A prominent feature in it was the question of payment, and the general sentiments of the Society on this subject appeared to be expressed by one of the speakers as follows:—"The public can never gain the highest results of our art so long as they reward our labours with the stereotyped fee of a guinea. It does not require an elaborate calculation to see that we cannot spend two hours and from seven to fifteen shillings on gold, which many cases require, and be sufficiently recompensed by a guinea." The speaker proposed to adopt the principle of charging for time. The other points discussed were of a technical nature. The paper at the next meeting will be on "Electricity as an Anæsthetic in Dental Extraction."

The Welsh "Fasting Girl."—A singular charge of assault was preferred on Friday by the parents of Sarah Jacobs, the girl in Carmarthenshire who is said to have abstained from food or drink for the last seventeen months, against Dr. Pearson Hughes, of Llandovery, at the Llandyssal Petty Sessions. The mother of the girl complained that Dr. Hughes "stripped the girl and held a stethoscope to her chest, and stopped her breath." She told him that she had a doctor of her own, and asked him to leave her child alone. It was further made cause of complaint that he "pushed his hand behind the girl's shoulders, and passed it down her back, causing her to groan and rise up in her bed." In cross-examination witness said that Dr. Hughes threw 5s. on the bed, and said that he would not believe her statement if she swore it until she was black in the face. She admitted that the child might have received as much as 50*l*. Mr. Jones, for the defendant, said that Dr. Hughes regarded the affair as the greatest hoax that was ever perpetrated, and submitted that the mother had given her consent to the examination, a fact that was proved by the woman having accepted money. The Bench dismissed the charge, the Chairman remarking that his own opinion on the subject of the alleged fasting was very decided, and he would express it if the parents wished him to do so. It does not appear that they accepted the offer.

Royal Institution of Great Britain. — At the annual meeting held on Saturday, May 1, 1869, Sir Henry Holland, Bart., M.D., D.C.L., F.R.S., President, in the chair, the following gentlemen were unanimously elected as officers for the ensuing year:—*President:* Sir Henry Holland, Bart., M.D., D.C.L., F.R.S. *Treasurer:* William Spottiswoode, Esq., M.A., F.R.S. *Secretary:* Henry Bence Jones, M.A., M.D., F.R.S. *Managers:* George Berkley, Esq., C.E.; William Bowman, Esq., F.R.C.S., F.R.S.; Charles Brooke, Esq., M.A., F.R.S.; George Busk, Esq., F.R.C.S., F.R.S.; Admiral Sir Henry John Codrington, K.C.B.; Warren De la Rue, Esq., Ph.D., F.R.S.; John Peter Gassiot, Esq., F.R.S.; John Hall Gladstone, Esq., Ph.D., F.R.S.; Wm. Robert Grove, Esq., M.A., Q.C., F.R.S.; George Macilwain, Esq.; the Duke of Northumberland; William Frederick Pollock, Esq., M.A.; Robert P. Roupell, Esq., M.A., Q.C.; the Hon. John William Strutt; Colonel Philip James Yorke, F.R.S. *Visitors:* Andrew Whyte Barclay, M.D.; Charles Beevor, Esq., F.R.C.S.; John Charles Burgoyne, Esq.; Sir C. Wentworth Dilke, Bart.; Alfred Gutteres Henriques, Esq.; Sir Thomas Henry; Thomas Hyde Hills, Esq.; Thomas Lee, Esq.; William Longman, Esq.; Edward Henry Moscrop, Esq.; Rev. Cyril W. Page, M.A.; Edmund Pepys, Esq.; the Lord Joceline W. Percy; Arthur Giles Puller, Esq., M.A., F.S.A.; Robert Ballard Woodd, Esq., F.S.A., F.R.B.S. At the general monthly meeting, on the 3rd inst., Sir Henry Holland, Bart., President, in the chair, the following Vice-Presidents were nominated for the ensuing year:—The Duke of Northumberland, William Spottiswoode, Esq., F.R.S., the Treasurer. Lieut.-Colonel Archibald Campbell Campbell; Sir William Dickason Clay, Bart.; William Wilbraham Ford, Esq.; John Benjamin Marsden, Esq.; Herbert Schloss, Esq., were elected members. John Tyndall, Esq., LL.D., F.R.S., was re-elected as Professor of Natural Philosophy. The Managers announced that, in conformity with the deed of endowment, they had appointed Michael Foster, M.D., F.L.S., Fullerian Professor of Physiology.

University College, London.—The prizes in the Faculty of Medicine were distributed on Wednesday in the theatre of the College, Gower-street, Mr. William Spottiswoode, F.R.S., presiding. Dr. Reynolds, Dean of the College, read a report, which stated that the condition and prospects of the Medical school were highly satisfactory. There had been enrolled during the session 1868-9 222 students in the Faculty of Medicine, corresponding closely with the number of last year and the year before, and greatly exceeding the number of former years. Many of the students in the Faculty had, during the past session, graduated in the University of London, and by their success in competition with other schools had maintained the distinguished reputation which the College long since established for itself in the honours of the University. During the present session the Hospital had been enlarged, and twenty additional beds had been supplied for the purposes of clinical teaching. After paying a high tribute of praise to the late Dr. Hillier, whose early death he and his colleagues had to lament, the Dean concluded by expressing his unfeigned pleasure at

being able to state that throughout the session the conduct of the students of the Faculty of Medicine had been such as to merit the highest approbation of their teachers. The chairman then distributed the following prizes:—Medicine (Professor Russell Reynolds, M.D., Dean): Gold medal, Henry Newell Martin, of Newry; 1st silver, Charles Henry Carter, of London; 2nd silver, Howell Rees, of Maesteg. Anatomy and Physiology (Professor Sharpey, M.D., F.R.S.): Gold medal, George Dancer Thane, of London; 1st silver, Arthur Richard Saunders, of Haverfordwest; 2nd silver, A. H. Carter, of Pewsey. Anatomy (Professor Ellis): Gold medal, George Dancer Thane, of London; 1st silver, J. B. Ball, of Dublin; 2nd silver, W. W. Carr, of Blackheath. Junior Class: Silver medal, Thomas Sharpe Parry, of Mold. Chemistry (Professor Williamson, Ph.D., F.R.S.): Gold medal, Charles Atkinson Nankivell, of Torquay; 1st silver, E. G. Whittle, of Whitehaven; 2nd silver, Walter B. Houghton, of London. Surgery (Professor Marshall, F.R.S.): Gold medal, Richard Thomas Smith, of Hebden-bridge; 1st silver, Rushton Parker, of Liverpool; 2nd silver, Alfred Shewen, of Sevenoaks. Comparative Anatomy (Professor Grant, M.D., F.R.S.): Gold medal, Arthur Richard Saunders, of Haverfordwest. Practical Physiology and Histology (Dr. Michael Foster, B.A.): Silver medal, A. H. Carter, of Pewsey. Junior Class: Silver medal, Edward A. Schafer, of Highgate. Fellowes Clinical Medicine (Professor Wilson Fox, M.D.): Gold medal, Henry Newell Martin, of Royston; 1st silver, Ethelrid Dessé, of Barbadoes; 2nd silver, W. H. Davis, of Newport. The chairman having addressed the successful candidates, a vote of thanks, moved by Mr. Grote, and seconded by Mr. J. Booth, was passed by acclamation, and the proceedings terminated.

Luigi Sacco.—All acquainted with the history of vaccination will remember what an important part Sacco played on its introduction into Italy, and how Jenner valued his co-operation. At a recent commemoration of the hundredth anniversary of his birth, held at his natal place, Varese, in the Province of Como, it was determined to raise a subscription for the purpose of erecting a monument commemorative of his services. We sincerely hope that the disgraceful tardiness which characterised the subscription set on foot for Jenner's monument in our own country will not be exhibited in the proposed subscription.

Mortality of French Nurslings.—After the discussion on this subject at the Paris Academy of Medicine about two years since, when such startling revelations were made, a committee of nine members was appointed to investigate the subject. It has just presented its report through its reporter, M. Blot, but it is pronounced by the French journals to be but a bald and insufficient production, adding nothing to what was known on the subject. Its chief recommendation consists in the suggestion of new regulations for and means of supervision of nurses. The French Government has recently appointed a commission to inquire into the causes of the mortality of infants, but among a great number of official and administrative persons two Medical men only are to be found.

Composition and Quality of the Metropolitan Waters in April, 1869.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	21·17	0·060	0·172	0·002	14·5	3·8
West Middlesex	20·93	0·098	0·203	0·001	14·0	3·6
Southwark & Vauxhall	22·39	0·064	0·165	0·002	14·2	3·4
Chelsea	21·13	0·064	0·198	0·003	14·9	3·5
Lambeth	20·70	0·081	0·200	0·003	14·3	3·6
Other Companies.						
Kent	26·83	0·040	0·412	0·001	19·9	6·0
New River	19·90	0·021	0·143	0·000	13·9	3·0
East London	23·83	0·077	0·090	0·000	15·4	4·0

The average quantity of water supplied daily to the metropolis in the month of March last was, according to the returns of the Water Companies to the Medical Officers of Health, 94,584,402 gallons, and the number of houses supplied was 462,097. This is at the rate of 29·1 gallons per head of the population daily.

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

To Correspondents.—The remainder of the discussion on water at the meeting of the Medical Officers of Health Association shall appear next week; also a letter from Mr. Frank Clowes, on the same subject, which is in type. The continuation of Dr. Gordon's paper on Indian Sanitation, Mr. Bryant's Clinical Surgery, Dr. Charles Taylor on Cataract, and another letter from our correspondent at Vienna are also in type, and shall appear forthwith.

Mr. George Jackson is not exempt.

A. B. C.—To both questions the answer is in the affirmative.

Mr. Horace Wright will have to pass the preliminary examination.

The notes of Mr. Solly's case of Myeloid Tumour of the Upper Jaw in our last number were supplied by Mr. Neale, of St. Thomas's.

Public Vaccinator.—The chapter will be found in "The History of Henry Esmond, Esq.," by W. M. Thackeray.

Birmingham.—Up to April 27 the contributions from workpeople for the extension of the Queen's Hospital amounted to £417 8s. 8½d.

Sigma will find the information he requires in the "Students' Number" of the *Medical Times and Gazette.*

Parens should address his question to the Secretary of the Royal College of Surgeons, Lincoln's-inn-fields.

Fidus.—Never read Medical books on your own case. Any experienced Practitioner is competent to advise on the malady which we suspect yours to be, so far as it is malady at all.

Inquirer.—Mr. Liston was for some time an Examiner as well as a member of the Council.

Anxious.—Such cases are curable. He should apply to some respectable Surgeon, and should scrupulously avoid advertisers and quacks.

An Intending Candidate.—The admission to the Society is by ballot. A form of recommendation will be supplied by the Society on application to the Registrar. This recommendation must be signed by three Fellows of the Society, read from the chair, suspended in the library for a definite period, and subsequently submitted to the ordeal of the ballot-box.

Armagh.—We shall have great pleasure in publishing the case, and if the narrative be confined to mere matter of fact, such as the analysis of the dye and the symptoms of the patient, without imputing motives, or using violent language concerning the vendor of the poison, we should think there would not be the remotest chance of legal proceedings.

Certificates of Death.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I beg to enclose you a specimen form of certificate of death which I have had printed for my own use. It is founded upon a form suggested in the columns of one of your contemporaries some months ago. The modifications and additions I have introduced will, I believe, render the form of certificate still more complete, and for precision and accuracy of statement far superior to those which have hitherto been supplied to us.

15, Bury-street, E.C., May 3. I am, &c. David H. Dyte.

P.S.—The certificates are bound in books of 250 each, and may be obtained of the printers, Messrs. Wertheimer and Co., Circus-place, London-wall.

*** The following are the items embodied in Mr. Dyte's form of certificate. They prevent the Practitioner from certifying to the death of a living person.

Name .....
Age .....
Last seen alive .....
At .....
Suffering from .....
(*a*) Died in my presence .....
(*b*) Saw dead body .....
(*c*) Death reported by .....
of .....
as having occurred .....18.....

	Cause of Death.	Duration.	
First			Made a p.m. on ..... 18.....
Second			

Sigoed.....
Professional titles .....
Address .....
Date .....

"The Chloride of Ammonium and Perchloride of Mercury."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I am obliged to "Experimentalist" for his thanks, and beg to say that a consideration of his problem gives me no trouble. Further, I am glad to find that the puzzle is not, as I first thought, in the precipitates obtained, but in the solution; therefore it will be unnecessary to mention them again, remarking, however, they were at least characteristic of a mercuric salt; but if the puzzle be not in the precipitates what appearances attend the solution which should justify our seeking it there? I find

that a drachm of ammonium chloride dissolves in half an ounce of both cold and boiling distilled water, the hot solution does not deposit on cooling; the older works on chemistry state that mercury perchloride is decomposed by ammonium and alkaline chlorides, and more soluble compounds formed. This is an element introduced in the last letter of "Experimentalist," and which does not occur in his first. Moreover, two of the questions in the last letter depend upon this same new element. I have not found what is stated of ammonium chloride true in the proportions mentioned by "Experimentalist." However, as our salts might differ in dryness, it shall be taken as a fact that an apparent saturated solution of ammonium chloride dissolved more of the salt on addition of mercury perchloride, as well as the perchloride added; so a solution of sugar dissolves more lime hydrate than pure water, or a saturated solution of one salt dissolves large quantities of another salt—facts which may depend upon a regular arrangement of the molecules of a solvent, upon corresponding shapes of atoms of matter held therein. But surely "Experimentalist" is not ignorant of these facts, or intimating that they are sufficient to constitute a new puzzle to which he hopes to get a sound explanation. I shall, in my spare minutes, make a few simple experiments to thoroughly satisfy "Experimentalist" and myself on the point of decomposition in such solutions, should no one more competent explain it satisfactorily, and will forward the result to you, Sir, if you think proper, for publication. Meanwhile, as I know that a very small quantity of ammonia added to a boiling concentrated solution of ammonium choride and mercury perchloride occasions a precipitate of ammoniated mercury previous to the formation of the fusible ammoniated mercury, and am convinced that, in the event of decomposition taking place in such solution, some of the nascent or free ammonia might be detected at the mouth of the tube in which such operation is conducted, and further, in one experiment, ether agitated with a similar solution afforded indications of mercury perchloride existing as such, I shall not seek more truth to explain phenomena than is necessary. I am, &c. J. B. S.

Dulwich, April 26.

COMMUNICATIONS have been received from—

Mr. John Moore; Dr. Abrath; Fidus; Public Vaccinator; Dr. Fairbank; Dr. Thorowgood; Dr. Lory Marsh; Dr. Felce; Mr. H. Richard; Dr. A. N. Kido; Mr. D. H. Dyte; Mr. Walter Tyrrell; Professor Schwartze; Dr. Ballard; Mr. Chatto; Dr. J. N. Vinen; Mr. R. P. Middlemist; Mr. J. H. Gornall; Mr. C. J. Fox; Mr. Frank Clowes; Dr. John Roberts; Dr. Guy.

BOOKS RECEIVED—

Wood's Bible Animals, Part 17—Pharmaceutical Journal, May—Report of the Committee of Visitors of the Surrey Lunatic Asylum, 1868—The Problem of diminishing Prevalent Destitution and Temptations to Crime, by William Tallack—St. Luke's Hospital for Lunatics Reports—Stewart on a Case of Aphasia—Newcastle-upon-Tyne Lunatic Asylum Report—Quarterly Journal of Science, January and April—Mrs. Warren's A House and its Furnishings—Edinburgh Medical Journal, No. 167—New York Medical Gazette—Huxley's Introduction to the Classification of Animals—The Practitioner, No. 11—St. Thomas's Hospital Statistical Report—Lewins on the Identity of the Vital and Cosmical Principle—Bacot on the Bahamas—Macgowan on the Signs of the Times—Monthly Microscopical Journal, May—Smith's Pilgrimage to Juggernauth—Brown on Scarlatina, 3rd ed.—Report of the Manchester and Salford Sanitary Association—New Orleans Journal of Medicine, April.

NEWSPAPERS RECEIVED—

Folkestone Chronicle—Indian Times—Globe.

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 1, 1869.

BIRTHS.

Births of Boys, 1092; Girls, 1073; Total, 2165.

Average of 10 corresponding weeks, 1858-67, 2030·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	682	606	1288
Average of the ten years 1858-67	677·6	648·4	1326·0
Average corrected to increased population	...	...	1459
Deaths of people above 90	1	...	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	...	2	3	...	6	2	...	...
North	618210	1	5	9	3	21	16	2	...
Central	378058	...	3	6	...	10	5	2	...
East	571158	1	1	17		17	9	3	...
South	773175	6	9	7	1	27	15	3	...
Total	2804989	8	20	42	4	81	47	10	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·057 in.
Mean temperature	51·9
Highest point of thermometer	73·3
Lowest point of thermometer	37·6
Mean dew-point temperature	43·8
General direction of wind	N.E. &E.N.E.
Whole amount of rain in the week	0·00

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 1, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending May 1.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending May 1.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3170754	40·7	2165	1462	1288	73·3	37·6	51·9	0·00	0
Bristol (City)	169423	36·1	104	76	*64	72·2	35·1	52·4	0·00	0
Birmingham (Boro')	360846	46·1	259	175	133	71·8	35·8	51·6	0·00	0
Liverpool (Boro')	509052	99·7	407	295	242	69·0	37·5	50·8	0·00	0
Manchester (City)	370892	82·7	272	210	*192	71·3	39·0	54·0	0·00	0
Salford (Borough)	119350	23·1	106	60	50	70·1	37·3	51·9	0·00	0
Sheffield (Borough)	239752	10·5	195	126	125	67·7	39·5	51·3	0·00	0
Bradford (Borough)	138522	21·0	110	71	83	67·3	39·1	50·5	0·00	0
Leeds (Borough)	253110	11·7	162	129	105	69·0	40·0	52·0	0·00	0
Hull (Borough)	126682	35·6	84	59	61	...	...	...	...	...
Newstl-on-Tyne, do.	130503	24·5	89	69	69	64·0	38·0	46·3	0·00	0
Edinburgh (City)	178002	40·2	159	86	86	68·7	34·0	50·4	0·10	10
Glasgow (City)	458937	90·6	399	268	268	72·2	37·3	51·8	0·00	0
Dublin (City and some suburbs)	320762	32·9	181	158	158	66·6	33·3	50·7	0·00	0
Total of 14 large Towns	6546587	35·5	4692	3244	2955	73·3	33·3	51·2	0·00	0
					Week ending April 24.	Week ending April 24.				
Vienna (City)	560000 (1863)	...	...	...	355	...	...	53·4	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 30·057 in. The barometrical reading decreased from 30·18 in. on Thursday, April 29, to 29·93 in. at the end of the week.

The general direction of the wind was N.E. and E.N.E.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

May 8. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Royal Institution, 3 p.m. Prof. Seeley, "On Roman History."

10. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

11. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædie, Great Portland-street, 2 p.m.

Ethnological Society, 8½ p.m. Opening Address by Prof. Huxley, F.R.S., President. Sir George Grey, K.C.B., late Governor of New Zealand, "On the Social Life of the Ancient Inhabitants of New Zealand, and the National Character it was likely to create." The Bishop of Wellington, "Observations on the New Zealanders and some of the Melanesians." Mr. J. L. Palmer, H.M.S. *Topaze*, "On some Explorations in Easter Isle."

Royal Institution, 3 p.m. Prof. Grant, "On Stellar Astronomy."

Royal Medical and Chirurgical Society, 8½ p.m. Dr. H. Weber, "On the Treatment of Phthisis by prolonged Residence in elevated Regions."

12. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Epidemiological Society, 8 p.m. Meeting of Council.

13. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædie Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Royal Institution, 3 p.m. Prof. Tyndall, "On Light."

14. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Clinical Society, 8½ p.m. Dr. Morell Mackenzie, "Case of Displacement of the Trachea by external Pressure." Dr. Beigel, "Cases of Chronic Bronchitis treated by Chloride of Ammonium." Dr. Gee, "The Action of a New Organic Base, 'Apomorphia.'" Mr. Ernest Hart, "Pyæmia from Otitis." Dr. Anstie, "Case of Epilepsy in which the Paroxysms are arrested by Quinine."

Royal Institution, 8 p.m. Mr. Perkin, "Newest Artificial Colouring Matters."

West Kent Medico-Chirurgical Society (at the Greenwich Dispensary), 8 p.m. Dr. Morell Mackenzie, "On the Use of the Laryngoscope in Chronic Affections of the Larynx."

ORIGINAL LECTURES.

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

ON RESEARCH WITH THE LARGE INDUCTION COIL OF THE ROYAL POLYTECHNIC INSTITUTION, WITH SPECIAL REFERENCE TO THE CAUSE AND PHENOMENA OF DEATH BY LIGHTNING.(a)

Gentlemen,—When I first had the pleasure of seeing in action the splendid induction coil which, at the instance of Professor Pepper, the Directors of the Royal Polytechnic Institution, seconded by the constructive skill and perseverance of Mr. Apps, have provided for the scientific instruction of the people, it occurred to me that the instrument might be turned to direct service on behalf of Medical science. I thought it might be turned to use in order to settle some doubtful points of great importance which for long years past have been subjects of discussions, as yet unsatisfactory, for the simple reason that the required instruments for accurate research have not been at command. You will anticipate me when I say that the phenomena attendant upon death by lightning-stroke, with which on the present occasion I chiefly deal, are amongst the first of these vexed questions; and you will agree with me, I feel sure, that if, by means of the most powerful electrical instrument of its kind ever constructed, we can place even one or two disputed practical subjects out of the region of doubt and in the region of certainty, an hour in demonstration will not be thrown away.

Before, however, I proceed a word further, let me most earnestly thank the Directors of this institution for the courtesy and consideration they have shown me while prosecuting my inquiries. If the instrument and all that pertains to it had been my own, I could not have commanded more than I have commanded, while I should have lost the very valuable practical aid which I have day by day received from one who is most conversant with the working of the instrument—I mean Mr. Pepper.

The Instrument.

We will turn now to the instrument itself, and, in the briefest possible time, make ourselves acquainted with it. It is an immense induction coil. It weighs 15 cwt. Its primary wire is 3770 yards long, its secondary wire is 150 miles long; the central case of soft iron wire is 5 feet long, 4 inches in diameter, and 125 lbs. in weight.

Discharges.—For our physiological purpose we make the coil give us three kinds of discharge, which we will produce in turn in experiment. The battery power at work is from forty-eight cells of a Bunsen's battery. The 150 miles of secondary wire are in this experiment simply charged from the primary wire and discharged. The spark of the discharge you see. The spark is 29 inches long, and of considerable thickness. Resolved, it consists of two flames—of a line of thin blue tense flame, surrounded by a thick burning flame which, by action of bellows upon it, can be blown aside. This discharge as we see it now has not been seen before in the same perfection. Physiologically, the shock it causes is entirely new, and is therefore to us of special interest. The second discharge is got by attaching the vibrating or mechanical break. The discharge in this case is the same as that which, on a small scale, we are familiar with in the common coil; it is, on a large scale, the ordinary discharge which we use in Medical practice. The spark we obtain here is from 10 to 15 inches from point to point. The spark is blue in colour, intense, forked, and almost continuous. We can make twenty discharges in five seconds. The third discharge is obtained by charging directly from the coil this large Leyden battery of jars. The surface of the battery is forty square feet. To charge it three discharges from the coil are required. It gives the sharp tense discharge which we are all familiar with, as from the Leyden jar charged from the frictional electrical machine.

Effects of Discharges on Animal Bodies.

Here, then, are our means of research; and now we may move at once to consider what they will do—what effects they will produce when made to act on an animal body. One would imagine, *à priori*, on observing the first discharge to which I have called your attention, the discharge from the coil direct, that the spark, measuring as it does 29 inches, and striking a point in its way so fiercely, would, if it struck even a large animal, destroy life. But this expectation, which at first glance comes so natural, is corrected at once by experiment. Directed, in fact, on the body of a living animal, and on any part of the body, the single blow of the discharge is simply harmless. Nay, many shocks of this discharge are harmless.

To illustrate this truth, we will proceed to experiment on an animal; and as, by a preliminary inquiry, it is found that the results of the experiment are in no way vitiated if the animal be first put to sleep by bichloride of methylene, I have provided in this research that every experiment shall be conducted painlessly. We take, then, an animal—a pigeon—connect it by the foot with the negative pole of the coil, and send one, two, three discharges upon the body.

The animal is uninjured. There has been with each shock a general muscular contraction, but no more. The heart and the respiration remain natural, and the motion and sensation are unimpaired. One exceptional injury alone deserves notice—the feathers have been slightly singed. We take a much smaller animal—we take a toad—we place it in like manner, so as to receive the discharge direct; it receives one, two, three discharges, and it is uninjured. If we changed the bird or the toad for the rabbit, the result would be the same.

Suppose we repeat the discharges many times in direct succession, we can at last produce an effect. We can produce a peculiar insensibility or anæsthesia which will last a considerable time, but from which the animal will recover. We will continue the discharge on the toad until this state is produced. You would conceive the animal had been exposed to a narcotic vapour, and in truth it is insensible to pain, but its life is not in jeopardy. A frog or toad will bear twenty-five of these shocks without permanent injury. We have seen a pigeon receive fifteen of these discharges, and a rabbit thirty, without injury.

The escape of the animals in these cases is due to the ready course of the current over their bodies. In fact, the body internally is not traversed by the current at all, but is surrounded by it. We shall see the mode of escape best by an experiment of Mr. Pepper, in which a looking-glass is made to take the place of the animal. We in this case direct the discharge upon the surface of the glass, and we see how the spark splutters as it were, and at various points is dispersed over the surface, seeming to break the glass into fragments, yet doing it no injury whatever.

We must not, at the same time, be led away with the impression that the action of this spark is only negative when it is discharged upon the outer surface of the body of an animal. It may be made to go through the body, still with impunity. Here is a bird which has been narcotised with the methylene to insensibility. Then a needle, to which a copper button is attached, has been passed subcutaneously in the line of the vertebral column. Between the muscles of the leg another needle has also been inserted, and this latter needle is connected with the negative pole of the coil. Now we will make the discharge upon the metallic button, and thus pass the discharge clean through the body of the animal. The result is as before—there is no injury. You will say the nervous system escapes. Well, I once sent the discharge through the brain itself: the result was the same. Probably, if we could limit the discharge, sending it merely through the medulla oblongata, we should actually kill; but the mechanical injury inflicted by the operation complicates the experiment and vitiates the result.

So much for this discharge. As a discharge it is not very effective in its power to destroy life, even when repeated many times in succession. It is less mischievous, indeed, than that form of discharge which we call a mechanical blow.

We will pass next to the discharge which is produced when the vibrating or mechanical break is attached. We shall find in this case again that the discharge, if made upon the outer surface of the body of the animal, is harmless. We will direct it upon the body of a narcotised bird. The same phenomena are observed as when the first form of discharge was made—that is to say, there is contraction of muscle, but there is this difference, the contraction is persistent, or nearly so,

(a) Delivered at the Royal Polytechnic Institution on Tuesday, May 11.

If, changing the experiment, by inserting the conductors beneath the skin, we make the spark traverse the body of the animal, the muscular contraction is more decidedly pronounced, and as the muscles of the chest, the muscles concerned in respiration, are now contracted with no efficient relaxation, death would follow if the current were passed for a sufficient length of time; in this case the fatal result is purely from apnœa, and life will remain as long as it would remain if the animal were being destroyed from strangulation. Recovery will often take place after two minutes of this suspension of the respiratory process.

We will turn, lastly in this line of study, to the discharge from the Leyden jar. We may here again subject a pigeon to the full shock without killing if we simply let the discharge strike on the exterior of the body. But if we in this case pass the conducting wire under the skin, the shock is commonly fatal at one, or at most two, discharges. In the rabbit one shock is instantly fatal.

The distinguished electrician, Benjamin Franklin, was of opinion that this mode of death is more sudden and consequently less severe than any other; and in a letter he addressed to Messrs. Dubourg and D'Alibard on May 1, 1773, he suggested that this shock should be employed as the mode of killing animals sacrificed for the use of man. In his letter he gave instruction for the kind of battery that should be used for killing fowls, and even turkeys; he thought a Leyden battery of six jars, each jar capable of holding twenty-four pints, would suffice. The battery he suggested was to be charged, of course, from the frictioual electrical machine. We have seen death from this shock, and it is of interest to observe how slight a difference of administration of force produces vast difference of result. Had we given these dead animals three, thirteen, probably thirty distinct shocks from the coil direct, we had inflicted no injury. But we condense three discharges of the coil in the Leyden, and we have a charge that will kill. Franklin was evidently struck with this effect of accumulation; for writing to his friend Peter Collinson, F.R.S., in 1748, he says, "It is amazing to see in how small a portion of glass a great electrical force may lie. A thin glass bubble, about an inch in diameter, weighing only six grains, being half filled with water, partly gilt on the outside, and furnished with a wire hook, gives, when electrified, as great a shock as a man well can bear."

Let me, however, point out that this shock from the Leyden battery is not always fatal, but may produce two kinds of states—a state of insensibility, in which the body is prostrate and dead to all sense of pain, but quite capable of recovery; and a state from which there is no recovery. I published many years ago in the *Medical Times and Gazette* the fact of these two distinct conditions, and I showed an experiment in which a Surgical operation was painlessly performed on a dog, the animal having been previously rendered insensible by this discharge. If we analyse the phenomena, we find a ready explanation, I think, of this difference in the effect of shock. When death does not follow the discharge, the shock has affected those nervous centres only which govern voluntary muscular motiou and sustain common sensibility. When the shock kills its effect extends to the centres which govern the involuntary muscular acts—first, the respiratory; second, the circulatory.

Comparison of Results with Phenomena of Death by Lightning.

Surveying these experiments, and comparing them with the effects of the lightning stroke, we learn two or three important lessons. In the first place, we see how carefully Nature protects those animals which are most exposed to lightning shock. In the second place, we see that the lightning-shock which kills definitely is the intense shock, that which resembles the discharge from the Leyden battery. In the third place, we learn that there may be two kinds of shock, both of which may strike down a man or an animal, but with differing results. One shock may produce intense temporary contraction of muscle and insensibility, from which there may be recovery; the other may kill outright, as from a stun or blow, extension of the shock from the voluntary to the involuntary muscular systems. Lastly, we are enabled to explain satisfactorily certain exceptional phenomena connected with death by lightning which up to this time have been inexplicable. I refer to the absence or presence of indications of singeing or burning of the external parts of the body, the skin and hair, or the clothes where the body is clothed, in cases of lightning-stroke. In one case of death from lightning there shall not be a trace of external injury; in another case there shall be actual disfiguration of the body. I have the notes of a singular case in which two men, standing close together in a windmill during a storm, were struck simultaneously. The foremost man, who was looking out of a window of the mill, was dead in an instant, and was severely singed and burnt; the other, much shaken, was not struck down, nor, indeed, dangerously hurt, but he was burned in many places; his hair and whiskers were singed, his skin was scorched on the shoulder, and one of his boots was cracked and scorched.

The inference, I imagine, is fair—I had almost said the demonstration is complete—that the lightning flash which effected these changes was a compound flash like that which we have seen from the coil. The man who was killed received both flashes; and he who was burned but escaped with his life received the flame flash only. It is this flame flash, I believe, which sometimes, without killing, strikes a temporary or a permanent blindness.

PHENOMENA AFTER DEATH BY LIGHTNING SHOCK.

Rigor Mortis.

There is no incident more curious in the history of science than one connected with the question of rigor mortis after lightning shock. In the year 1792—that is, seventy-seven years ago—the greatest representative of Medicine of his age and generation, John Hunter, made a statement on this question; it was an authoritative statement, and such was the weight of his mere word that it was received without challenge, and has been until late years let pass as gospel. His statement was that animals killed by lightning did not become rigid after death. I will quote the exact words of Hunter, that no misconception may prevail; they will be found at page 152 of the famous work, "A Treatise on the Blood, Inflammation, and Gunshot Wounds." They run as follows:—

"Animals killed by lightning, and also by electricity, have not their muscles contracted; this arises from death being instantaneously produced in their muscles, which therefore cannot be affected by any stimulus, nor consequently by the stimulus of death."

It is true that this sentence contains, as do many others of the same writer, an obscure thought, or, at any rate, an expression which in this day is obscure, "the stimulus of death;" but this must be separated from the direct statement, which is clear enough, and is, as it has ever been accepted, that animals do not become rigid after lightning shock. On what data Hunter based this statement I cannot discover. He could hardly have seen a sufficient number of deaths of men from lightning shock to be assured on the point by the direct line of observation, and he certainly had not a sufficient series of facts relating to death after electrical shocks to guide him faithfully by what we may call the indirect line of observation. We must therefore conclude that he accepted some partial and imperfect observation or tradition, which, tallying with his peculiar views, was too hastily seized upon and used up in theory. To those who have really studied Hunter, as one of the very few masters in Physic, this error will be familiar; whenever he observed for himself, and reported simply from what he observed, and reasoned upon what he observed, Hunter became a master; but when, as is not infrequent, he introduced general observations and general corroborations of particular theories, he was as weak as a child which has lost its way; he had lost his way himself then, the way from nature. In this case he terribly lost his way, and worse still, for nearly half a century he led other men after him in the same erroneous path. It was received as a matter of faith that, after death from lightning stroke or electricity, there is no development of rigor mortis. The school teachers taught the doctrine, the scholars received it, the text-books stamped it, the examiners extorted it as a proof of sound knowledge, and I do not think I am wrong in saying that ninety out of the hundred of Professional men believed the doctrine implicitly, while many, perhaps the majority, still believe it. I will now demonstrate to you, and I could certainly in no better way prove the value of such powerful instruments of research as this coil, that the statement is utterly baseless, and that all the argument which admits of being piled upon it, whether in the arena of scientific debate, in the justice hall, or elsewhere, is simply vain. But before I proceed to demonstration, it is proper to state that the fallacy I have named was discovered in this very institution not far from twenty years ago by my friend, Dr. Thudichum. At that time the great hydro-electric machine was in operation here, and Dr. Thudichum killed with it an animal, a large bitch, by three shocks passed between this

neck and the loins. And thus he records the phenomena observed after death:—

"The animal had received the mortal stroke at twenty minutes past two. At ten minutes before three there were evident signs of *rigor mortis*, which, notwithstanding that the animal was handled in order to ascertain in what succession the muscles became rigid, went on increasing to such an extent, that at half-past seven—five hours and ten minutes after death—the dog appeared as if frozen hard or carved of wood, being quite stiff or inflexible."

In my Lettsomian lectures delivered in 1860, I showed an experiment which confirmed in a striking way this observation of Dr. Thudichum. In an animal under chloroform I produced intense rigidity of the muscles of a hind limb by passing through them the six-inch spark of an induction coil. Then I let the animal sleep to death, and observed the course of the cadaveric rigidity. The muscles of the limb rigid before death were never relaxed, but remained without change, in the rigidity of death.

In a further series of researches on the muscles of animals recently dead, I found, further, that I could produce rigidity, muscle by muscle, on simply passing through each muscle the spark from the induction coil.

But these researches, though they were more than sufficient to shake the Hunterian dogma, were small when compared with the results we have obtained from the instrument now before us. I have here, with the earnest and effective aid of my friend Dr. Sedgwick, questioned nature on the point of rigidity after death from electrical shock, in every conceivable way; and the answer has been uniform, as it always is when it is from nature, telling us, without hesitation, that rigidity after death from the electrical discharge is an invariable fact, under all conditions that admit of the process rigidity. A few minutes since we struck down a pigeon by the discharge from the Leyden battery; the bird is becoming rigid already. It will in a short time be like a cast or model in stone.

So far, indeed, is it from true that rigor mortis does not follow upon death by the electrical shock, I might, if I were an advocate interested in sustaining an argument on the other side, show a series of experiments tending to illustrate that the shock intensifies the rigidity. A cat that had been made to sleep just to the death, from inhalation of the vapour of bichloride of methylene, was laid on this table, and subjected to repeated strokes of the first order, from the coil, for the space of a quarter of an hour. Step by step the rigor was intensified, until at last the animal could actually be made to stand on its rigid limbs. It was like a statue or cast in stone.

Let us be fair, however, in reading off these phenomena of intense rigidity. They would not occur after death from one acute shock, nor from one lightning stroke; they are the phenomena of resistance, and they depend on the repetition of the stroke *coup sur coup*, the conditions being at the same time favourable to the process of rigidity. Those conditions are, good development of muscle, death without great preceding exhaustion, and exposure to a warm temperature.

As I have shown in another place, the contraction of muscle after death is the effect of the action of heat—an equivalent of the force which during life was being expended in producing the involuntary and voluntary muscular motions. Thus, by surrounding a dead animal with a medium equal to the temperature of its own body or a few degrees above it, we can induce the rigidity almost instantaneously, while by exposing the muscles of the animal recently dead to a low temperature, we can delay the rigidity, or even stop it altogether.

When, then, we strike down a well-developed animal with the electrical shock, and continue the discharges into the body in a warm air, we effect what is really equivalent to raising the temperature in the muscles; and if we test the matter on individual muscles by passing the shock through them, we find we do raise the temperature, and thus by an indirect means promote the rigidity. But when we pass the shock only once through the body of the animal, and with force sufficient to kill outright, we do not necessarily insure rigidity, in spite of surrounding conditions. We effect what is favourable to rigidity, and no more. If the animal or man, after being struck, were to be exposed to a cold air, especially to a moving column of cold air, the rigidity would be delayed and reduced in character; if the animal were very thin, and cooled very quickly, the rigidity might be delayed, but this delay would have no kind of relationship to the electrical shock or the lightning shock as the mode of death.

I have only one observation more to make on this subject of rigor mortis after death from electrical discharge, and that refers to persistency of rigidity. As a rule, the persistency of the rigid condition is in proportion to the intensity of the rigidity itself. In many of our experiments the rigidity has continued for periods of four and five days: in all cases it has extended over forty-eight hours.

I have thought it best in this lecture to avoid all reference to the debatable point of the nature of rigor mortis as a physical and molecular change in muscle. It is sufficient at this moment to prove that the change, whatever it may be, is not prevented by death from electrical discharge.

Coagulation of Blood after Death from Electrical Shock.

John Hunter, in the same part of his work in which he refers to the absence of rigor mortis after death by electrical shock, observes that in such cases the blood does not coagulate. This view has held place as firmly in the Professional mind as that which relates to absence of rigidity; and although, in fact, it is not altogether incorrect, it must have been drawn from a very limited number of observations, and, as an absolute rule, it is altogether untenable. The statement has been supported and opposed by other observers. Gerhard and Hufeland urged from experiment that an electrical current continuously passed through blood tends to keep that fluid in an incoagulable state. Scudamore, with more precision, experimented on blood, both with frictional electricity and with the galvanic current. His experiments with reference to electricity differ from those of Gerhard and Hufeland. He found that some blood exposed to the electric current gained in temperature two degrees, but coagulated as quickly as other blood removed at the same time from the same person, and allowed to coagulate naturally. He adds that the blood treated by electricity coagulated more firmly. In experimenting with the galvanic current he found also that the temperature of the blood was raised. In one case there was a copious evolution of gas at the negative pole, and in all cases the current gave rise to a peculiar process of coagulation and decomposition.

My own researches are to the effect that the process of coagulation of blood, when the blood is removed from the body, is influenced only by the electric or galvanic current in proportion to the increase of temperature produced by the resistance which the blood offers to the transmission of the current. Let me illustrate this by experiment. Here are three tubes of different diameters—two a quarter of an inch, the other half an inch in diameter; they are of the same length, and they are filled with the same blood, derived from the lamb, and held, and but held, fluid—for the merest disturbance will produce coagulation—by hydrate of soda. We will put then the larger of these tubes in circuit, and send through the blood forty shocks of the first order. Removing this tube, and taking it in the hand, we find it is quite cool, and we let out the blood to find no clot. We now take the smaller tube, we pass through the blood in that the same number of shocks, and now we have heat which we let increase eight or ten degrees above the temperature of our body. Then we remove the tube, and find the half of the blood in it coagulated. Lastly, we take another small tube filled with blood, as before, and pass the discharges as before, but with this distinction, that we previously surround the tube with moist bibulous paper, which we cool by a few breaths of ether spray. We remove the tube and find there is no clot. To test this matter further, we yesterday performed an experiment which is too minute and long to be performed during a lecture, but which is very precise. Having laid bare the jugular veins of a large rabbit, after anæsthesia, we lifted up an inch of vein and tied up this portion full of blood, using wires for ligature, which afterwards went to the poles of the coil or battery. Thus we could transmit the current straight to the blood in the vein, the blood, in truth, forming part of the circuit. We did this effectively and, as far as I can see, without any liability to error. Then we punctured the veins and caught the blood in a watch-glass. It flowed out freely, and was very red in colour for venous blood; but it at once underwent coagulation in the watch-glass, the clot being remarkably firm. I have here a specimen of the clot for your inspection. With these facts before us, we might infer that after death by lightning-stroke there would be firm coagulation of blood in all parts of the body immediately after death; but, when we come to the facts, however they may have to be explained—and they wait for explanation—this firm coagulation is not discovered.

Dr. Thudichum observed, in the experiment to which I have already referred, that the blood in all the veins, although of more consistency than venous blood in the human body, was not coagulated when he opened the veins, and we have found in our inquiries a tendency to slow coagulation. Thus, even in birds fifteen and twenty minutes after dissolution, the blood

has been fluid. On being set at liberty, however, it has always undergone the natural process of coagulation. To my mind the blood presents the condition which is seen when blood newly drawn is prevented from coagulating by being put under pressure. It would be interesting to ascertain the reason for this slow coagulation of blood *within the body* after death from electrical shock; but I will not open the question on the present occasion. It is sufficient to put the facts in their right position, and the facts are, that the blood, although delayed in coagulating *within the body*, is not deprived of the property of coagulation. That you may see the condition of the blood of an animal after death from the discharge, we have opened the body of the rabbit and placed the blood from the right side of the heart in a watch glass, which I hand round. The clot is firm and uniform.

ON PUTREFACTIVE CHANGE AFTER DEATH BY ELECTRICAL SHOCK.

From some observation, the origin of which I cannot find, it has been accepted as a matter of fact that the bodies of men or animals killed by lightning undergo rapid putrefaction, and are indeed decomposed in the space of a few hours. I have inquired many times in various places for facts bearing on this particular and popular theory, but have not succeeded in finding any derived from direct personal observation. The statement that there is such rapid putrefaction is one of those curious beliefs accepted by all and proved by none. Franklin himself, although he repeats the statement, quotes no better evidence than the word of a respectable person who assured him that a flock of sheep killed at night by lightning were putrid next morning. Of course, as death by lightning-stroke is common when there is a prevailing high temperature with moisture—when, in short, the ordinary natural conditions for putrefaction are present—it is to be expected that animals killed by lightning may often decompose in a few hours; but the connexion of the decomposition with the lightning as a cause of death is no necessary fact, nor necessarily more than a mere coincidence. Anyway, when we test the matter experimentally, taking death from electrical discharge as the equivalent to death from lightning-shock, the popular belief falls at once. It has not a shade of proof. We have taken animals during the past month—animals that have been killed by electrical discharge—and have placed them in conditions most favourable to decomposition without observing in them any indication whatever of rapid putrefactive change. Two pigeons killed by the shock were opened so that the viscera of the chest, together with the large pectoral muscles, were exposed to the air at a temperature varying from 58° to 66° Fahr., and for a period of eight days they retained their freshness. A rabbit killed by the shock was placed under the same condition as another killed with chloroform (rather a preservative mode of death than otherwise), but no difference could be detected in regard to putrefaction. The process commenced in both animals in the same parts—that is to say, in the abdominal viscera—and progressed throughout the body at the same rate. Here is an experiment in point. This pigeon which we pass round was subjected to the shock until rigidity was commencing. This occurred three weeks ago, and you will see how little the decomposition has advanced.

CONCLUSIONS.

The time required for the performance of the numerous experiments we have witnessed carries us to-day over the allotted hour; let me, therefore, bring this lecture to a close in a few short sentences which epitomise the leading facts we have obtained from our natural study. The facts may be placed under six heads, and they run as follows:—

1. Of the three orders of electrical discharge we have produced to-day, one only, that from the Leyden battery, is instantly fatal. In this form of discharge, therefore, we see the quality of lightning stroke which suddenly destroys life.

2. There may be an electrical discharge made up of two distinct flashes—a tense flash combined with a burning flame or flash. The first of these is destructive to life; the second singes, scorches, perhaps blinds, but does not necessarily destroy life. In lightning shocks we may see, in the effects produced, the evidence of one or other of these discharges, or of both on one and the same subject.

3. The electrical discharge, according to its intensity, produces two distinct conditions—one a condition of nervous insensibility (anæsthesia), with continuance of involuntary muscular action, ending in recovery; the other a condition of both nervous and general muscular insensibility, ending in death.

4. After death from electrical shock, there is well-marked, often intense, and prolonged muscular rigidity—rigor mortis.

5. After death from electrical discharge, there is coagulation of blood, but the process is developed slowly within the body.

6. Animals killed by electrical discharge do not, from the mode of death, undergo putrefactive change with any exceptional rapidity.

On Tuesday, June 1, that being our ordinary day of lecture, I shall take as the subject of lecture another series of physiological inquiries made with the coil; and, as I am again privileged with the use of this lecture-room, we will, if you please, meet here at the same hour.

ORIGINAL COMMUNICATIONS.

CLINICAL SURGERY.—No. II.

ON THE

TREATMENT OF SUPPURATING JOINTS BY FREE INCISIONS.

By THOMAS BRYANT, F.R.C.S.,
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The treatment of a disorganised or suppurating joint has ever been a source of difficulty to the Surgeon, and the larger the articulation that is affected the more that difficulty has been experienced, for the suppuration of a large joint, such as the knee or hip, too often threatens life in some stage of its progress, and the integrity of any joint, large or small, is, as a rule, compromised by suppuration.

How to preserve the natural movements of a diseased articulation is the first aim of the Surgeon, and when that hope has gone his object is to save the limb. When this end can be obtained with a stiff joint, the result may usually be regarded as satisfactory, particularly in disease of the lower extremity, and even in the upper a cure by anchylosis is not so bad as some Surgeons would lead us to believe. When neither of these ends appears probable, possible, or expedient, from the extent of the local disease, the general want of power of the patient, or the necessities of the individual case, the question of operation comes before the Surgeon, and he has to decide whether amputation of the limb, resection of the joint, or incision into the articulation is to be performed. To work out the many points involved in the solution of these questions is a task of difficulty, and a form of practice which is applicable to one joint may be inexpedient to apply to another.

This difficulty is doubtless due to the different value which Surgeons place on different forms of practice, and the estimation with which they regard natural processes. One Surgeon, having intense faith in natural processes in the cure of disease, and particularly joint disease, would attempt to save a limb that another would condemn, regarding any practice as wrong that interferes with a natural recovery, as long as any reasonable hope exists of securing such a result, and believing that a cure by anchylosis, however acquired and however long a time may be passed in securing it, is worth the attempt. A second Surgeon, having stronger faith in Surgical treatment, would excise a joint, believing it to be inexpedient to waste time for a natural cure, even when it may be gained, when by excision he believes an equally good, if not a better, result can be secured in a shorter period; whilst a third Surgeon, looking upon both forms of practice as too protracted and uncertain, would remove the diseased part by amputation, in the belief that a more certain result and a more rapid recovery would be secured by such a process.

In brief, a case of disease of a joint that one Surgeon would attempt to cure with anchylosis, a second would excise, and a third amputate—the two former schools amputating a limb only when all hopes of saving it by less severe measures have been proved futile.

In the present paper it is not my intention to consider the expediency of practising excision of a joint. On a former occasion I have fairly shown that in the knee it is only justifiable in exceptional cases. In its own place the subject of excision of other joints will meet with due attention, although I may admit at once its indisputable value in appropriate cases of disease of the shoulder, elbow, and hip-joints. I recognise the rule that amputation of a limb should only be performed

when all other measures are out of question, and it is clearly a necessity to sacrifice a limb to save life. I have intense faith in the power of nature's processes to cure disease, and particularly joint disease, and believe that, in the majority of cases of joint disease, the office of the Surgeon is mainly valuable in guiding natural processes in the way of cure. In the hip and knee a natural recovery with anchylosis is all that one can wish, and I believe this result to be a success such as a Surgeon may look upon with satisfaction; and it is, as a rule, acquired without risk to life, and without much active Surgical interference. In the shoulder, elbow, wrist, etc., it is not so bad as some Surgeons would lead us to think, and it is fairly a question whether, by excision in a large proportion of cases, a better result is to be acquired. These points, however, are not the subjects of my present communication, for in this I wish to demonstrate the value of a free incision into a suppurating or disorganised joint. I believe that such a practice is of great value in many cases—that by it many limbs may be saved, and as many helped on to anchylosis. I am, moreover, disposed to think that it has not been practised as freely as it deserves.

I propose on the present occasion to demonstrate the value of the practice by the quotation of such cases as my note-book affords.

But first of all let us stop to inquire briefly as to the cases in which it is expedient to apply the practice. Is it applicable to all cases of suppurating joints? If not, to which should it be applied? And these questions lead me to consider, although briefly, the pathology of joint affections, for, without pathology, practice must ever be uncertain and unscientific.

To be brief upon these points, it may fairly be asserted that there are but two tissues in which joint mischief may be said practically to commence—the osseous and the synovial—although in certain cases of injury to the hip, knee, and other joints, in which much stretching or even laceration of the ligaments has taken place, disease may occur at their bony attachments—in the hip in the teres ligament, in the knee in the crucial; but even in these it is in the synovial membrane or bone that the disease shows itself.

To this general assertion it must, however, be added that disease rarely exists long in one tissue without involving another; and that, when disorganisation of a joint has taken place, every tissue will be more or less affected, but the extent to which the different tissues will be eventually involved rests entirely upon the original seat of the disease.

When disorganisation of a joint takes place as a result of acute synovial inflammation, or from chronic synovial disease, the articular cartilages may disappear, and the articular surfaces of the bones may be exposed, yet those articular surfaces will probably be only partially involved, and the great body of the bone will still be good. The disease, as far as the bones are concerned, will be superficial, and may be thus dealt with.

When disorganisation of a joint, however, takes place as a result of bone mischief, the synovial membrane will to a certainty have undergone changes with the articular cartilages, as in the former class of cases, but the cartilages will either have entirely disappeared or have been cast off or shed into the joint, or the portions that remain will be found resting on the bone. But the chief changes will be seen in the bone itself. The articular extremities will in all probability be extensively involved. More or less complete evidence of inflammation will be manifested either by partial or complete necrosis, local or diffused suppuration, or osseous consolidation. The disease in the joint, having been secondary to the disease in the bones, may require treatment, but the original seat of the disease must be remembered, and the treatment shaped accordingly.

Consequently, in disorganisation of a joint the result of primary disease of the synovial membrane, one kind of treatment may be found of value which will be inapplicable to other cases, and disorganisation of a joint the result of disease of the osseous structures may require a form of practice very different from that required in synovial disease; a correct diagnosis in these cases (as in others) being of primary importance, and, as a guide to practice, of great value.

We will now proceed to the more immediate subject of this paper—the value of a free incision into a suppurating or disorganised joint—and will first consider in what cases the practice is most applicable.

First of all, the practice of making a free incision into a joint is only justifiable when disorganisation or suppuration has taken place, whether that suppuration be the result of a chronic disease or of an acute one following a wound of the articulation.

In acute suppuration of a joint, the result of a wound, I believe there is no better practice to be followed. A free incision into the articulation under most circumstances not only is the best local treatment, but the best general, for it seems to be true that, as soon as a free outlet for pus has been made, surgical fever, although intense, may be expected to subside, and local symptoms to pass away. The incisions, when made, should, however, be free, that the escape of pus may be complete. By this practice joints will be often saved, and movement secured.

In disorganisation of a joint, the result of chronic disease, the plan of treatment by a free incision is not, however, so simple; for its value, as already indicated, depends much upon the original seat of the disease. When the disorganisation of the joint has been secondary to disease in the articular extremity of the bone, to acute or chronic inflammation terminating in necrosis, partial or complete, it is not to be expected that a recovery is to take place by giving free exit to the suppuration in the joint, for the cause of this suppuration will remain after the adoption of the practice, and thus keep up the irritation and prevent a cure. The incision may relieve the symptoms, but will not cure the disease or do much towards hastening anchylosis. Nothing but the removal of the diseased bone, either after incision, as in an ordinary operation for necrosis, or by resection, will be of use; for the disorganisation of the joint is clearly the result of disease of the bone, and the seat of the disease must be made out before the correct treatment can be applied. An incision, as an exploratory operation, may, however, be of use in the case, for it may facilitate the removal of the diseased bone, and thus hasten recovery. When, however, the disorganisation of the joint has been the result of disease in the synovial membrane, the value of a free incision into the articulation is very great, for in these cases, although the disorganisation may be complete, the disease in the bone will probably be only superficial, and will rarely be found to extend far into the cancellated tissue. The disease in the bone is the result of synovial mischief, and will consequently recover when the source of disease has been removed, and the pus has been evacuated from the joint. Indeed, it is in disease of the synovial membrane of the pulpy kind, in which suppuration has taken place, that this practice of making free incisions into the articulation is carried out with the greatest advantage, and in the following cases which I propose now to relate I trust the truth of these remarks will be demonstrated.

Case 1.—*Pulpy Disease of Ankle-joint—Recovery with good Movement after Free Incision into Joint.*

Tom W., aged 4, came under my care at Guy's Hospital on January 30, 1865, with a disease of the ankle-joint. It was on the right side, and had existed for seven months, having come on after an injury, with pain and swelling. When seen, the joint was clearly much enlarged, the parts around the malleoli, etc., being doughy and thickened. There was pain in the part and daily flushing with heat, particularly at night. Fomentations were ordered, with tonics, and by February 20 all heat had disappeared, with all pain and indications of inflammation. The joint was consequently strapped up. The child was then, contrary to orders, allowed to use his limb, and as a consequence a relapse took place. The symptoms became as bad as—indeed, worse than—ever, and suppuration followed, an abscess opening on the outer side of the joint on May 15. On May 19 another formed about the inner malleolus, and it was clear that the joint was thoroughly opened. A free incision was made into the joint about the inner malleolus, and its contents allowed to escape without hindrance. Water dressing was applied. From this time everything went on favourably. By June 10 the abscess and the incision over the external part of the joint had healed, and all pain had ceased. By September things looked as if they were about to consolidate. On October 5, there was another relapse, and another abscess formed, and severe joint symptoms with constitutional disturbance made their appearance—indeed, it appeared as if an abscess had burst into the joint from the breaking down of some of the pulpy disease in the synovial membrane. The symptoms, however, gradually disappeared, and by November 27 all their severity had gone. From this date everything went on favourably, suppuration ceased, and all thickening of the synovial membrane gradually disappeared. By February 19, 1866, all the abscesses had healed and the sinuses were closed, and by April the joint reassumed its natural aspect, all thickening of the soft parts having subsided. Strapping was again employed to hasten the absorption of the inflammatory products, and by April 9 the case was reported as well, with, what was hardly to have been expected, a movable joint. By December, 1866, the joint was quite sound, perfect movement existing, the remains of the cicatrices and some weakness of the joint alone

remaining to testify to the severity and nature of the disease. On December 7, 1868, this boy called on me, and the joint was still sound and useful, no traces of disease beyond the cicatrices remaining. The astragalus moved as smoothly as possible between the malleoli. He is still well.

Case 2.—Pulpy Disease of Ankle-joint—Suppuration and Recovery—Treated by Free Incisions.

William R., aged 9, was brought to me at Guy's Hospital on July 4, 1864, with a disease of his right ankle of two years' duration. It had appeared after a blow, with pain and swelling, and at uncertain intervals these symptoms had continued ever since. When he came under observation the synovial membrane projected round the malleoli and was much thickened, and appeared in parts to be breaking down; any movement of the foot caused pain, and the astragalus did not move smoothly in its socket. A splint was applied and tonics given. For a time the symptoms improved with the child's health, and it was hoped that suppuration would not take place. In March of the following year, however, two abscesses formed, one on each side of the joint, and it was clear by the passage of a probe that the joint was opened. A free incision was then made on each side, laying the joint open freely, and a splint was kept on. In six months the wound had healed, and the parts appeared to have become consolidated. In another three some movement in the joint appeared. In July, 1866, when last seen, the boy could walk well without pain. The movements of the joint were complete. The boy, however, required some extra support for his ankle, but had a good foot.

Case 3.—Pulpy Disease of the Left Ankle-joint—Suppuration—Recovery with a Movable Joint.

Cornelius M., aged 3 years, was brought to me at Guy's Hospital on December 14, 1865, for disease of his left ankle. It had come on after a fall, received some months previously, with pain and swelling, the joint being at times hot and painful. When first seen by me the articulation was clearly swollen from inflammatory infiltration of the synovial membrane. The whole part had a soft and pulpy feel, and the margins of bone were all covered in. There was no bulging of the synovial membrane from effusion, and the articulation moved smoothly. Fomentations with strips of wet rag were ordered to be kept on the joint, and the horizontal position was maintained; tonics were also given. By January 30 the symptoms had improved, but on February 26 they had again become severe, suppuration threatening. On March 12 an abscess was opened by a free incision in front of the inner malleolus, which was clearly connected with the joint; consequently a splint was applied. By June 25 all swelling had nearly subsided, and all heat had gone. Pressure with strapping was applied, and on September 3, six months after the incision, the child was declared to be cured, with a good and movable joint.

Case 4.—Pulpy Disease of the Synovial Membrane of the Ankle-joint—Free Incisions—Recovery with a Good Joint.

Alfred T., aged 5½, came under my care at Guy's on January 1, 1866, for disease of the right ankle-joint of three years' standing. It had appeared after a fall, and had commenced with pain and swelling. When seen, the whole ankle was much swollen, soft, and pulpy to the touch. It was hot and painful, although some movement was allowed. Fomentations were ordered, and steel wine given with good food. The boy was directed to be kept in a bed. On January 29 an abscess appeared on the inner side, which was opened by a free incision, the pus clearly coming from the joint, for it could be pressed out. Water dressing was applied. The case went on satisfactorily after this for a time, but by June 14 a second abscess appeared on the outside from the breaking up of the inflammatory effusion. This was treated also by a free incision, and water dressing applied; at this time the inner wound had quite healed. In three months the outer incision had also cicatrised, and the swelling about the joint had disappeared. Some movement of the articulation also existed. In August, 1868, nearly two years after this date, the child was brought to me, when the movements of the ankle-joint were smooth and perfect, the only marks of the old disease being the cicatrices and the weakness of the joint.

Case 5.—Synovitis and Disorganisation of Ankle-joint—Recovery with Movement—Treated by Free Incision.

Eliza M., aged 2, was brought to me at Guy's, on February 25, 1864, for disease of the right ankle. It had existed for six months, and had commenced with pain and swelling. When seen the joint was clearly much diseased, although the cartilages were apparently perfect. There was great thickening of the synovial membrane all round the malleoli and the joint, and the parts were hot. Fomentations were ordered with tonics. On March 1 all the symptoms were worse, and suppuration of the joint was threatening. On March 31 the articulation was laid open on its inner side. The whole joint having apparently broken down, a splint was applied. Much relief followed the laying open of the joint, and from that time things began to mend. On May 10 there was little discharge, and by July the wounds had healed. The splint had been kept on during this period. By July 30 the splint was removed, and on September 10 some movement in the joint was visible. In December the movements were much more perfect, and on April 10, 1865, when the mother again brought the child, I was surprised to find that the foot moved freely and smoothly between the malleoli and without pain. The joint was weak, and required some support, but it was sound.

(To be continued.)

ON EXTRA-CAPSULAR FRACTURE OF THE FEMUR.

By ALEX. OGSTON, M.D.,

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In the study of fracture of any bone, the observation of the direction in which the fissures tend to run, especially when the direction and amount of the violence applied are, at the same time, taken into account, is of the greatest possible interest. There can be no doubt that the course of every fracture is determined by unalterable mechanical laws, and that if it were possible to find a series of cases where the same amount and direction of violence acted in a precisely similar way on bones presenting an identical conformation, the resulting fractures would be exactly similar in all the cases. Such a series of cases, however, is rarely met with, and the varying sorts of injury which present themselves are easily comprehensible when regard is had to the infinite variety of circumstances capable of modifying the result.

In some parts of the human body, however, the elimination of many of these modifying circumstances, such as muscular action, position, etc., and the proneness of the violence to be applied in much the same direction in many cases, lead to the occurrence of injuries to a great extent similar to each other, and a knowledge of the general similarity of such injuries assists the Surgeon in his diagnosis and treatment, as well as in the classification of his knowledge.

The upper part of the femur is a portion of the skeleton where the fractures can be arranged into a number of classes, and of all the injuries observable on the upper part of this bone, the extra-capsular fractures in the neighbourhood of the trochanter major are perhaps those in which the results obtained are most uniform, and correspond most with our application to the subject of mechanical laws. Extra-capsular fractures are more uniform in their appearances than intra-capsular fractures, and correspond, in this respect, with what is known of their causation, fractures within the capsular ligament being producible by the direct application of violence, as well as by shocks transmitted from the foot, knee, and so forth, while fractures external to this ligament are the result of the direct application of force to the trochanter major, and are usually traceable to a fall on this part over the side of the individual, so that the force is applied directly to the trochanter major, and in a line passing inwards, more or less along the neck of the bone, towards the centre of the pelvis. In other words, the force is applied in a similar manner to that which would be employed if, in an articulated skeleton, one were to hammer at the trochanter major with the intent to drive the head of the femur through the acetabulum. And so it sometimes happens that such a fall does drive the head of the femur through the bottom of the acetabulum and into the pelvis. When, however, the os innominatum does not yield, the whole force of the fall has to be borne by the neck of the thigh bone, a structure which, it will be remembered, though little compact in itself, is planted with its outer end in the trochanter major, a mass of tissue still less compact. The neck, too, receives the force in a favourable position, end on as it were, and, pillar-like, supports the strain without yielding. A glance at a femur shows the neck of the bone to be more like a cone than a pillar, the broad end of the cone, widest from above down-

wards and narrowest from before backwards, being inserted into the trochanter major. The broad base of this cone, not yielding to the strain, also confers a power of resistance on the tissue immediately without it, and, similarly to what takes place when one forces a blunt body through a cork, carries a wedge of osseous tissue supported on its broad basis. This wedge of osseous tissue, whose shape corresponds with the end of the cervix femoris, being broad from above downwards and narrow from side to side, is similar in shape to the bottom of a boat, the keel running, as it were, in the broadest diameter of the base of the cervix, and in a direction from above downwards and a little backwards, a course corresponding with the greatest diameter of the neck of the thigh-bone. The head, neck, and wedge of tissue, thus refusing to give way to the strain, are driven through the substance of the trochanter major and upper part of the femur, and, a line of fracture having been already produced round the base of the cervix, corresponding more or less completely with the intertrochanteric lines, another fissure is caused in the bone by the projecting ridge at the apex of the wedge; and this line, separating the trochanter into a greater part broken entirely off, and a smaller remaining attached to the shaft of the femur, corresponds most accurately with the direction of the ridge surmounting the wedge, and consequently also with the greatest diameter of the cervix femoris. (It is curious to observe the accuracy with which this fissure, dividing the trochanter major, corresponds with

Fig. 1.

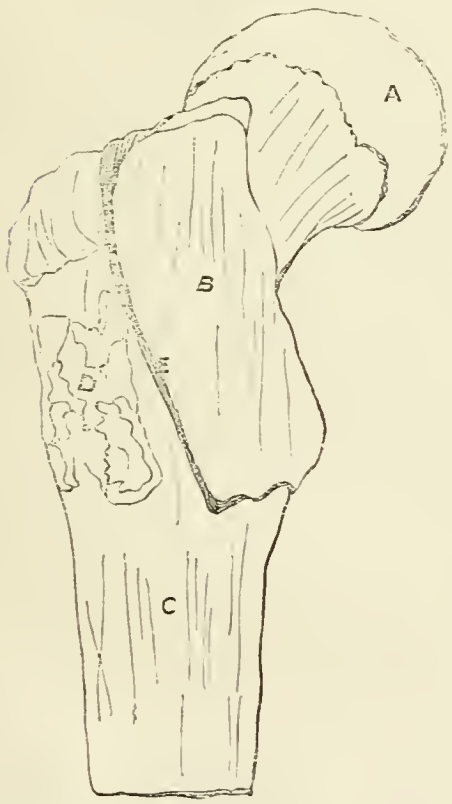

Fig. 1.—Left femur. A, first fragment, head and neck. B, trochanteric fragment. C, shaft and part of trochanter. D, exostosis. E, line of fissure.

the greatest diameter of the cervix, but the specimens in my possession, four in number, bear out the statement fully, and two other preparations, the only specimens of extra-capsular fracture in the University Pathological and Infirmary Museums in Aberdeen, are equally harmonious in this respect.)

It will be perceived that in extra-capsular fracture the bone is usually divided into three fragments, the first formed by the head and neck, the second by the greater part of the trochanter major, and the third by the shaft of the bone and a small portion of the trochanter major. The lines of fracture are, on the contrary, two in number, one corresponding very closely with the intertrochanteric lines and running sometimes through the centre of the trochanter minor, and the other, leaving the first fissure at the upper border of the neck of the femur, running thence downwards and a little backwards through the trochanter major, to rejoin the first fissure somewhere near the trochanter minor.

Fig. 2.

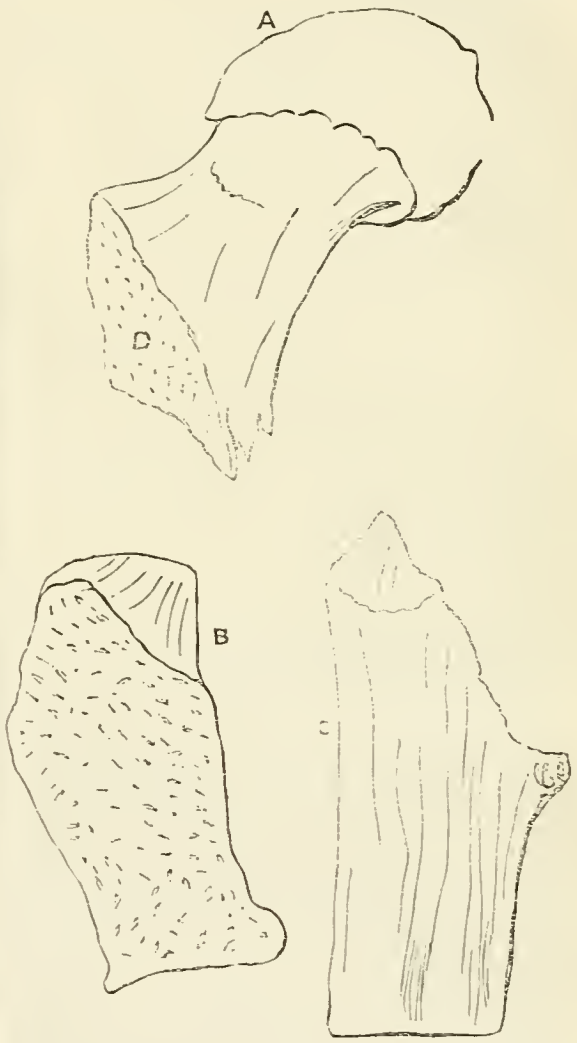

Fig. 2.—Right femur. A, first fragment, head and neck. B, second fragment, chiefly trochanteric. C, third fragment, shaft and trochanter. D, wedge of bone.

The displacements occurring in such a fracture are very evident. The detached trochanter major is drawn upwards and backwards by the glutei medius and minimus, quadratus femoris, obturators, and pyriformis, and leaves between itself and the shaft a hollow, in which the fragment formed by the head and neck is placed. The shaft is also drawn upwards by the pelvic attachments of its muscles, and pushes upwards the outer end of the cervical fragment, which may besides be tilted up by the psoas and iliacus should the lesser trochanter be partially attached to this fragment, and not, as is usually the case, chiefly to the portion formed by the shaft. In this way the whole limb is shortened, the shortening being to a greater extent than in intra-capsular fracture, and the usual external rotation is effected by the usual agencies. The prominence of the trochanter major, too, appears less elevated than natural, for the two fragments being pulled away from each other, the wedge-shaped base of the cervical fragment lies immediately below the skin, and consequently the distance between the acetabulum and the skin is diminished. These appearances are well seen in the preparations of this fracture where union has occurred. The displacement upwards and backwards of

the trochanteric fragment, the rotation of the lower fragment, shown by the position of the lesser trochanter, and the tilted-up end of the cervical fragment, where the neck, losing its

Fig. 3.

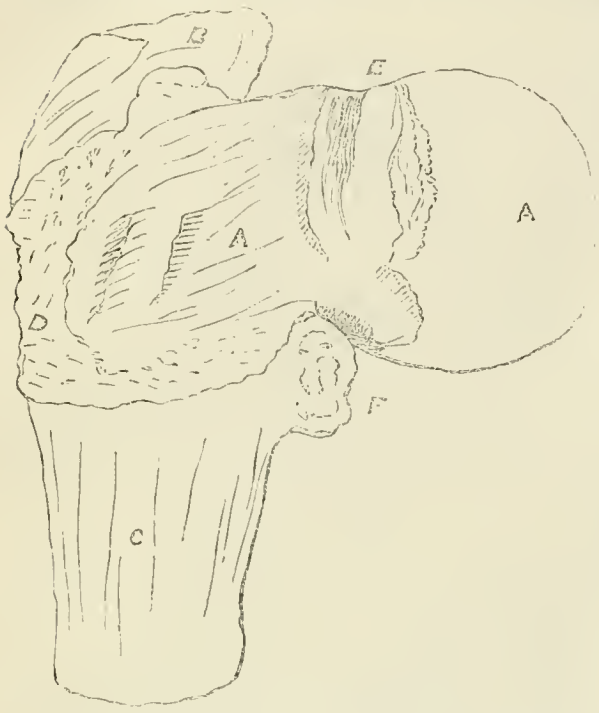

Fig. 3.—Right femur, united extra-capsular fracture. A, cervical fragment. B, trochanteric fragment. C, fragment formed by the shaft. D, new formation of bone. E, groove formed on cervix by acetabulum. F, trochanter minor.

usual oblique position, has become so horizontal as to be marked above by the articulating edge of the acetabulum, are all extremely prominent. This preparation where union has occurred has the following imperfect history:—"An old man, coming up a cellar stairs with a heavy weight on his back, lost his footing and fell backwards down the steps. When taken up, and attended to by my father, he presented the usual signs of fracture of the neck of the right femur, with shortening, eversion, and crepitation. After six months' treatment he recovered and was able to walk about with a shortened and everted limb. On his death, two years subsequently, the specimen was obtained."

The diagnosis of extra-capsular fracture is usually obscured by the amount of swelling and injury of the soft parts, for considerable violence is required to effect it; but the mode in which the injury was received, the ready crepitation, the large amount of shortening, and the altered relations of the three fragments, might in careful hands be sufficient to insure recognition of the injury.

ON A CASE OF DISEASE OF THE PONS VAROLII.

By Dr. R. BEVERIDGE,
Physician to the Royal Infirmary, Aberdeen.

In endeavouring to determine the functions of the various parts of the nervous system, no more reliable observations can be made in man than those where disease is localised in one limited spot, inasmuch as the functions so deranged point to those naturally carried on there; and, as a contribution to our knowledge of this subject, the following case is submitted:—

J. T., a labourer, aged 23, enjoyed perfect health up to the middle of September, 1864, when he began to see double and to stagger in walking. These symptoms becoming aggravated, he was soon incapacitated from work, and was admitted into the Royal Infirmary September 28. After admission, the partial paralysis rapidly increased, and in the middle of October the symptoms might be thus described:—Cannot walk without assistance; cannot articulate distinctly; swallows with considerable difficulty; voluntary power over the left side of the body and face not abolished altogether, but very considerably impaired; voluntary power over the right side of the body slightly enfeebled; marked internal squint of the left eye, which can with difficulty be brought so as to look straight forward, but cannot by any effort be made to look outwards. Vision perfectly distinct and accurate with either eye, but the internal squint caused at first double vision, which for a time was felt to be very embarrassing. Touching lightly with the hand and pinching are felt everywhere, but less distinctly on the right side than on the left; and he states that the right side both of the body and face feels numb. Mental faculties unimpaired. The state of the hearing was not examined till November 20, when he was found to be deaf in the right ear, and he stated that he had noticed deafness on that side gradually coming on for some months. In the end of November, the symptoms were increased in intensity, but unaltered in character. Voluntary power over the muscles was nowhere completely lost, but was much more impaired on the left than on the right side, while the loss of sensation was more marked on the right side. Breathing went on regularly, but he could not increase the depth of respiration by a forced effort when asked to do so. He gradually sank and died on December 1.

Autopsy, December 2.—Brain weighing 54 oz.; veins of cerebrum slightly congested; arachnoid in spots slightly opalescent; substance of hemispheres healthy; ventricles containing, but not distended with, clear serum; choroid plexus finely injected—this appearance most marked in the inferior horn of the ventricle. Medullary bands, corpus callosum, fornix, hippocampi, corpus fimbriatum, and tænia semicircularis firm and strongly marked. Corpus striatum, optic thalamus, corpora quadrigemina, and pineal gland natural. Cerebellum healthy. Pons larger than usual, somewhat lobulated on the anterior surface, the lower part of which, down to the medulla oblongata, presented a gelatinous appearance. On making a section, the fibres of the lower part appeared very indistinct, and in a great measure replaced by a soft semi-gelatinous-looking mass (soft cancer) without any defined border, much more abundant on the right than on the left side, but present on both sides, not extending down into the medulla oblongata, most marked in the lower half of the pons, extending nearly through the pons from front to back on the right side, but limited to the front of it on the left side, replacing entirely the transverse and to a great extent also (although not completely on either side) the vertical fibres; presenting under the microscope the appearance of a mass of minute mostly oval nucleated cells, intermixed with a (very) few nerve tubes, no exudation corpuscles, and no nerve cells; not forming a defined tumour, but infiltrated, as it were, into the tissue. The origin of the right fifth nerve in the pons was involved, as was also that of the right auditory. Medulla oblongata healthy. Lungs congested, œdematous, especially behind, large, voluminous, filling entirely the sides of the chest, and not collapsing on its being opened; the right weighing 34 oz., the left 25. Heart somewhat enlarged, weighing 12½ oz. Pericardium adherent by loose bands along a narrow line in front of the right ventricle, extending from near the apex to the origin of the pulmonary artery. Left ventricle with its walls thickened; endocardium of the left auricle thick and opaque; that of ventricles white in small patches; aortic and mitral valves thickened, but pliable and apparently competent; commencing fibrinous vegetations on the inner surface of the mitral valve near its base. Abdominal viscera healthy.

This case is of considerable interest in a physiological point of view—the more so that, the disease being a slowly progressive one, the symptoms were limited to impaired function of the pons itself, and there was not present the complication of shock with its consequences such as occurs in the case of apoplexy or the like. Standing as the pons does, as it were, in the great highway of impressions passing both to and from the great nervous centres of the cerebrum, affections of it may be expected mainly to show the results of severance of these centres from the cord and its nerves below. Accordingly in this case everything seemed to show that the cord below, and the cerebrum above, were both intact—the continuance unhampered of ordinary respiration and of the muscular action of the thoracic and abdominal walls and viscera showing the integrity of the medulla oblongata and cord, while the full preservation of the mental faculties proved the unimpaired action of the cerebrum; but the partial loss of sensation and voluntary motion evidently pointed to a break in the means of transmission both of sensory impressions inwards,

and of voluntary motor impulses outwards. The point of chief interest is to show the parts of the pons transmitting these respectively, and the following tabular statement may serve to bring out the salient points of the case.

Right.	Left.
Nearly complete destruction of the pons.	Partial destruction. limited to the fore part.
Symptoms.	
Voluntary motion of body and face slightly affected.	Voluntary motion of body and face nearly lost.
Motions of eye perfect.	Internal squint.
Sight perfect.	Sight perfect.
Deafness.	Hearing perfect.
Sensation of body and face everywhere impaired, with feeling of numbness.	Sensation nearly perfect.

To these might be added, although their localisation on one side was not so palpable, partial loss of articulation and deglutition, and loss of voluntary (that is, forced) respiration. Assuming that the side of the pons chiefly involved would correspond to the side of the body chiefly affected, it would appear that the destruction of the right side of the pons entailed anæsthesia of face and body on the right side, and motor paralysis of the face and body on the left side; while the partial affection of the left side of the pons, chiefly in front, produced partial impairment of motion on the right side, but left the sensation of the left side nearly entire, thus seeming to indicate that the route of the motor impressions is chiefly towards the fore part, and that of the sensory towards the back of the pons. The first four cerebral nerves were in no way interfered with—a circumstance intelligible enough, as their origins are all above the pons; but the others, from the fifth onwards, were all impaired in action as far as concerned their connexion with sensation and volition, although the reflex functions carried on through them were in no degree interfered with. The crossing of the impressions from one side to the other in course of transmission is a point of great interest. Brown-Séquard maintains that in the pons the seventh or portio dura of the two sides are in some way crossed, and this case bears out that view, for the *whole* of the motor impressions, both those connected with the face and those connected with the body generally, were here crossed. Again Brown-Séquard's experiments seem to show that in the cord the sensory impressions are crossed at or near their point of entrance, and are transmitted up the opposite side. This case, however, shows that such is not their position in the pons, so that, if we admit the correctness of Brown-Séquard's observations, we must conclude that at or near the pons both sensory and motor impressions are crossed, the motor passing into the opposite side from that in which they originated, while the sensory return again to their own side. In short, the difference in position of these in the pons and in the cord respectively would be indicated thus:—Destruction of one side of the cord produces paralysis of the same side and anæsthesia of the opposite side, while destruction of one side of the pons produces paralysis of the opposite side and anæsthesia of the same side.

THE CAUSTIC TREATMENT OF PURULENT CATARRH OF THE EAR.

By Professor SCHWARTZE, of Halle.

As the advantages of the caustic treatment of the purulent catarrh of the ear seem not to be sufficiently known, I do not think it superfluous to call the attention of my Professional brethren to this method of treatment. I myself have used it for several years, and obtained the best results from the same, and many other Physicians, who upon my recommendation have tried it, have found it equally successful. I do not pretend to proclaim it as something novel. Everybody who possesses some knowledge of ophthalmology and is acquainted with Von Grafe's treatise on "Diphtheritic Conjunctivitis" (*Arch. f. Ophthalmologie*, vol. i.) will find it very natural to apply the same method also in blennorrhœa of the mucous membrane of the ear. But the anatomical relations render it much more difficult to apply the caustic solution to the whole extent of the diseased mucous membrane of the ear, and therefore the effect cannot be as sure as in the treatment of blennorrhœal conjunctivitis. Notwithstanding this disadvantage, no other astringent method can show such good and quick results as this. The infallibility ascribed to some astringents must be attributed to observation either too short or not accurate enough. I will by no means assert that lasting and perfect success might not be obtained by astringents in general. Experience proves this often to be the case; but experience proves, just as certainly, that in cases of old standing the treatment wants months, or even years, and that even then no certain results can be expected. Every one who possesses experience and honesty enough will admit that there are a great many cases of simple blennorrhœa without granulations and caries, in which an astringent treatment continued in the most persistent manner for months and years has had no success. To change the astringents themselves, or to modify the manner of application, to use solutions or powders, the result will be all the same—viz., naught.

With such experiences everybody must be very glad to know a method which promises him, if not an absolutely certain success, yet one much more probable than the former, provided the exact indications calling for a caustic treatment are present and it is properly executed. Those who have not yet tried this method may be the more willing to adopt it if I assure them that no considerable pain is caused by it. To decide whether the caustic treatment becomes necessary or not, the most accurate examination of the ear is required. If this examination shows no granulations upon the exposed mucous membrane of the tympanum or upon the rest of the membrana tympani, and no symptoms of ulceration of the bone, then success may be expected with almost absolute certainty.

To recognise small granulations, however, has often its difficulties to not very practised eyes. It will not surprise me, therefore, to be told that the method has proved unsuccessful where, in reality, the examination bears the fault. Even the small trachom-like granules which are often found upon and near the margins of older defects in the membrana tympani, contraindicate the application of this method. Neither those nor isolated larger ones disappear, as far as my own experience goes, by touching with even the strongest solutions of nitrate of silver. They always require the application of the nitrate of silver in substance, or, if a more speedy result is demanded, the galvano-caustic cauterisation. Still less benefit can the method have, of course, if there are larger polypous excrescences. In caries the ichorous discharge is somewhat limited by the cauterisation, and the fœtor diminished, but the cure is never in any considerable degree promoted. Astringents, even used in the weakest solutions, increase the pain, as is well known, whilst the other treatment is borne without increasing the same.

The caustic method is very aptly applied to all cases which show a hyperæmic, swollen, lax, and succulent mucous membrane, regardless of the duration of the disease. In recent cases an application twice or three times repeated will suffice. In older cases, where astringents have been used in vain for a long time, the cauterisation must be more frequently repeated. The change for the better is almost without exception perceptible after the third or fourth cauterisation, and manifests itself by diminution of the swelling and redness, and by a considerable abatement of the secretion. The strength of the solution used for the cauterisation of the mucous membrane depends upon the existing swelling and injection. I am in the habit of using fifteen grains of nitrate of silver to the ounce for the weakest and forty grains for the strongest solution. As Wilde has recommended it in purulent inflammation of the meatus externus, I at first touched the rest of the membrana tympani and the exposed parts of the mucous membrane with a small hair-brush attached to bent pincers. Very soon, however, I was convinced of the impracticability of this method of application, it being impossible to reach all the parts of the tympanum with the brush. I therefore pour the solution always into the ear. Before doing this it is necessary to remove all the secretions most carefully by syringing the meatus externus and by blowing through the Eustachian tube. After this the ear must be carefully wiped with the help of the speculum. The latter is best done by means of fine charpie or cotton fastened to the blunt ends of a pair of small pincers. Should some of the secretion or of the injected water remain in the tympanum, the solution of course does not come at all, or at least not in the desired concentration, in contact with the diseased membrane. The pouring in of the warmed solution may best be done by a small glass pipette or a small shallow china cup. Fifteen drops of the solution are usually sufficient. The longer the solution remains in the ear, the stronger of course is the caustic effect. In accordance with the state of the mucous membrane, the solution therefore is left in the ear from some seconds to one minute or longer. To bring the solution during this time as much as possible in contact with the membrane, it suffices in cases of large defects of the

membrana tympani to turn the head in different directions, particularly towards the back. In cases of small perforations, it will be necessary to press air through the Eustachian tube while the solution is in the ear (Politzer). A still surer success may be obtained, in my opinion, by applying strong pressure of the fluid column in the meatus with the help of a thick india-rubber tube hermetically applied whilst the head is slightly bent towards the opposite side. By this proceeding, the solution is forced to find a way through the perforation into the tympanum, and arrives thence into the pharynx, if the mucous membrane of the Eustachian tube is not very much swollen. Those healthy parts of the mucous membrane in the Eustachian tube and the cavum pharyngo-nasale which are touched by the solution, will not be hurt dangerously if neutralisation at once takes place. To this end the solution is removed by turning the head to the opposite direction and by making a strong injection of lukewarm salt water immediately after it. To remove the chloride of silver and the superfluous chlorate of potash which remains in the ear, a few full injections of lukewarm water must follow. Should the caustic solution have gone as far as the pharynx, the salt water must be applied there in the same manner as the solution got there. After having repeatedly wiped dry the ear, charpie or a small setaceum of linen is introduced deep into the ear. The charpie remains there till the cauterisation is to be repeated, and it shows the quantity of the matter in the meantime secreted. The cauterisation must not be repeated until the eschar has been completely thrown off. This is shown, as is well known, in the form of whitish spots sitting upon the mucous membrane. The more succulent the membrane was, the sooner will the eschar be thrown off. In exceptional cases it may therefore be necessary to apply the cauterisation twice a day. As a rule, however, it will suffice to cauterise once a day in the above-described manner. When the swelling decreases, it will be sufficient to repeat it once every two or three days. It is not seldom the case that, even after the first cauterisation, the appearance of the mucous membrane is so much changed and the secretion so considerably diminished that the solution cannot be continued in the original strength, but has to be weakened. If the cauterisation is repeated too late—*i.e.*, after renewed swelling and hypersecretion of the membrane—the effect is almost as bad and slow as by the usual astringent treatment. Of this I have convinced myself sufficiently in my policlinic practice, where, as a rule, I am not permitted to repeat the cauterisation oftener than twice a week. For these reasons the results of this method were therefore generally much slower and less sure in the policlinic than in my private practice.

I have described this simple manipulation very minutely, much more so than some of my colleagues may think necessary. But I have often made the experience that this proceeding has been followed by no evident success, or has even produced much pain, where without doubt the cause of this was that the above-described precautionary rules had not been sufficiently observed. In my hands it has never caused any considerable pains.

The caustic method recommends itself as relatively the surest method not only in old cases of purulent catarrh of the ear (with the above-stated exceptions), but also in much more recent and slighter cases—the more so as the patient wants no assistance from others for its application. How very insufficient this help often is, even where we meet the best intentions, everybody knows. How much more so in those cases, and these are by far the most numerous, where we cannot expect even the first rules relating to the necessary cleanliness to be observed—that is, in the pauper practice.

Halle-on-the-Saale, Prussia.

London Corpse-dust.—At the last meeting of the Académie des Sciences it was stated that M. Freycinet, a mining engineer, in his work on "Sepulture in its relation to Public Health," declares, as a result of the calculations that he has made, that the soil of London contains 50,000,000 kilogrammes of human remains.

Consanguineous Marriages in France.—From an official return it appears that the following consanguineous marriages took place in France during the three years 1863-65:—Between nephews and aunts, 179; uncles and nieces, 552; brothers-in-law and sisters-in-law, 2763; and between cousins-german, 10,810—total, 14,304. During the same three years the general total of marriages amounted to 900,197. The proportion of these consanguineous marriages was 1·51 per cent. in 1863, 1·67 in 1864, and 1·59 in 1865.—*Journal de la Société de Statistique*, January.

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Medical Times and Gazette.

SATURDAY, MAY 15, 1869.

GRATUITOUS MEDICAL ADVICE—USE OF THE OUT-PATIENT DEPARTMENT.

Whatever disadvantage the poor of this metropolis may labour under, it is perfectly certain that no person, whatever his position may be, need remain ill or die for the want of Medical advice and assistance. We have a large and well-organised staff of Poor-law Medical Officers, overworked and underpaid, it is true, but, as a rule, active in their duties and faithful to the trust reposed in them. The relieving officer, if he hesitate to supply the applicant with bread or wine, is always ready without inquiry to give an order for Medical relief. We have large endowed Hospitals with ample funds to which the necessitous may apply with the certainty of relief being afforded them in case of accident or of illness. We have other Hospitals supported by voluntary contributions which rival their more opulent brethren in their work of charity. We have Dispensaries, self-supporting and otherwise, in every district. We have, moreover, a large class of Surgeons in general practice who never for a moment hesitate to attend to the call of suffering humanity, often without the remotest expectation of being rewarded for their valuable services. It is well known, too, that these gentlemen, occasionally struggling to maintain their own position of respectability, contribute to the material comforts of the poor people whose sufferings they are called upon to relieve. The members of an honourable profession like that of Medicine could not do otherwise. We trust the time may never arrive when such good Samaritans will cease to exercise their benevolence. But it must not be forgotten that the system of gratuitous Medical advice as it at present exists is associated with evils of the greatest magnitude, both to the public and to the Profession. Relief which is obtained so readily is not only undervalued as a general rule, but in a vast number of cases abused. Medical relief from the parish Surgeon does not, as is the case with other modes of relief, necessarily constitute the recipient a pauper; and many well able to remunerate a Medical Practitioner moderately resort to the parish Surgeon without scruple and without thinking for a moment that they are the recipients of charity. So, in our Hospitals and Dispensaries, letters of recommendation are given to applicants without any inquiry whatever into their capabilities or resources. What is the natural result of this anomalous state of things? Clearly that it tends to demoralise the recipients and to rob a large and meritorious class of men of that which should form a considerable and legitimate item in their income. As Junius, in one of his celebrated letters,

remarked to Sir William Draper when he refused to unmask himself to meet Sir William in a duel, "You would fight, Sir William, but others may assassinate." So the system of gratuitous advice, whilst it affords to the poor and needy an ample opportunity of obtaining advice and assistance, opens a door to the unscrupulous and often wealthy impostor to obtain those services of the Medical Practitioner which he is well able to pay for. Nothing is more notorious than this abuse. It has been exposed over and over again. On last Wednesday week an able letter addressed to the *Times* by Mr. Holmes Coote, one of the Surgeons to St. Bartholomew's Hospital, says in regard to the "small institutions" "to some of which patients drive up in hired cabs which they keep waiting at their leisure, and issue from the carriage rustling in silks, and are prompt to find fault if not at once attended to." He adds: "But for this the Medical Profession is itself to blame; one half giving its services gratuitously to the injury of the other half." Mr. Coote, with much force and truth, indicates the existence of the evil, but he fails to give us the remedy. We should be glad if a Surgeon of so much experience would furnish us with his opinions upon this point. For our own parts, we will venture to indicate what we believe to be the right use of a Hospital out-patient department.

At present, the out-patient department at many Hospitals is a grievance, a sham, a waste, and a scandal. It is a grievance that servants, mechanics, small tradespeople, and others in no want, should receive gratuitous advice and medicine, to the injury of the General Practitioner and of the chemist, whom they can afford to pay. It is a shame to pretend that the hasty glance and prescription in an out-patient Hospital room by a junior House-Physician is "better advice" than is given by the General Practitioner. It is a great waste of time to the mechanic's wife to spend two or more hours in obtaining a pennyworth of medicine for a trifling ailment. It wastes the House-Physician's time and energy to prescribe rapidly for cases that yield no clinical or pathological results. It is a scandal, and is now in advanced political circles openly spoken of as such, that the Medical Profession should impoverish itself and pauperise the poor by this indiscriminate mode of almsgiving. It is a scandal, besides, that a charity subscription should entitle the giver to "privileges"—tickets for Medical relief, which he may give to undeserving objects. Our suggestion is this: The Physicians and Surgeons to Hospitals are, or ought to be, of the consulting order; they ought to be resorted to as friends, not looked on as rivals by the General Practitioner. The real cases for them are those of a chronic order which defy ordinary treatment, or which are obscure and need better diagnosis. Each patient should bring, not a governor's letter, but a letter from a Practitioner, describing the case and asking a consultation; and the patient should bring back, not a dirty bottle of "stuff," but a well-considered opinion from the Physician or Surgeon for the guidance of the Practitioner.

ARMY HOSPITAL GANGRENE.

The January and April numbers of the New Orleans *Journal of Medicine* contain an excellent paper by Dr. Joseph Jones, now Professor of Chemistry in the University of Louisiana, on the subject of hospital gangrene. The sources of Dr. Jones's experience were the Hospitals attached to the Southern armies during the American civil war, sources which he has already utilised by valuable published papers. He states that in many cases the appearance of gangrene in the wound was preceded by fever ushered in by a chill; but as the influence of malaria was also frequent among the soldiers it was sometimes difficult to assign the chill and fever to their true causes. In some cases reported to him there was said to have been nothing of this kind. With regard to its mode of origin, gangrene may, he thinks, be looked at in four ways—as a local disease, depending on contact with putrid animal matter; as a constitutional disease, depending on imperfect hygienic conditions; as both local and constitutional in character; and, finally, as the result of a specific poison. Dr. Jones adheres to the third of these views, for, from his experience, he maintains that hospital gangrene may arise in those exposed to exhalations from gangrenous wounds, without any abrasion of surface; that it may be communicated without direct contact; that in some cases it does not make its appearance immediately after exposure to contagion; and, finally, that in crowded wards the diseased condition may be propagated within the system with such rapidity that death may result before much local change has taken place.

In many cases of gunshot wound which subsequently became gangrenous, the attention of the patient was first directed to the wound by a pricking and darting pain like that of ten thousand needles; in others there was stinging and itching only, whilst in others still there was little or no local pain or uneasiness. In some instances the wounds first of all became dark red and glazed, both granulations and pus disappearing, whilst a reddish or greenish sanious and fœtid discharge followed. The wound would become swollen and ragged, and finally appear as a greenish or greyish gangrenous mass. When the wounds were extensive, the gangrene would appear in several spots, and from these gradually spread. In bad cases the gangrene would appear in from twenty-four to seventy-two hours after an operation. The blood-vessels round a gangrenous wound are always (says Dr. Jones) engorged with blood, and in several instances he has seen rapid recovery follow a hæmorrhage from these. When the system is thoroughly poisoned, gangrene will sometimes make its appearance remote from any wound, and without any apparent adequate cause. In such cases a blue or purple spot is first seen, the cuticle being sometimes raised and containing serum. In bad cases the skin may apparently dissolve away before the gangrene. The adipose and connective tissues give way most readily; the muscles, nerves, large blood-vessels, and bones less so, although the blood-vessels give way more frequently than in certain other forms of gangrene—hence hæmorrhages are more common than in these. Sometimes the skin may appear healthy, when the tissues beneath are gangrenous. When gangrene ends favourably, the healthy surface becomes bright red, and its granulations are exquisitely sensitive. But, even after this, death may result from exhaustion, etc. On examination, the gangrenous matter is found to consist of the various tissues in a disorganised state, together with the products of these. Pus-corpuscles are absent, and their appearance is to be esteemed a favourable sign. Living organisms may also be detected. Dr. Jones holds that there is no necessary connexion between hospital gangrene and scurvy. The two may exist together, and when so their ravages are frightful, and it is difficult, if not impossible, to eradicate the gangrene without treating the scurvy. Our author holds that gangrene is essentially inflammatory in its nature; that its local manifestations give rise to general febrile action as the result of the poison. There is also a marked difference between the temperature of the extremities and that of the trunk, depending on general weakness and imperfect circulation.

In its course this disease would seem to observe no uniform period either with regard to death or to recovery, the condition of the patient's bodily health influencing very greatly the result. The disease is especially dangerous when in or near a large joint, or along the track of important vessels or organs. Dr. Jones has never seen a case recover where the hip or knee joints were laid open, or even where the elbow-joint was opened, unless the limb was amputated. As the result of hospital gangrene, and owing to the destruction of parts, contraction and deformity will probably result, and the amount of this in no way depends on the importance of the primary wound. Care should therefore be taken to keep the parts in a proper position, whilst long-continued pressure should be avoided as almost certain to cause gangrene. As to the causes of death, these, Dr. Jones says, are progressive failure of power, as from

blood-poisoning; repeated hæmorrhage from eroded vessels; the entrance of air into eroded veins; the opening of large joints; the formation of extensive bed-sores which tend to become gangrenous; diarrhœa from the effects of the poison; extensive disorganisation round the wound; gangrene of internal organs; invasion of organs essential to life by the gangrene; pyæmia; phlebitis; and various constitutional and local sequelæ. The causes of the disease have been already sufficiently indicated. With regard to prevention and cure, Dr. Jones is strongly in favour of treating the wounded as near the scene of action as possible, in which we fully concur with him. Cleanliness, free ventilation, and the use of disinfectants should also receive every attention. As to treatment, that should be strengthening, and locally strong nitric acid should be freely applied, so as to totally destroy the diseased surface, which should then be dissected off. We have here given an outline of the contents of this valuable paper. To those who have no present opportunities of seeing in practice this dread scourge of armies, but who may hereafter be called upon to encounter it, we would especially recommend its careful perusal.

THE WEEK.

TOPICS OF THE DAY.

If the recent debate in the Commons on the failure of the Poor-law and the increase of metropolitan pauperism has produced no other good effect, it afforded an opportunity for telling the House some wholesome truths on the subject of poor-law Medical relief. Fortunately there was at last a Medical member in the House, who, having, as he said, been for twenty years a Poor-law Medical officer, was entitled to speak with the authority which personal experience had given him. Dr. Lush's speech afforded evidence, if any were wanted, of what value Medical representation would be, not merely to the Medical Profession, but to the House of Commons itself. Dr. Lush told the House that Poor-law Medical officers were so badly paid that the poor themselves had lost faith in services which cost so little, and that the present system was unsatisfactory to everybody concerned—to the Medical officers, to the guardians, and to the poor themselves. The debate, inasmuch as it led to no practical result, may be thought by some to have failed of its purpose, but we think that the House has acted wisely in deferring action until Mr. Goschen has had fair time and opportunity to mature his plans. Few refuse confidence in his ability and honesty of purpose, and his speech showed that he had no wish to gloss over the serious realities of the situation.

The Parliamentary session is rapidly passing on, and no note is given out as to steps being taken for the amendment of the Medical Act; indeed, it is said that the meeting of the Medical Council will not take place until a period much later than usual—namely, the end of June or the beginning of the following month. If this be the case—and we suppose it must be so, as some of the Irish members cannot attend at an earlier period—the chance of carrying a measure through Parliament this session must be small. It is stated that the deputation from the Executive Committee waited not on the Home Secretary, but on the President of the Council. This is a judicious movement. The Home Secretary's hands are occupied by such varied and important business that he has neither the time nor the knowledge required for Medical legislation. On the other hand, the Privy Council is constantly referred to in the Medical Act as the controlling authority, whilst the President and Vice-President have the opportunity of obtaining valuable assistance from their Medical officer, than whom no one is more competent to give advice in preparing an amended Act. There may be delay and postponement, but such delay would be more than compensated by obtaining an Act which may be a permanent one, and beyond the necessity for constant amendment.

The Pharmacy Amendment Bill, as altered from its original text by the Lord Advocate, reserves the rights of all persons registered as legally qualified Medical Practitioners before the passing of "this Act," and also the rights of "any person who may hereafter be registered as a legally qualified Practitioner, and who, in order to obtain his diploma for such registration, shall have passed an examination in pharmacy." It remains to be seen what examinations can be held *bonâ fide* to include pharmacy. The idea of a Royal College of Physicians examining candidates for licences in the art and mystery of compounding pills and potions and spreading plaisters is enough to raise from their eternal slumbers the ghosts of the *grandes doctores doctrinæ* who ornament the walls of the sacred edifice in Pall-mall East. They will certainly all step out of their picture frames, and walk in solemn procession to Berkeley-square to remonstrate with Dr. Alderson. But this is the pill which the College must swallow if henceforth its licentiates are to be legally protected in dispensing their own medicines. We notice that the chemists and druggists are already extracting some sweets from their monopoly. Counter practice is flourishing. They have, in many instances, raised their prices, and they speak of themselves as "the Profession." On the other hand, we have not noticed that there have been fewer cases of accidental poisoning since the passing of the Act. The hardship inflicted by the original Pharmacy Act on chemists' assistants is mitigated in the present Bill by the extension of the time within which certificates may be produced to the registrar to the thirty-first of December in the present year, and also by the provision that the three years of employment as assistants may have ended at any time prior to the passing of the said Act.

The amendments subsequently moved by Dr. Brewer on the amended Act had two principal objects. The first was to emancipate the functions of legally qualified Medical Practitioners from the disabilities, pains, and penalties entailed by the seventeenth clause of the Pharmacy Act of 1868, which contains the "Regulations to be observed in the Sale of Poisons." Dr. Brewer's first amendment, which we are glad to say has been agreed to by the Government, is to the following effect:—"Nothing contained in section 17 of the said recited Act shall apply to the prescriptions in writing of any legally qualified Medical man, provided such prescription be dispensed by any person qualified according to the provisions of the said Act." This completely removes the medicines ordered by legally qualified Medical Practitioners from the category of poisons as defined by the Act. If only for this amendment, Dr. Brewer deserves, and will receive, the gratitude of the Medical Profession. His action in this matter affords another proof of the value of Medical representation in Parliament. Dr. Brewer's second object was to draw some practical limits to the meaning of poison under the Act. For this purpose he proposed to abolish Schedule A of the Act, which committed the State to the absurdity of classifying together as poisons syrup of red poppies and arsenic and cyanide of potassium, and to substitute a schedule to be described and headed "Drugs and Chemicals to be used and administered with Caution." In this very sensible amendment we believe he has been actively opposed by parties interested in maintaining the original Bill, and he has not succeeded in obtaining the acquiescence of the Government. We are heartily sorry for it. A third set of amendments which he has introduced is for the purpose of removing disabilities from dispensers who, having served three years at the retail, subsequently move into a wholesale department and thereby lose their vantage-ground. In this also he has obtained the Government assent. On the whole, we congratulate Dr. Brewer on his success, and trust that he will continue his efforts to obtain due consideration for the Medical Profession in the House of Commons.

We do not think that the Liberal majority who are yielding such unreserved obedience to Mr. Gladstone, will be very likely to oppose their leader's well-known opinions on the exemption of Hospitals from local and other taxation. If there were no more Hospitals and Dispensaries than are really needed; if all

Hospitals and Dispensaries were what they profess to be—charitable institutions; if they did not encourage habits of life and thought and action amongst the lower orders of society which necessarily lead to pauperism and increase the number of paupers, something might be said in favour of exempting them. But as none of these things can be affirmed, and as, moreover, we are certain that the unwarrantable increase of Hospitals and Dispensaries in London and elsewhere has considerably interfered with the material prosperity, independence, and *status* of the Medical Profession, we must confess ourselves not anxious to see extra facilities given for their multiplication.

The Medical officers of the Brighton Eye Infirmary are endeavouring to make their institution a free one—in other words, to open it to all cases of poverty and sickness without letters of recommendation from governors. Of the two systems, we undoubtedly think the free open to less abuse, provided always that the Medical officers possess and use the right of refusing their aid in all cases where real poverty is not established. Governors' letters are a channel through which the Medical Profession are annually victimised to an enormous extent. The principle of giving subscribers the right to recommend patients to a Hospital or Dispensary is a false one. If the guinea subscribed buys a certain number of patients' letters, it is no longer a donation to a charity, but a payment to a joint-stock society where medicine is supplied to the subscribers or their nominees at the cheapest rate possible, and advice—as being worth nothing—is given gratis. One day last week, a friend of ours—a kind-hearted Physician—was sitting seeing patients in the out-patients' room of a metropolitan Hospital, when the porter announced "a lady." In swam a portly dame dressed in handsome silk and mantle, her fingers, when she drew off her glove, displaying an unusual garnishment of precious stones, and handed a paper to the Doctor. "That," she said, "is the last receipt the collector of your Hospital has given to my husband for his subscription." Then turning to her well-dressed companion who had followed her into the room, she continued, "This is my sister; be good enough to prescribe for her."

For the first time in the history of the University of London the ceremony of presentation for degrees has taken place in a building which the University can call its own. Neither of the large halls, however, in the edifice in Burlington-gardens is sufficiently near completion to accommodate the members of the University and the visitors, and the proceedings were therefore conducted in one of the supplementary examination rooms, which proved much too small for the occasion. Mr. Lowe, who was present, disappointed his constituents by not making a speech. After its long struggle to obtain it, we congratulate the University on having at last obtained a permanent habitation.

Dr. Inglis, an Edinburgh graduate of 1859, and a Fellow of the Edinburgh Obstetrical Society, has been appointed by the Crown Professor of Midwifery in the University of Aberdeen. Professor Inglis is the author of papers on craniotomy and version in the *Edinburgh Medical Journal*. His most formidable rival for the Aberdeen chair was Dr. Charles Bell, who graduated in Glasgow in 1836.

On Tuesday last, at 5 o'clock, Dr. Richardson delivered, at the Polytechnic Institution, the lecture "On the Experimental Effect of the Great Induction Coil," which we publish this week. Dr. Richardson's lecture attracted a large audience, and was listened to with the greatest interest. A vote of thanks was proposed to Professor Pepper and the directors of the Polytechnic for their liberality in throwing their institution open for the use of scientific men.

APOPLEXY, NOT DRUNKENNESS.

One of those unfortunate cases in which persons labouring under apoplexy are taken to the police-station as "drunk and incapable," has just occurred at Blackburn. The symptoms becoming alarming, a doctor was sent for, who at once declared that the poor man was suffering from apoplexy. He was removed to his home, and died the same evening. An inquest was held on the body, when it was found, from the evidence of the Medical witness, that the deceased had died from the effects of fracture of the skull, followed by compression of the brain. There was no blame attributed to the police in this case, as they had sought Medical aid as soon as possible. In another inquest, which was held at King's College Hospital on Tuesday morning, it was given in evidence that a gentleman had fallen down in the Strand. The police, supposing him to be drunk, removed him to the station-house, and subsequently to the Hospital, where he died from apoplexy. He was *not* drunk.

WATER ANALYSIS.

Our report of the late discussion on water analysis and its contamination by sewage is so long, that our commentary on it must for the present be short. We will only say that no question raised has been clearly answered. Whether sewage be all decomposed in a flowing river, and if so, how soon—whether the danger of polluted water lie in the decomposing sewage, or in certain living germs that resist decomposition—what mode of analysis can be implicitly trusted to for the determination of small quantities of carbon and nitrogen—whether nitrates indicate "previous sewage contamination"—how they reach the waters of chalk wells—are all questions on which the chemists of the day most devoted to these particular researches are at variance. Meanwhile, we know that polluted water does cause disease in the shape of an occasional pestilence; and we are gradually coming to the belief that some of the lesser epidemics, as scarlet fever and typhoid, are propagated in the same way. Then the acknowledged pollution of our rivers, and the acknowledged uncertainty in the means for detecting that pollution, give us an unpleasant feeling of danger.

AN EQUIVOCAL "MEDICINE."

The conduct of a clergyman has just been made the subject of inquiry at Manchester. The charge against him was drunkenness. Evidence was given that, on several occasions, he had been observed "to be not sober." The defence was that, acting under Medical advice, he was in the habit of taking rum and milk, as he was in a weak and nervous state. The charges were dismissed, the judge remarking that it was to be regretted that some "medicine" "less equivocal and equally efficacious" had not been used instead of the rum and milk.

BREACH OF THE LUNACY LAW.

A case of some importance under the Lunacy Act came before the magistrate at Bow-street on Saturday last. The Rev. Mr. Irvine was summoned by the Commissioners of Lunacy under the provisions of the Act 8 and 9 Vict. cap. 100, sect. 90, which prohibits any person (with certain exceptions) from receiving into his house or from taking care or charge of any lunatic or alleged lunatic, without communicating with the Commissioners in Lunacy and obtaining certain certificates and orders. The peculiarity of the case consisted in the fact that the lady patient had resided in Mr. Irvine's house since 1857, and it was not contended that at that time she was suffering from insanity, though unequivocal symptoms of unsound mind developed themselves about September last. She was then subject to delusions and jumped out of a window, breaking both legs. It was argued on the part of the Commissioners that Mr. Irvine should then have communicated at once with them. Evidence was given to show that Mr. Irvine was anxious for her early removal, but was influenced by the fear that removal at that time might injure her, and in this opinion he was fortified by the advice of two Medical gentlemen who attended

her. There was no question raised upon the part of the defence that she was not insane at the time of the accident. This case opens a very important legal question in regard to the custody of lunatics. As we understand it from the reports in the newspapers, the defence substantially rests upon the fact that at the time the lady was admitted into Mr. Irvine's house she was not a lunatic, and "therefore there had been no receiving as a lunatic in the meaning of the Act," and that the lady had been retained by Mr. Irvine in his house as a matter of common humanity after the receipt of the injury and the setting in of delusions. As a matter of course long technical argument took place between the lawyers upon this point. The magistrate, Mr. Flowers, determined, under these circumstances, to send the case to a higher tribunal. It is difficult to overestimate the importance of the question which will be raised probably in the Court of Queen's Bench. We shall watch future proceedings with interest.

UNUSUALLY HIGH RATE OF MORTALITY IN GLASGOW.

Professor Gairdner, in a report just presented to the authorities in Glasgow, directs attention to the unusually high rate of mortality in Glasgow during the first three months of this year, but especially in the month of March. This report is in every way deserving of careful consideration, not only on account of its author's high reputation as a Physician, but also on account of the care with which his conclusions have been tested, for in this respect Dr. Gairdner's report might well be taken as a model. He shows that whereas the mortality during the first three months of 1868 was 3528, in 1869 during the same period the deaths increased to 4613, or nearly 31 per cent. more than in the previous year. He also shows that infants were especially the subjects of the mortality, and that, too, chiefly through the medium of respiratory diseases; but that the mortality was not increased in Aberdeen and Perth, although it was somewhat so in the other large towns, especially Greenock. His reference to the effects of north and north-east winds, especially when loaded with atmospheric impurities, is deserving of every consideration. He also insists on the importance of procuring proper home accommodation for the poorer classes, for, says he, all "else is mere surface work." The following are the formal conclusions of the report:—

"1. That the very remarkable rise in the death-rate above described was due chiefly to causes acting upon the organs of respiration, and upon them chiefly in the form of acute or febrile disease.

"2. That this excess of mortality was very widely diffused in Glasgow, and that no large class or section of the population was altogether, or even nearly, exempt.

"3. That it was not due, in any very strict sense of the words, to local or removable causes—*i.e.*, to ordinary nuisances.

"4. That while zymotic diseases had a share in its production, their share was not specially characteristic; and, particularly, that no one zymotic disease (except perhaps typhus, which usually culminates at this season) was responsible in any considerable degree for the excessive mortality of the month of March.

"5. That, on the whole, and as the result of the widest possible induction, it appears that, *cæteris paribus*, the ill-protected, ill-housed, and generally least comfortable classes suffered most severely; but this generalisation is constantly crossed by others tending to obscure it, and it cannot be regarded as absolutely and definitely proved, though extremely probable.

"6. That the Northern and Western divisions of the city (the latter quite as distinctly as the former) suffered very much out of proportion to the severity of their habitual death-rate, and that the Eastern and Southern divisions suffered less than the Northern and Western.

"7. That while no age was probably exempt, the young fell victims in a much larger proportion than others; and particularly that infants at the earliest ages, and up to five years, suffered in excess, not only from respiratory affections, but also from the allied 'nervous diseases of children.'

"8. That most of the important cities of Scotland have presented more or less distinct traces of an increased mortality during the month of March, probably due in some degree, though with modifications, to the same causes that operated in the case of Glasgow; that none of these towns, however, except Greenock, approached the excessively sudden and general increase of the death-rate observed in Glasgow; and that in Aberdeen and Perth scarcely any trace of such increase can be found.

"9. That it is not wholly improbable that manufacturing vapours, carried by the northerly and easterly winds, may have had a share in giving to Glasgow its unenviable prominence.

"10. But that while the causes of the mortality were probably in part atmospheric, the true sources of the excessive liability of Glasgow to such tides of disease and death are to be sought, not in these comparatively accidental circumstances, but in the permanently acting causes of high death-rates, and especially in the low standard of domestic comfort, the overcrowding, general squalor, and physical degradation which are the unhappy characteristics of a large section of the population; and that these, again, are the direct results of permitting generation after generation to be brought up in houses of the worst construction, in which morality, decency, and cleanliness are alike impossible."

FROM ABROAD.—THE PARIS MUSÉUM A SCHOOL OF AGRICULTURE.—HYDROPHOBIA—PROSTITUTION IN PARIS.

Some sensation, not to say consternation, has taken place among the Paris *savants* at a position which M. Duruy, the ever-active Minister of Public Instruction, has assumed in relation to the teaching of the Muséum d'Histoire Naturelle. That this minister is a man of the best intentions, indomitable courage, and intent upon great improvements, no one doubts, but unfortunately where, as in France, so much is vested in the hands of one man, whether he be emperor, minister of instruction, or préfet of the Seine, crotchets are very likely to be confounded with improvements, and ill-suited agencies put to do incongruous and repulsive work. At the mere *sic jubeo* of M. Duruy the reluctant Faculty has been forced to receive into its school some go-ahead American or English ladies, who pursue their dissections and Hospital studies in company with the students. With these last, it has become a curious matter of observation how far the tact of their fair companions carries them through some of the queer conjunctures in which they become involved; and not a few anecdotes are in circulation illustrating the extent to which the ardent love of knowledge triumphs over the old-fashioned shamefacedness of the "beau sexe." The changes in the organisation of the Muséum were foreshadowed in the speech delivered by M. Duruy at the annual meeting of the French Scientific Societies at the Sorbonne, in which he gave an account of what had been done in the way of improving the arrangements and facilities for superior instruction during the last year, and in which he took a very reasonable pride.

"The Musénm," he observed, "is about to respond to the necessity which is even imposed on science itself of becoming democratic in its applications, still remaining, as regards theory, the domain of the highest intellect. The Professors will continue those labours amidst the highest order of investigations which have conferred so high a renown upon this sanctuary of the sciences; but, at the same time, they will apply themselves with the most scrupulous care to the exposition, and will aim at the solution, of all the problems of life in the vegetable and animal species that are useful to man—searching, in fact, for the most favourable conditions for economic production."

These are fine words for announcing that the resources of the Musénm are to be devoted to the formation of a high school of agriculture, which it seems is in future to be the object of the lectures delivered there on physics, chemistry, zoology, comparative anatomy, etc. The scheme is stoutly opposed by M. Meunier, in *Cosmos*, and other writers, who see the ludicrous inapplicability of so costly a means to the end held in view. "What," says the editor of the *Revue des Cours Scientifiques*, "is to become of instruction at the Muséum under these novel conditions? If it continue as it ought—the investigation of the highest problems of theoretical science, the

instrument of successive progress—the agronomic students will fail to comprehend it, and have no need of it. If it descend to the level of the audience sent to it, it will be but a counterpart of the *Conservatoire des Arts et Métiers*, the one teaching the application of science to the arts and industry, and the other its applications to agriculture. As to science itself, it will no longer retain any place in these courses, as the programme devotes all the lectures to the agronomic students." "It is evident," M. Meunier observes, "that agriculture, which has secured the Minister's favour, and through this the tender interest of the heads of the establishment, will attract all the resources to itself; and that within a short period the reciprocal relations of agriculture and pure science will be reversed, the parasite becoming master, the old proprietor of the house being a mere intruder in his own abode."

In relation to the recent discussion on hydrophobia at the Société des Hôpitaux noticed in our last, M. Bazin related a case that occurred in the practice of M. Gubler, in which, as in one recently published by M. Crequy, the urine of the patient contained sugar. The patient, between 45 and 50 years of age, was brought to the Beaujon the subject of violent delirium, which came on in very frequent paroxysms. His face was congested. He was in a constant state of agitation, and kept constantly spitting. It became necessary to secure him in a strait waistcoat. He was excessively loquacious, the idea of death frequently occurring to him, and in intervals of calm he became melted into tenderness at the thoughts of his family. When any one approached him, his excitement became much greater, diminishing again when they left him. He refused to drink, and had the greatest horror at the sight of fluids. M. Gubler pronounced it a case of hydrophobia, and, as with all his patients, he had the urine examined. Removed by the catheter, it was found highly albuminous, and exhibited a notable proportion of sugar. It was ascertained afterwards that the man had been bitten by a strange dog about four months prior to the symptoms developing themselves. About a month after the bite he became sad and anxious as to the results, but the actual symptoms only appeared two days prior to his admission. It is not meant to attach much importance to the appearance of albumen and sugar in the urine in this case, although any fact concerning so obscure and hopeless a disease is deserving of record. In fact, cerebro-spinal and renal congestion present at the later stage of such a case may well explain their presence; and it is very desirable that the investigation of the urine should be extended to the period of incubation and early stages of the symptoms.

At a meeting of the Academy of Medicine, M. Léon Lefort read a paper on "The Prostitution of Paris in relation to the Propagation of Venereal Diseases." Attached to the Hôpital du Midi from Feb. 1, 1866, to June 30, 1867, he had under his care 1824 cases of venereal disease, besides giving 12,889 consultations to out-patients. Into 4987 of these cases M. Lefort was enabled to make a thorough investigation, and arrived at some interesting conclusions as to the period of incubation and the varieties of chancre, the period of the appearance of orchitis, etc. The present communication, however, deals only with the question of prostitution; and here the author, like all his predecessors, found that, when he had to do with the statements of patients, he had to contend with that inveterate disposition to tell lies which seems to become a second nature with the subjects of syphilis. However, he is quite alive to this peculiarity, and has carefully sifted 4070 cases. He considers them under different heads, according as they were derived from different categories of women, such as kept women, unpaid acquaintances, girls met at dancing-saloons, street-walkers, and registered prostitutes. We need not follow him into the details, but, as a general result, he finds that the chief evil to be struggled against is clandestine prostitution, which furnished 2302 cases out of the 4070. M. Lecœur, too, the head of the "Bureau des Mœurs," states that during the six years 1861-66 of 13,818 women arrested for clandestine prostitution, 3725 were diseased. In 2303 such who were arrested and visited annually there was found 1 case in 3, while in 3850 registered girls there was found during the same period only 1 in 7. Moreover, every registered girl found diseased is at once sent to St. Lazarus, while the clandestine prostitutes continue to infect new customers.

In reference to the regulation of prostitution, M. Lefort states that in August, 1867, the number of registered girls living separately was 2545, and those in tolerated houses (165 in number) were 1306; and M. Lecœur estimates the number of clandestine prostitutes at about 30,000! The number of tolerated houses has diminished from 233 in 1840 to 165 in 1857, and the number of girls attached to them has decreased from 1976 in 1857 to 1306 in 1867, and such decrease is accompanied by a formidable increase of clandestine prostitutes exempt from all sanitary inspection. M. Lefort believes that it would be a good regulation to prevent all prostitutes appearing in the public streets before 11 o'clock at night, as many persons who are now tempted by them would have arrived quietly at their homes.

"The increase of prostitution," M. Lefort observes, "depends upon numerous causes, and raises serious problems of our social economy. On the part of the women, there are the insufficiency of wages, the interdiction by the law of all inquiry as to the paternity of illegitimate children, the passion for luxury, together with the indulgence and even unhealthy sympathy which the literature and the drama of our day exhibit in respect to libertinage and even paid debauchery. On the part of men, there are the forced celibacy imposed by the conscriptions, the delays of all kinds which impede marriage, the relaxation of morals, and, above all, the material and moral transformation of the city, which, long the brain of the world, becomes more and more the mere rendezvous of *nomades* of pleasure."

He observes that, in attempts to restrain clandestine prostitution, the authorities are surrounded with difficulties, as it is not easy to say where libertinage ceases and prostitution begins; and when errors are committed in carrying out the law, public sympathy, which is very indulgent in the matter, becomes roused against it. Even when arrests are legitimately accomplished, and where the offence has been repeated, difficulty may yet await the execution of the law, for most of the prostitutes being minors, parental authority has the power of forbidding their registration. Thus of 13,818 girls apprehended, only 1549 were registered, and 7277 were claimed by their families. This intervention would be a matter of congratulation if it were made with the view of restoring its objects to an honest life; but its sole aim is to prevent their registration, and enable them to continue their life of prostitution without restraint. M. Lefort believes that a change in the law is requisite, which will render the parents pecuniarily responsible in case of their daughters becoming notoriously prostitutes. At all events, no way will be made in checking clandestine prostitution until some means is devised of preventing this mischievous intervention of parental authority. M. Lefort refers to the operation of our Contagious Diseases Act as showing how beneficially police intervention may be brought to bear on prostitution; but it is to be remembered that this Act at present only applies to some towns where there are military garrisons and the most abandoned class of prostitutes. Assuredly it would scarcely do much to check clandestine prostitution if supported, as in France, by the aid of parents.

PARLIAMENTARY.—THE SEWAGE OUTFALL AT BARKING CREEK—PAUPERISM AND VAGRANCY—THE PHARMACY AMENDMENT BILL—THE SEA BIRDS' PRESERVATION BILL.

On Thursday, May 6, in the House of Commons, Mr. Eastwick asked the Secretary of State for the Home Department whether a memorial from the vicar, churchwardens, Medical Practitioners, and other inhabitants of Barking, in the county of Essex, calling attention to the present condition of the river

Thames in consequence of the discharge of sewage through the main outfall sewers of the Metropolitan Board of Works, and praying that the subject of the memorial might be taken into consideration, and that her Majesty's Attorney-General might be instructed to apply to the Court of Chancery for an injunction against the Metropolitan Board of Works to restrain them from discharging the sewage of London into the river Thames, had been presented at the Home-office; and, if so, whether any steps had been or were to be taken in consequence; and whether copies of the memorial in question would be distributed among members.

Mr. Bruce said that a memorial of the nature described by the hon. member had been received by the Home-office, and in consequence an inquiry had been directed to be made into the allegations it contained. When the report was made, it would be for the Home-office to determine what steps should be taken to abate the nuisance if such were proved to exist. There would be no objection to produce the papers if the hon. member would move for them.

On Monday, May 10, a long debate followed Mr. Corrance's motion for a committee of inquiry into the existing state of pauperism and vagrancy in England. In reference to Medical relief, Mr. Corrance suggested that Government assistance should be given under certain circumstances to sick clubs. He was supported by several speakers in recommending that there should be a more general adoption of the principles of the Irish Dispensary system in giving relief.

In the course of the debate, Dr. Lush said that though he could claim no special authority on the subject, he could claim special experience, because for twenty years he had served as a Poor-law Medical officer. He could have wished that the question of vagrancy had not been introduced in this discussion. It did not follow that a vagrant was a pauper, while, as a rule, paupers were not vagrants. The poor of England were very much attached to their own localities. His experience as a Poor-law officer convinced him that the present Poor-law system was unsatisfactory to the Medical officers, the guardians, and the poor themselves. The Medical men employed by unions were very insufficiently remunerated—so insufficiently that the poor thought that services which were so badly paid for could not be worth much. In Ireland £132,000 was spent in Medical relief under the Poor-law Board, while in England the amount was only £272,000. Every man in the Medical Profession expressed dissatisfaction with the present state of things as regarded the English system.

In the sequel, Mr. Corrance withdrew his motion at the request of Mr. Goschen, who urged that the Poor-law Board was fully alive to its responsibilities.

The Pharmacy Act (1868) Amendment Bill, as amended, was considered, and certain amendments were introduced on the motion of Dr. Brewer.

On Tuesday, in the House of Lords, the Sea Birds' Preservation Bill was read a third time and passed.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

The annual meeting of this Society was held at 53, Berners-street, on Wednesday, April 28, Thomas Hammerton, Esq., V.P., in the chair. At the meeting Henry Sterry, Esq., was elected a vice-president, and the following gentlemen directors:—Nathaniel Grant, M.D.; Francis Bisset Hawkins, M.D.; Henry Pye L. Drew, Esq.; Erasmus Wilson, Esq.; James Hinton, Esq.; and Frederick G. Reed, M.D. The statement of accounts read showed a total of £2504 10s. granted in relief during 1868, an increase of £261 over that of the preceding year. At the end of the year 52 widows and 27 children were receiving relief in sums from £50 to £20 per annum for the widows, and from £25 to £5 per annum for the children. During the year six widows and eleven children had been adopted, six widows receiving grants had died, and two children had become ineligible. The Secretary stated that already during the present year applications for assistance had been received from five widows and eighteen children. The meeting was brought to a close by a unanimous vote of thanks to the Court of Directors for their trouble and zeal in managing the affairs of the Society.

REPRESENTATION OF OBSTETRIC PRACTITIONERS IN THE GENERAL MEDICAL COUNCIL.

A deputation from the Obstetrical Society of London waited on her Majesty's Secretary of State for the Home Department, on Tuesday, May 11, to represent the grave defect in the constitution of the General Medical Council, resulting from the want of adequate representation in that body of Obstetric Medicine.

The deputation, which was accompanied by Dr. Lush, M.P., Mr. Finnie, M.P., and Mr. R. N. Fowler, M.P., was introduced by Dr. Lyon Playfair, M.P., and consisted of the President, Dr. Graily Hewitt, and the following members of the Council of the Society:—Drs. Tyler Smith, J. C. Langmore, E. J. Tilt, J. Hall Davis, Robert Barnes, J. Braxton Hicks, G. C. P. Murray, Henry Gervis, A. Meadows, W. S. Playfair, C. Holman, F. C. Cory, and Messrs. J. M. Burton and J. Scott.

Dr. Graily Hewitt said that the Obstetrical Society was a body of gentlemen interested in the cultivation of Obstetric Medicine, numbering nearly 600 members, and including the most eminent Practitioners in this department in Great Britain and the colonies. The Society had been in existence for ten years, and had effected much in furtherance of the cultivation of this branch of Medicine.

Dr. Barnes then directed the attention of the Home Secretary to the memorial presented by the deputation.

Mr. Bruce received the deputation with much courtesy, and expressed his opinion that the matter now brought before his attention was one of great importance, and promised that it should receive his best consideration.

"*Memorial.*

"1. The Obstetrical Society of London begs leave most respectfully to invite the attention of her Majesty's Secretary of State for the Home Department to the grave defect in the constitution of the General Medical Council, resulting from the want of adequate representation in that body of Obstetric Medicine.

"2. The General Medical Council is constituted of seventeen representatives elected by the Universities, the Colleges of Physicians and Surgeons, and the Apothecaries' Societies; by six nominees of the Government; and by a President elected by the Council itself.

"3. Owing to the constitution of the governing bodies of the Universities and Colleges, these bodies have always elected representatives who neither teach nor practise obstetrics.

"4. Amongst the members nominated by the Government there is not one who teaches or practises obstetrics.

"5. The result is that at the present moment the General Medical Council does not contain a single member who has ever been a public teacher of obstetrics, and only two or three members who actually practise obstetrics.

"6. The position and claims of Obstetric Medicine in reference to the examining boards and the licence to practise are very unsettled; the provision of competent midwives for the poorer classes and the public services is in the highest degree unsatisfactory; the encouragement of obstetric science and the regulation of obstetric practice are duties of undeniable importance to the public interest.

"7. Your memorialists submit that these duties can hardly be efficiently discharged to the public interest, or so as to command the confidence of the great bulk of the Medical Profession, by a body from which teachers and practitioners of obstetrics are practically excluded.

"8. Your memorialists therefore earnestly pray that the constitution of the General Medical Council may be so remodelled as to make due provision for the appointment of members conversant with and capable of informing the Council upon matters relating to the science and practice of obstetrics.

(Signed)

"Sir Charles Locock, Bart.	John Braxton Hicks, M.D., F.R.S.
Graily Hewitt, M.D.	J. C. Langmore, M.D.
G. Thompson Gream, M.D.	E. J. Tilt, M.D.
W. Tyler Smith, M.D.	J. Hall Davis, M.D.
T. Spencer Wells, F.R.C.S.	Henry Gervis, M.D.
Thos. W. Nunn, F.R.C.S.	Alfred Meadows, M.D.
G. C. P. Murray, M.D.	C. Holman, M.D.
William Playfair, M.D.	F. C. Cory, M.D.
William O. Priestley, M.D.	J. M. Burton, F.R.C.S.
Henry Oldham, M.D.	J. Scott, F.R.C.S."
Robert Barnes, M.D.	

FOREIGN CORRESPONDENCE.

AUSTRIA.

Vienna, April 12.

A great evil here is the utter absence of anything like a national sport. There is no cricket, no football, no boat-racing, nor any healthful rational amusement for the Austrian youth. On a public holiday a young man spends his time at the cafés, theatres, or casinos. There is no out-door sport, no active game to stimulate the circulation and the vital processes. The only time at which I have seen any display of activity has been at a ball. The Viennese are certainly fond of dancing, but this is an amusement carried on in a hot close room, and any benefit derived from the exercise is more than counteracted by an extra allowance of beer and tobacco. The Austrians seem to feel the cold very acutely. The past winter has been unusually mild, certainly not more severe than our winters in England. Notwithstanding this, I have seen a great many cases of frost-bite in the Krankenhaus—at least seven or eight poor fellows who have lost toes or fingers from this cause. In the year 1867 I find there were twenty-three cases of frost-bite, of which six were fatal. Frost-bite being by no means uncommon, great precautions are taken against cold, and coats and wrappers of enormous thickness are used upon all occasions, but the one great antidote for the evil effects of cold, active employment, seems not to be understood.

The Krankenhaus is one of the largest civil Hospitals in Europe, and there are points concerning the internal management of the same which are not without interest. It is under the supervision of the State, and unfortunately no account is published of the yearly expenditure, so that at present I shall be unable to give any exact details as to the cost per bed, etc. This, however, I hope to be able to do at a future time, as the director has most politely promised to furnish me with a concise account of the receipts and disbursements.

In the first place no patient is admitted unless he or his friends or his parish can contribute in some degree to his maintenance while in Hospital. An inhabitant of Vienna pays forty-two kreuzers a day, about ninepence of our money. All other patients pay seventy kreuzers (14d.). There is one wing of the Hospital set apart specially for patients who can afford to pay more. In this department they are received at rates varying from three to one gulden a day, a gulden being about 1s. 8d. of our money. Patients received in this department are provided with private rooms, and are treated with every consideration. This is a great boon. Any stranger falling ill in Vienna may be at once received into this department, and be taken excellent care of till his health be restored, or as long as he continues to pay the required sum. Institutions of this kind are much wanted with us. Private Hospitals here are far more common than in London, and I shall hope to make some remarks on their management and government. Whether they are regarded with favour by the general Practitioner of Vienna is doubtful; they must certainly exercise a bad effect on his yearly receipts. The victualling of the Hospital is conducted on rather a novel plan. It is all put in the hands of a contractor, who is obliged to supply the different articles of diet at a fixed tariff. The tariff is ridiculously low, about one halfpenny or rather less for a bowl of soup, and other things after the same low rate. What kind of beef-tea would the most economical of English cooks supply at a halfpenny a pint? Certainly not the sort one would care to give to an invalid. Perhaps the contractor has taken a hint from the hippophagists, and is furnishing the patients with that highly nourishing broth known as "equine tea." I am told that the victualling is not good. I certainly should not care to drink many ounces of the ordinary *bouillon* supplied to the patients, but then I have not been brought up in Austria, and am consequently not qualified to pass judgment on the articles of Austrian diet, since the old adage holds good everywhere, that "what is one man's meat is another's poison." I may be allowed to add that the contractor drives a very nice carriage and pair of horses. The low diet of the patients consists entirely of bread and broth. The broth is made of flour and meal (a mixture of wheat and rye) roasted in fat, and water. This is the foundation of all the diets, and to this are added meat (generally veal), vegetables, some form of light pudding, and stewed prunes, as occasion requires. Prunes are very cheap here, and they are used in the Krankenhaus quite as one of the ordinary components of the diet. Eggs or milk are very rarely given. As regards stimulants the most common are Vienna beer or *Tisch-wein*, a wine something like an inferior hock. The use of brandy or strong spirit of any kind is quite unknown.

The drugs are supplied in the same way as the food. The dispensary is put in the hands of a contractor, who is bound to supply medicines by tariff. Every prescription paper has columns for figures on the right-hand side. The prescriptions are made up and the price affixed in the dispensary, and the druggists' bills are paid by the direction. I have not been able to find out that they have any "hold" over these contractors. It certainly is a difficult thing to tell the quality of food after it has been cooked, or to decide as to the purity or otherwise of a drug after it has become one of the component parts of a "bottle of physic."

Attached to the Military Hospital or "Josephinum" is a "museum of anatomical and pathological preparations," which is very celebrated at least through Austria, and the praises of which are on the lips of all the inhabitants of Vienna, Medical or otherwise. It has this peculiarity, that it is regarded as one of the sights which every visitor to Vienna ought to see, and to which the laity are freely admitted one day in every week. The preparations are all anatomical, and consist of wax models of the vessels, muscles, and various organs of the body. Some of these models are very meritorious, not so much for their truthfulness and likeness to nature as for the extraordinary care and trouble with which many of the minutest anatomical details have been rendered. Notably amongst these are two life-size models in wax, one showing the distribution of the superficial lymphatics over the entire body, and another giving a view of the abdominal cavity, with the various plexuses of the sympathetic nerve. One cannot help having a suspicion that the modeller has drawn upon his imagination for many of the details here represented, but one is nevertheless filled with wonder at the amount of patience which must have been bestowed on the production of so elaborate a work of art.

It is difficult to see what scientific purpose a museum of this kind serves. The study of anatomy by wax models is, one hopes, obsolete. Certainly this mode of study is not countenanced by the great Vienna Professor, Hyrtl, who will not even allow a woodcut to have a place in his anatomical works, so afraid is he that aids of this kind will serve only to obstruct the only true road to anatomical knowledge—dissection.

Many of the preparations are only worthy of a place in a quack's museum. Among these are models of Venus, some of them with the anterior wall of the abdomen removed; models of the Cæsarian section, models of the generative organs of both sexes, and of all the principal operations in midwifery. For the inspection of these works anybody and everybody is admitted, and one sees groups of youths and boys gathered round the last-mentioned models especially, having a right understanding of nothing that is represented, but gaping, and grinning, and gratifying to the full their vulgar curiosity. The museum is said to be "pathological" as well as "anatomical," but we failed to discover any pathological specimens in the collection.

In England one occasionally hears complaints of the ignorant observations made by the general newspaper press on things Medical. In Austria, even more than in England, the newspapers love to dabble in Medicine. More than this, they occasionally make personal remarks on the operations or doings of this or that professor, and, worse than all, they are by no means scrupulous as to the truth of their assertions, nor do they much care seemingly from what source they gain their information so long as the required paragraph be manufactured. Lately there was a report flying about—an idle report merely—that a certain Doctor in Vienna, while performing an ovariotomy, had accidentally left one of his sponges in the wound, and had sewed it up in the abdominal cavity of his patient, thereby causing her death. The editor of the *Freie Presse* at once gives the report a place in his newspaper, and, thinking it possibly not sufficiently startling as it then stood, he draws upon his imagination, and coolly asserts that Professor Billroth has been leaving sponges in his patient's abdomens! Matters even went so far that an Austrian policeman came to the Professor's Klinik to inquire as to the truth of the slander. I wonder what one of our London or Scotch Surgeons would think if they read an announcement like this in the *Times* some morning. Professor Billroth has written to the editor of the *Freie Presse* asserting his utter ignorance of the whole affair, and declaring his intention of taking legal proceedings against the propagator of the scandal, and since then we have heard no more of the matter.

This great school attracts students from all parts of the world. One meets Russians, Italians, French, and Americans

in large numbers, but at present there are very few representatives of the British schools of Medicine. I believe I am correct in stating that out of the fifteen hundred students in Vienna there is only one man from Scotland and one from London. There are some thirty or forty from America, principally from New York, Boston, and St. Louis. There are, or rather were a short time since, two ladies pursuing their studies in the midwifery department, one a Russian and the other an American. The latter only remains at the present time. The Russian lady gained considerable *kudos* by applying the forceps in a difficult case of labour on two several occasions publicly and before the whole class assembled in the Klinik. I am informed that she delivered her patient in the most masterly manner and with great coolness and self-possession.

There is a Klinik here especially for the instruction of midwives, and at the present time there are some forty young women receiving a systematic and practical training in all the mysteries and duties of the lying-in chamber. A few weeks back a post-mortem examination was made of a case of extra-uterine pregnancy, and amongst the crowd of students collected to witness so rare an occurrence I was not a little surprised to see the midwife who attended the case, and who evinced a most lively interest in all the proceedings. It must not be supposed that women are at all in the ascendant here, or that what it is the fashion to speak of as "woman's rights" receives any recognition in Austria. On the contrary, I fear she is regarded as rather an inferior being than otherwise. It is certain that much hard work and disagreeable drudgery falls to her lot. In all hotels and public buildings one invariably finds a woman in charge of the urinals and water-closets. Women in Austria perform the duties of bricklayers' labourers, and may be seen carrying hods of mortar and baskets of bricks up high ladders. More than this, they actually supply the place of navvies, and dig and wheel barrows of "ballast" almost as nimbly as their lords. They chop wood, they carry water, they offer to black your boots in the street, and perform many other little offices which, according to our English notions, hardly come under the denomination of "woman's work." Perhaps this state of things is unavoidable in a country where it is considered necessary to keep a standing army of 800,000 men! The women here work inordinately hard, while hundreds of idle men are constantly sauntering about in various uniforms, doing nothing at all except perhaps blowing a cloud of bad tobacco smoke.

GENERAL CORRESPONDENCE.

PREVIOUS SEWAGE CONTAMINATION.

LETTER FROM MR. FRANK CLOWES.

[To the Editor of the Medical Times and Gazette.]

SIR,—I was present at the discussion of Dr. Letheby's paper last Saturday (1st inst.) at the meeting of the Metropolitan Association of Medical Officers of Health, my desire to hear the discussion having been excited by reading in your columns Dr. Letheby's paper and the report of the speeches which followed. The main subject brought forward was the use of the term "previous sewage contamination," but the different methods for estimating nitrogenous matters in water were also freely discussed. The operations involved in Dr. Frankland's process were commented on both by Dr. Letheby and many subsequent speakers; but as many gentlemen who addressed the meeting were under the disadvantage of not having practically tested the process, or of having apparently worked without employing very simple but requisite precautions, you will perhaps allow me space to notice briefly some statements made, which, if read by Medical men who do not possess opportunities of practically testing their truth, would certainly produce very false impressions. Experience gained during nearly two years' constant use of the process constitutes my claim to address your readers.

Dr. Letheby states that the process for determining nitrates and nitrites is "tedious and, to some extent, dangerous." If the evaporation of the water be carried on in a draught of air (our usual practice), the whole estimation may be made in about four hours, and by far the larger portion of this time is occupied in evaporation, which requires only occasional attention, and scarcely interferes at all with other operations. I have worked with this process almost daily for weeks together, sometimes completing eight or nine estimations in a day, but I have as yet been quite unconscious of any impending danger, unless, indeed, it be the risk of "salivation;" and that this is only an imaginary one is proved not only by my own experience, but by that of many others who have occasionally been engaged with me. Dr. Letheby does not complain of the results of this process as inaccurate, and I can vouch for their extreme accuracy when attention is paid to the few simple precautions recommended by Dr. Frankland.

It appeared that amongst those who referred to the process for estimating organic carbon and nitrogen, Dr. Tidy was the only speaker who possessed any extensive practical experience, and according to the statements of Drs. Letheby and Tidy, the results obtained by the latter gentleman were both inaccurate and uncertain; but I may state that repeated trials, both with weighed quantities of organic substances and with duplicate analyses of waters, lead me to entertain a very different opinion; indeed, so accurate have been the results obtained, that this method of combustion appears destined to rival, if not to supersede, the old method for determining the quantitative composition of organic bodies. Had I not heard Dr. Tidy's own reference to his experiments, I should have been inclined to doubt his manipulation, but my doubts are now thrown in another direction. Dr. Tidy, apparently, does not duly appreciate the absolute necessity of certain simple precautions enjoined by Dr. Frankland, the more important of which are enumerated in Dr. Letheby's paper, such, for example, as the exclusion during evaporation of dust, soot, and other particles suspended in the atmosphere, the addition of which to the residue might easily increase the organic matter originally present almost indefinitely; also the absence of ammonia from the atmosphere in which the evaporation is carried on; and, we might add, the choice of a vessel whose shape will render the subsequent removal of the residue easy and free from danger of loss (the beaker, apparently used by Dr. Tidy, is most inconvenient). These and many other indispensable precautions, which would naturally suggest themselves when it is remembered with what small quantities of organic matter we are usually dealing, appeared to lose their importance in Dr. Tidy's estimation.

One other statement of Dr. Letheby's claims notice. We are informed that the results of this "uncertain" method are constantly employed by Dr. Frankland "for the application of his theory as to previous sewage contamination." Perhaps it will afford some satisfaction to Dr. Letheby, if not to others, to be informed that this process is never concerned in the estimation of "previous sewage contamination," but that the numbers appearing under that column are always calculated from the results of two processes which Dr. Letheby is good enough not to consider as "uncertain;" these are Nessler's process for the estimation of ammonia—used continually in Dr. Letheby's laboratory—and the method of determining nitric acid which has been noticed above.

I must, in conclusion, state my regret that Dr. Letheby could allow himself, in a purely scientific discussion, to employ language in reference to Dr. Frankland and his process which he will feel, I trust, on reconsideration, to have been scarcely applicable to a gentleman of Dr. Frankland's position and character. I am, &c. FRANK CLOWES.

15, Cornwall-place, Holloway, N., May 5.

NEW REMEDIES.

CAPSULES OF COPAIBA AND TURPENTINE.

THE efficacy of turpentine in cases of chronic gonorrhœa and gleet is well known, but its utility depends upon its combination with copaiba, in which form it has been extensively used by Mr. Henry Smith, both in King's College Hospital and in private practice. One of the great objections to the medicine consists in the nauseous taste of the compound, which, however well disguised by essential oils and tinctures, can neither be swallowed nor retained by some persons. To meet this difficulty Messrs. Savory and Moore have prepared some gelatinous capsules, exactly like ordinary copaiba capsules in size and shape. Each capsule contains five minims of balsam of copaiba, and three minims of oil of turpentine. Thus, by taking three or four capsules, the ordinary dose of turpentine—ten to twelve minims—is exhibited, and of course the medicine is perfectly tasteless.

A NEW Lunatic Asylum is to be built at Whittingham to accommodate 1000 patients, at an estimated expense of £120,000.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, APRIL 7, 1869.

Dr. GRAILY HEWITT, President, in the Chair.

Mr. C. T. AVELING was elected a Fellow of the Society.

Mr. SPENCER WELLS exhibited a Fibroid out-growth from the Fundus Uteri. The specimen, which weighed 34 lbs. 10 oz., he had removed a few hours before the meeting from a single woman 36 years old. Eleven years before, half her lower jaw had been removed with a fibrous tumour by Mr. Pemberton, of Birmingham. An abdominal tumour was discovered five years ago; it enlarged gradually, and she was twice in the Birmingham Hospital. During the last six months the tumour had increased rapidly, and she became very weak and lost flesh. On admission to the Samaritan Hospital, a very large tumour was discovered, which evidently contained no cyst large enough to warrant tapping, but which did not feel so hard as fibroid tumour of the uterus. No vascular murmur was audible in it, and it appeared to move quite independently of a uterus of normal size. When the tumour was exposed Mr. Wells was surprised to find that it was not ovarian. It sprang from the posterior surface of the fundus uteri, by a short pedicle. This was secured temporarily by a clamp forceps (which was exhibited), and the tumour was cut away. Some bleeding spots where adhesions had been separated were secured by an acupressure needle, and the clamp was removed. Bleeding vessels were secured by harelip pins and twisted sutures, which also served to fix the bleeding surface to the abdominal wall by transfixion. Mr. Wells promised to make the result of the operation known at a future meeting. The specimen was referred to Dr. Braxton Hicks and Mr. Wells for report.

The PRESIDENT considered this an unusual case. Fibroid tumours of the uterus of large size were usually very hard and dense, and their growth slow.

Mr. WORSHIP exhibited an Ovarian Cyst, which he had removed at the post-mortem examination of a patient who had suffered from ovarian disease for about ten years, succumbing at last after two days' illness to an attack of peritonitis. About a twelvemonth prior to her death she had been tapped, and eleven gallons of viscid chocolate-coloured fluid drawn off. At the post-mortem the cyst was found extensively adherent to the abdominal parietes.

Dr. CORY exhibited a lad aged 11 years on whom he had successfully performed tracheotomy for an attack of croup which had lasted fifty-seven hours, and in which death appeared imminent.

Dr. MEADOWS exhibited several instruments which he had received from Professor Lazarewitch, of Charkoff. Among them was a new hysterophor, which the author stated he had used with great success in cases of prolapsus uteri; also two varieties of intra-uterine stems made of vulcanite: one of these was tubular and perforated, so as to admit of the free escape of the uterine discharges; the other was of a spiral shape, and the advantages claimed for these were that they retained their position well, and at the same time allowed the uterine discharges to find their way down by the spiral grooves. A uterine sound was also exhibited, at the handle end of which was an oval concave plate of bright polished steel, which was intended to serve as a metroscope.

Dr. ROGERS exhibited some drawings of the ovum of an early abortion, and gave particulars of the case. The patient from whose uterus it had been thrown off had been married eight years without becoming pregnant, and had suffered much from dysmenorrhœa, which was ultimately relieved by dilatation and incision of the cervix. This proceeding was soon followed by pregnancy, and the ovum from which these drawings were taken was the result of the first conception. The decidua uteri was of a very irregular shape, with prominent cornua and deeply depressed fundus. To one of the cornua was attached a bundle of papillary appendages, which had evidently occupied the uterine end of the Fallopian tube—an unusual circumstance, as the decidua seldom or never extends into the Fallopian tubes. The other cornu was much smaller and nipple-shaped, without appendages. The outer surface of the decidua was puckered, but smooth, and presented little of the shaggy appearance proper to its normal condition. It was remarkably thick and tough. The inner surface, on the contrary, which is generally smooth, was shaggy with lymphy flocculi. The decidua ovi was thickened and puckered, and irregularly attached to the decidua uteri. The manner in which the walls of the vascular sinuses are reflected over the dendritic villi of the chorion, as first shown by the late Professor Goodsir, was very obvious in some thin sections of the decidual membrane. This patient subsequently again conceived, and was delivered at term of a living child.

Dr. MURRAY exhibited a small intra-uterine fibroid, which he had removed by the single-wire ecraseur.

A paper was read by Mr. HYDE HOUGHTON on a case of Hæmorrhage fatal in forty minutes. The patient, aged 45, was eight months advanced in her sixteenth pregnancy, and, while engaged in hanging bed-curtains, slipped off the chair and fell to the ground. Profuse hæmorrhage from the vagina at once occurred, and before the author could reach her, she had fainted and died. At the post-mortem, the body generally was found well-nourished, but in an exsanguine condition, uterus healthy, membranes not ruptured, placenta attached near the fundus. No trace of coagulum or spot of blood was found in the uterus. The os was occupied by a plug of mucus which was unstained by blood, nor was there any blood in the vagina; the only trace, indeed, of blood that was found was a thin layer gluing the labia together. The author communicated the case to Dr. Greenhalgh, and that gentleman suggested that the hæmorrhage was probably due to a ruptured varix, and was not at all of uterine origin; and in this opinion the author agreed, although at the time of the autopsy the idea had not occurred to him. It was corroborated, moreover, by learning, as he subsequently did, that the patient had suffered from varicose veins of the thigh and vulva.

The PRESIDENT stated that he had seen not long since a case where a varix just within the vulva formed a considerable tumour during pregnancy, and which slight force would have ruptured. Once also after delivery he had seen considerable hæmorrhage from a varix which had been torn during the labour, and the source of the loss was at first by no means obvious.

Mr. SPENCER WELLS and Mr. WORSHIP referred to cases in which they had seen death speedily follow the rupture of a varix in the leg. In Mr. Worship's case death followed within five minutes.

A paper was then read by Dr. JAMES WYNNE, of Guatemala, on an inveterate case of Ulcer of the Cervix Uteri cured by the application of Dr. Richardson's styptic colloid (communicated by Mr. Spencer Wells). After giving a history of the case, and describing the means of cure adopted during a period of three years without avail—these means including careful attention to the general health, and the repeated application locally both of the milder caustics and the more powerful escharotics—the author stated that after reading an account, in one of Dr. Richardson's lectures in the *Medical Times and Gazette*, of the properties of styptic colloid, he thought it might prove useful in this case. He therefore made use of it. Its beneficial effect was manifest from the first, and at the expiration of the third week the ulcer, which had lasted for seven years, during three of which the patient was under his own care, was entirely healed, and the induration of the surrounding tissue sensibly diminished. The general health also began greatly to improve, and ultimately became quite re-established. Since then he had used the styptic colloid in several other cases, and they appeared to recover with more facility than under the ordinary mode of treatment, the time of curation usually being abridged fully one half. In conclusion the author expressed his belief that the styptic colloid exercised a beneficial influence not only by excluding air from the ulcerated surface, but by protecting it from the secretions of the uterus, which were often very irritating in their nature. And from the fact that although the whole effect of the remedy was expended upon the ulcerated surface, it having no power to attack deep-seated tissues, yet the indurated condition of the cervix entirely disappeared, he drew the inference that in these cases the induration is caused by the ulcer, and not the ulcer by the induration.

Dr. MURRAY gave particulars of some cases of uterine ulcer in which he had successfully used the styptic colloid.

Mr. SPENCER WELLS said this paper had been sent to him by Mr. Corbet, our *chargé d'affaires* in Central America, with a note saying that Dr. Wynne has long held a distinguished position in South America. Collodion had long been used with good results at the Samaritan Hospital in cases where the lips of the os uteri were excoriated by irritating secretions from the uterus, so that collodion itself was a good application, but it was probably made better by the addition of tannin.

Dr. WYNN WILLIAMS remarked that while Mr. Wells had

borne testimony to the good effects of collodion *per se* in abrasions of the cervix uteri, he could, in like manner, bear strong testimony to the great benefit to be derived from a spirituous solution of tannic acid (spirit of wine and tannic acid in equal parts). Tannic acid acted not only as an astringent, but as a powerful antiseptic, and therefore the more there was applied over and about the ulcer the better. He stated it as his belief that all the beneficial effects of the styptic colloid were simply due to the solution of tannic acid.

Mr. Collingwood stated that when practising in Morocco he had in some severe cases of ulceration of the cervix used with the best effect a powerful escharotic, formed by saturating dried sulphate of zinc with strong sulphuric acid.

Dr. Routh thought that the ladies of the Harem in Morocco must have uteri very different from the ladies of England to be benefited by such active treatment as that alluded to by the last speaker. Here ulceration of the cervix was looked upon as only a concomitant of a congested or inflammatory state of the uterus or its membrane. Caustics when used, like potassa fusa, were to produce, as it were, a larger sore, which, by discharging copiously, would relieve the congestion. Glycerine was applied in the same way, causing a copious flow of fluid. But usually the uterus was relieved of its congestive state by local depletion, leeches, or scarifications, before caustics were used. In many cases depletion alone sufficed to cure the ulcer. If the uterine inflammation was confined to the mucous lining of the uterus, which, from the excoriating qualities of its secretion, produced ulceration of the os, it sufficed to cure the first affection, and the ulcer would get well with ordinary water ablutions.

The President spoke briefly in reference to the pathology of the so-called cases of ulceration of the cervix. There could be no doubt that the bright, vivid appearance of the lining of the cervix which is often associated with general congestion of the uterus has been frequently mistaken for ulceration. The congestion itself, when causing uterine suffering, was, according to his own experience, associated, in nine cases out of ten, with some noticeable and marked derangement in the shape of the uterus. Necessarily, this view of the matter—and whether or not the case related by Dr. Wynne was of this kind it was impossible to say—would induce a careful scrutiny as to the efficacy of a particular application in the treatment of ulceration of the cervix uteri.

Dr. Rogers read a paper, giving an account of a case of elephantine clitoris, which he had successfully removed by the écraseur.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Adjourned Meeting, Saturday, May 1, 1869.

Dr. Druitt, President, in the Chair.

(*Concluded from page* 505.)

Dr. Paul considered the attack on Dr. Frankland both unprecedented and wholly unfounded. As to the self-purification of rivers, no one doubted or denied the fact; the only question was whether it was always sufficient to remove exerementitious contamination, and render water at all times wholesome. In regard to that question Dr. Letheby was directly at issue with Sir B. Brodie on general grounds, and with Dr. Frankland as to the evidence of fact. Mere discussion of this question would be idle, for it required further observation to decide it. Mr. Hawksley's allegation that the Darwen, Irwell, and Mersey receive frequent accretions of drainage could have no force against Dr. Frankland's observation that, after a flow of ten miles, the amount of organic impurity was little reduced, unless it could be shown that those accretions were much more foul than the river water. Even then we should come back to the main question whether self-purification be sufficient in the case of sewage polluted rivers. Against the bare assertion of Dr. Letheby and Mr. Hawksley that it was so, there was all the observation and experience of at least twenty years' special study of this subject by several commissions appointed for the purpose. Dr. Paul contended that the objections to the mode of ascertaining the previous sewage contamination of water were not based on evidence or sound argument. The assertion that the nitrates might be derived from rain was inconsistent with the well-known amount of nitrates contributed from that source, and the reference to London rain was quite irrelevant. No evidence was offered of there being other sources of nitrates, as asserted by Dr. Letheby. As to the utility of the estimation of previous contamination, Dr. Paul contended that it was at least calculated to give additional significance to the ascertained presence of organic impurity in water, and, though the estimate was liable to some variation, it was the best yet accessible. Dr. Paul also referred to the inconsistency of Dr. Letheby's objection to this estimate, inasmuch as Dr. Letheby had repeatedly pointed out the presence of nitrates in water as being the index of its previous contamination, and of possible danger attending its use; and to the still greater inconsistency between the opinions now expressed by Dr. Letheby and his practice of reporting the amount of nitrates in water, which, if it gave no indication of the prior state of the water, was a superfluous absurdity. After pointing out the inadequacy of the methods hitherto in use for ascertaining the organic impurity of water and the chemical worthlessness of their results, Dr. Paul expressed his opinion that the method introduced by Dr. Frankland was the only one calculated to give positive results as to the amount or nature of such impurity, and that its alleged difficulty was an imaginary objection, entitled to no consideration, unless on the presumption that the chemical examination of water for sanitary purposes must necessarily be performed by a bluuderer. As to the value of such examination, it was for Medical men to decide; but if it were of value, it was imperative that the methods adopted should be capable of giving results that had some meaning and a scientific foundation. Dr. Paul regarded the method introduced by Dr. Frankland as a great advance in this direction that was entitled to respect, and not to be met with the flippant criticism it had received at the hands of Dr. Letheby, who had himself contributed nothing to the improvement of water analysis, but, by adopting Dr. R. A. Smith's and, in part, Dr. Frankland's methods, had merely fed on the produce of the working bees while disparaging their labour, and seeking, like a rude iconoclast, to sweep away all attempts to give a more scientific character to the inquiry. He concluded by referring to Dr. Letheby's mention of the "stump orator" as having a certain fitness, inasmuch as the solemn censure of Dr. Frankland, and the absence of any tangible ground for it, bore the same relation as the sound and emptiness of a drum. Unlike even its subject-matter, the pure water permeated with a modicum of dirt, it was an abyss of shadow without one grain of substance, neither proof, evidence, nor argument—in fact, nothing but what Carlyle regards as being now god of the universe—Vox!

Mr. Lord said they ought to be careful lest dilettantism should carry them away from daily life. He was afraid that chemical analysis was too minute to be practical. If they paid more attention to common sense, and less to scientific analysis, there would be no danger of sense being strangled by science.

Mr. Smee gave his experience of the river Wandle in proof of the doctrine that flowing streams have a purifying power. He ridiculed the idea of Dr. Frankland and the Registrar-General, that where there were nitrates there there must have been previous sewage contamination. There was a place in Chili where there were estimated to be 250,000,000 tons of nitrates; how could this vast amount have come from previous sewage contamination? Then, again, a thunderstorm produced the same effect, and where was the sewage contamination here? And so on in numberless cases. He had repeatedly begged the Registrar-General to suppress these reports, calculated as they were to produce wrong estimates of the facts of the case, and most dangerous to life.

Dr. Voelcker said: During the last few years I have been much engaged with the chemical examination of drainage waters, and have had an excellent opportunity of obtaining samples of water of various degrees of purity from the drains of the experimental fields at Rothamstead Park, upon which Messrs. Lawes and Gilbert grew wheat in continuous succession for more than twenty-five years. Some of the experimental plots were left unmanured for the whole of that period; others were annually dressed with phosphate of lime, common salt, salts of magnesia, and other purely mineral manuring mixtures; still others, in addition to these mineral fertilisers, received sulphate of ammonia or chloride of ammonium in variable quantities; and to one portion of the experimental wheat-field a good dressing, amounting to fifteen tons, of farmyard manure was applied every year. The water percolating through the different sections of the wheat-field and running through the drains was collected at different periods of the year and carefully analysed by me. The results of my analysis are of considerable interest in relation to the exhaustion of the fertility of land, and in several other respects. On the present occasion, however, I shall allude only to a few analytical results which deserve special consideration in a discussion on the physical properties and chemical composition of

potable waters. In the first place, I would observe that most of the drainage waters examined by me were perfectly colourless, and, though coming from cultivated fields, were not contaminated with organic matter to a greater extent than are good drinking waters on an average. Occasionally, however, some of the drainage waters, and more especially the water from the section of the wheat-field, which was annually manured with common dung, was decidedly coloured, and contained more than a desirable amount of organic impurities. Whenever this was the case, I found the amount of nitric acid in the drainage water was inconsiderable in comparison with the amount of nitric acid in some of the drainage waters, which were perfectly colourless and much less contaminated with organic matter. It thus appears that, as long as there is an appreciably large amount of soluble organic matter present in drainage water, nitrates are not formed to any considerable extent during the passage of the water through the soil. Liquid manure, or the dark-coloured drainings from dungheaps, I find, indeed, generally contain no nitrates whatever. If nitrates in water are to be regarded under all circumstances as indications of previous sewage contamination, and if their relative amount in different waters is to be the measure for estimating the relative degrees of such sewage contamination, we are forced to consider a water highly charged with the drainings of dungheaps, or with liquid manure, as free from previous sewage contamination. Such water, however, though it may not show signs of what is assumed to be indicative of previous sewage contamination, contains visibly much unchanged sewage. It appears to me the attention of chemists would be better employed by endeavouring to detect readily actual sewage contamination than by speculating upon the mischief which may be caused by the presence of nitrates in water. In the next place, I would observe that in some of the drainage waters from the wheat field which for the last twenty-five years was left unmanured, I found appreciable quantities of nitric acid, and not merely minute quantities such as occur in rain-water. Again, in the drainage waters from those sections of the field which were dressed with purely mineral fertilising matters, I found invariably nitrates amounting in several instances to several grains in the gallon. The presence of nitrates under these circumstances thus plainly shows that we cannot with propriety connect sewage contamination with the presence of nitrates, for which reason the expression "previous sewage contamination" appears to me objectionable. I beg further to direct attention to the rapid oxidation which ammoniacal salts undergo when they pass in solution through a porous soil. Under these circumstances, I find ammoniacal salts are transformed rapidly into nitrates, which make their appearance in the water running through the drains. In almost every instance in which I analysed the drainage water from those plots of the wheat field which were manured with purely mineral manures, with the addition of ammoniacal salts, I found that the ammonia of these salts, practically speaking, entirely disappeared, and gave rise to nitric acid, which usually passed through the drains in combination with lime. The actual quantities of nitric acid which I found in the drainage waters from those sections of the wheat field which were manured with ammoniacal salts and saline mineral matters varied according to a number of conditions upon which I cannot dwell at this time; but I may observe that I found in many instances more than eight or ten grains, and in some as much as fifteen grains, of nitric acid in drainage waters from the field which for more than twenty-five years had not received a particle of dung or any kind of organic manuring matters. So far from recognising in nitrates, under all circumstances, a source of danger to which people are exposed who drink waters containing nitrates, I am inclined to consider their presence in many instances as a healthy sign, for the colourless condition of a water and the presence of mere traces of organic matter and ammonia, such as occur in most, and I may add in many of the best and most wholesome, spring-waters, together with the simultaneous presence of an appreciable, though not excessive, amount of nitrates, appears to me to indicate that such a water, practically speaking, is free from organic impurities which occur in the surface layers of every cultivated soil. I can fully endorse the remark made by Mr. Smee that the bright and excellent drinking waters which issue from deep chalk springs invariably contain considerable quantities of nitrates, and know, on the other hand, as a matter of frequent personal observation, that surface waters, which are visibly contaminated with sewage, and which no person would like to drink, sometimes do not contain any nitrates, and often mere traces. The facts to which I have referred in my observations, if I am not mistaken, afford conclusive evidence of the rapid transformation of organic impurities into purely inorganic and innocuous matters during the passage of rain-water through a considerable layer of soil, and also that the presence of nitrates in a water, in many instances, affords a good argument against the adoption of the attempted and in many respects highly objectionable "previous sewage contamination theory."

Mr. Heaton remarked that Dr. Letheby had given a formidable list of the difficulties and dangers to which the method of Frankland and Armstrong was liable, but that he seemed to have forgotten that those chemists had tested the accuracy of their method before publishing it by a great number of trial experiments upon pure water containing known quantities of different substances in solution. On examining these trial experiments, he found that both the absolute and percentage errors were very small, the latter never exceeding 5 per cent. in the carbon and (excluding one obviously bad experiment) about 2 per cent. in the nitrogen. Messrs. Wanklyn and Chapman had indeed objected that the absolute error in these experiments was larger than the quantity usually found in waters, but this criticism involved the fallacy of assuming that the absolute error must be the same when the quantities operated on were much smaller than those used in the trial experiments. The percentage error might be the same or even greater, but that was a very different thing. An error of $\frac{1}{100}$ths of a grain in the analysis of 10 grains of common salt would amount to only $\frac{1}{10}$ths per cent. of the true quantity of chlorine, whereas the same error in the analysis of one grain would amount to 2 per cent. It was obvious that if this reasoning held good no analyses of small quantities were worth anything. He criticised in some detail the methods described by Dr. Letheby, and pointed out that although many of them would distinguish between very good and very bad waters, no one of them, nor even all of them together, could be said to give us any positive knowledge of the extent to which a given sample of water was polluted. He objected in particular to the permanganate test as notoriously irregular and untrustworthy in its operation, and could not conceive how Dr. Letheby could determine the organic matter by its means, except by some occult power residing in the two-foot tube by which he tells us he controls the indications of the test. The oxidising power of running water was said by Dr. Letheby to destroy all noxious matters in the course of a short run down a river. Here was a positive statement. How did Dr. Letheby prove it? Was it by the incineration method, the permanganate method, or by the mysterious two-foot tube, or was it by a comparison of the results of all these untrustworthy processes? We knew that poison was thrown into our rivers, but the speaker looked in vain throughout Dr. Letheby's address for any satisfactory evidence that it was destroyed.

Mr. Holland thought the best refutation was to be found in the fact that the people of this, the largest city in the world, were not all dead. He maintained that the Registrar-General was reporting as impurities what were no impurities at all, that running water purified itself sufficiently for all intents and purposes, and that the real danger was from the impurities absorbed by water from the air after it was delivered to us by the companies.

Mr. Rendle spoke of the extreme difficulty of distinguishing between pure and vitiated water, except by keeping it for a time, or by its effects. He thought chemistry on its trial. If it could find out for him what water would produce disease, and what water was harmless, it would materially assist him in his work.

Mr. Wanklyn said that when he began his examination of the London waters he had expected to find them loaded with nitrogenous matters, but he had found them to contain as little as water in many parts of the country. In fact, the result of his experiments led him to pronounce London water to be of average goodness.

Dr. Hewlett spoke of the Eastern rivers, and especially the Ganges, which he had seen loaded with refuse of every kind, and yet it was drunk by the population on its banks. How could this be if the river had not a self-purifying power? He also gave it as his opinion that nitrate of potash does exist where there cannot have been previous sewage contamination.

The President said that the present discussion, with all its fervour, was a mere surface indication of a vast conflict raging beneath, and that was on the question whether London should continue to be supplied by the present companies, or whether a supply of purer water should be sought from Wales or Cumberland, or elsewhere. By them, as Medical Officers of Health, it was a question that ought to be deeply studied; for if, on the one hand, a new supply were necessary, there would be no right to begrudge the

millions it would cost; on the other hand, if not necessary, it would be a most injurious extravagance, for the money might be expended in many other ways—as in building healthy airy streets, in improving the drainage of houses, and in getting rid of the smoke which pollutes our air, and causes, in his opinion, more bad health in one year than the Thames water in ten ordinary years. In approaching this subject, one distinction was needful at starting between the water as delivered by the companies and that which was consumed after having been stored in the common foul butts and cisterns exposed to vapours from sinks and closets. It was not fair to charge on the former the very probable ill results of the latter. Then, as to the water of the water companies. He had for years watched its quality and its effects on the public health, and could not say that in ordinary years he had been able to trace any ill effects to it. When the water was most abundant in mineral and organic impurity, as in the winter and rainy seasons, then diarrhœa was at its lowest; and when in August diarrhœa was at its highest, then the Thames water was purest. Besides, diarrhœa was most fatal to young nurslings, who probably got no raw water, and to old persons, who, if they drank water, were pretty sure to add a good deal of beer and spirits. The faults of the existing water supply were these—that in wet weather it was yellow, nauseous, and disgusting to the sight, for want of sufficient storage and filtration; and there was, worst of all, the uncertainty. He believed fully in the diffusion of cholera over East London in 1866 by the water, and could not but tremble for the result if, during an epidemic season, visitors from the Continent affected with cholera should pour their sewage into the Thames at Windsor, or even at Maidenhead or Guildford. Without doubt the rivers were contaminated with sewage, and the onus lay with the water companies to prove that such contamination was altogether removed before the water was supplied for potable purposes. Unluckily, if the East London alleged cholera epidemic proved nothing else, it proved that companies were not to be trusted. The existing differences between eminent chemists as to the value of different methods of analysis would doubtless vanish with the aid of time and further experiment; meanwhile the public could but be benefited by the fullest and freest discussion.

Dr. Tidy said one thing must be tolerably certain—that chemistry has taken rapid strides of late, for chemists are not merely asked now-a-days to say what is in a thing submitted to them for examination, but they are asked, nay more, they volunteer, an opinion as to what was in a thing, maybe, hundreds of years ago. But this is, after all, the true meaning of the phrase, condemned by nearly all scientific men, "previous sewage contamination"—objectionable on two grounds: firstly, that it is calculated to alarm the public unnecessarily; secondly, that it has no facts to support it. But the method adopted by Dr. Frankland, by which he estimates the present state of the water so far as concerns the organic matter present, is, I consider, most unsatisfactory. The length of time the process requires and the extreme difficulties in manipulation are strong objections to its universal adoption; but beyond this, the results are so uncertain, the same water scarcely ever giving the same amounts of carbon and nitrogen in two experiments, that I fear, rather than unriddling a hitherto chemical riddle, such processes will only place it in a more hopeless state of confusion than ever. I have made a large number of analyses on this plan, and also a large number of experiments on water in which I have placed known quantities of substances, as sugar and urea, and my experience is that not the slightest reliance is to be placed in the process. In many of the experiments I have made, the amount of carbon and nitrogen obtained is greater than the actual quantity present, whilst in others it is considerably less. And if the waters of our companies are to be judged fit or unfit for drinking purposes by the results of Dr. Frankland's process, I feel satisfied it will not be very long before sad disgrace will attach itself to all scientific evidence. Sensationalism is the great curse of the age. You cannot stop it, but it is desirable that it should be confined to the theatre and the novel, and not contaminate official scientific reports. This is not the place to discuss the purely chemical details of the process. We must take care not to be misled by the confined ideas of the pure chemist, but to form a just judgment we must review the mass of facts before us as physiologists and Physicians as well as chemists. Respecting Professor Wanklyn's most original process of distilling the water with an alkaline solution of permanganate of potash, the results, we find, are tolerably constant, and it has this great advantage over Dr. Frankland's combustion process, that it is easily worked. The unsatisfactory results so often complained of by the plan adopted in our own laboratory by Dr. Letheby, of estimating the organic matter by the amount of deoxidation and consequent discoloration of a solution of potassic permanganate, are due mainly, I think, to the discoloration being determined by guess rather than by the test of an actual experiment. Lastly, this is a matter of such grave importance to the comfort and well-being of the community that it demands on the part of chemists and Physicians careful and anxious consideration—above all, never to allow personal feelings to shut our eyes to that broad, dark, black line of separation dividing truth from error and true science from that falsely so called.

Dr. Parker mentioned an instance of water supplied to a public bath into which bathers would not enter.

Mr. Glaisher corroborated the experience of previous speakers as to water being purified by the flow of rivers. He had studied the subject for many years, and he could say positively that they had the purest rainfall in the valley of the Thames that was to be found anywhere. They had only to call on their engineers, and they might have the very best supply without going away from home.

Dr. Letheby, in reply, stated that it was evident from the animated character of the discussion, which had been maintained for the last two meetings, that the subject which he had brought under the notice of the Association was of great public importance; for not only had it received attention from the Medical Officers of Health, who were, perhaps, best able to discuss the sanitary points of the question, but it had also elicited very valuable expressions of opinion from those who were eminent in chemistry, meteorology, geology, hydraulics, and practical engineering. And now, on reviewing the discussion, it appeared to him that there was not much difficulty in replying to those opinions and in summarising them, inasmuch as they were, almost without exception, in singular harmony with the propositions and arguments of his paper—namely, that rivers and running streams possessed remarkably rapid self-purifying powers; that the nitrogenous compounds of water had other sources than previous sewage contamination; and that it was not proper, in dealing with statistical or scientific facts, to overlay them with speculative opinions, and to express them in sensational language. As regards the self-purifying power of streams, there had been but one expression of opinion, Dr. Frankland being entirely alone in the view which he entertains of this matter; and it was really unfortunate for his theory that the illustrations which he had given of the apparently unaltered condition of the rivers Irwell, Mersey, and Darwen, after a flow of ten miles were so completely at variance with it; for, as Mr. Hawksley had shown, from very intimate acquaintance with those rivers, they were receiving a constant accession of sewage and manufacturing refuse along the whole of their course. What, therefore, could have become of these foul matters if they were not appropriated or destroyed, seeing that they were not discoverable in the water? Dr. Letheby stated that a few years ago he made a very circumstantial inspection of these rivers for a matter before Parliament, and he was struck with the enormous quantity of refuse matter discharged into them, and with the rapid disappearance of it. Again, it was evident from Dr. Frankland's reports to the Registrar-General that there was a rapid disappearance of organic and nitrogenous matters in running water, for he has stated, month after month, with regard to the East London water, which is derived from the river Lea, that it shows no previous sewage contamination, notwithstanding that it receives through its tributaries a very large quantity of sewage. He even remarks in every one of his reports that "by gradual oxidation, partly in the pores of the soil, partly in the Thames and its tributaries, and partly in the reservoirs, filters, and conduits of the companies, this sewage contamination had been converted into innocuous inorganic compounds;" and this must be so, or the rivers of England would be absolutely unendurable, and would be a constant source of pestilence. How is it, says Mr. Holland, who has spoken to-night, that the people of this, the largest city in the world, are not all dead, seeing that they drink the so-called polluted water from the valley of the Thames, where hundreds of thousands of people are discharging their refuse into it? Other speakers, as Mr. Hawksley, Mr. Glaisher, Professor Ansted, and Mr. Smee, have made a like reference to the subject, and they have instanced the Trent at Nottingham, where the water is taken for the supply of the city, notwithstanding that it receives the sewage of more than a million and a half of people, and the trade-refuse of some of the largest manufacturing towns in the kingdom—as Stafford, Wolverhampton, Birmingham, Burton, Leicester—and, in short, the sewage and refuse of the whole of the pottery, the colliery, the hardware, and the brewery

districts through which it passes. The same is the case with the Tame at Birmingham, though it has received the refuse and sewage of all the pottery towns above it; and with the Don at Doncaster, notwithstanding that Sheffield and other large towns have drained into it; and with the Avon at Warwick after the sewage and dye stuffs of Coventry; and with the Irwell at Warrington, though it has had in it the sewage of Manchester and other places, and the Calder at Wakefield with its own sewage and that of Halifax; but the most striking example of the self-purifying power of running water was given by Mr. Hewlett, the Medical Officer of Health of Bombay, who spoke of the frightful pollution of the Ganges by refuse of every kind, and yet it was drunk by the population upon its banks. What other conclusion, therefore, can we arrive at, but that running streams possess a wonderfully effective and rapid purifying power? I am charged with not advancing any facts in support of this, but I would ask you if the facts are not overwhelming, and whether they do not go to prove that the opinion which I have advanced is correct—namely, that ordinary sewage mixing with twenty times its volume of good water, and flowing for a distance of ten or twelve miles in a stream abounding with fish and aquatic plants, is wholly destroyed or appropriated, and cannot be recognised by the most searching chemical analysis. It is an inexorable law of nature that organic matter shall not stand idle, but shall be in a state of constant change—that which was sewage or dead and decomposing matter yesterday, is the living tissue of a vegetable to-day, and will be a part of the organised structure of an animal to-morrow. Professor Ansted has very graphically and eloquently described these changes, and has told us of their importance in the economy of nature; for the quantity of organic matter upon the surface of our earth is, geologically speaking, remarkably small, and nothing but its ever-active changes would enable it to perform the great purposes of organic life; and nowhere, perhaps, are these changes so active and incessant as in running water, where the processes of precipitation, putrefaction, oxidation, and organic appropriation are constantly going on. With respect to the second question which I have submitted to you, concerning the possible and probable origin of nitrogenous compounds of water, other than sewage or manure, it appears to me that the speakers have been singularly unanimous. Mr. Smee has directed attention to the nitre beds of Chili, in which the nitrogen is estimated at 250,000,000 tons, and he has asked how they could possibly have arisen from sewage or manure. Dr. Voelcker, the Professor of Agricultural Chemistry, has stated that in his examination of waters flowing from lands in different states of cultivation, he has found remarkably large quantities of nitrates in those which percolate land that has never had any but mineral manures upon it, while those which flow from lands which have received farmyard manure have little or no nitrate in them; and he is so far at issue with Dr. Frankland and the Registrar-General that, instead of regarding the presence of nitrates in water as a bad sign, he looks upon them as a recommendation rather than otherwise. I gather, indeed, from the whole tenor of the discussion of this matter, that no one of authority supports the peculiar views of Dr. Frankland respecting the sewer or manure origin of all the nitrogenous matter of river and well water. A like conclusion appears to me to be arrived at concerning the third question as to the propriety of introducing hypothetical opinions in the record of scientific facts, and of using sensational and exaggerated language in the discussion of them. It is, for example, a pure hypothesis to regard the nitrogenous matter of water as previous sewage or manure contamination, and, as far as I can gather from those who have spoken on the subject, there has been no support given to Dr. Frankland's method of recording the proportions of nitrogen in water as "estimated previous sewage contamination;" on the contrary, it has been disavowed, here and elsewhere, by all the leading authorities on water analysis. I may mention, in proof of this, the names of Dr. Miller, Dr. Odling, Dr. Voelcker, Dr. Angus Smith, Professor Abel, Professor Wanklyn, Mr. Campbell, Mr. Chapman, Mr. Keates, Mr. Spencer, Mr. Smee, and Mr. Holland. It may be said, perhaps, that the expression is only used for comparative purposes, and, this being known, it is harmless; but in my experience I have found it to be very mischievous, and to convey a very false notion in respect of the quality of a water. Only within the last week or so I have known it used in a parliamentary inquiry when describing a sandstone water that could not have had a particle of sewage in it, and where as much as 3500 parts of every gallon of the water was put down as previous sewage contamination. In the case of the Kent water, which is taken from deep chalk wells, and in that from Grays, in Essex, the nitrogen is put down as estimated sewage contamination, and the waters are thus made to appear as the worst of all the metropolitan waters. This naturally alarms the public mind, and has a mischievous tendency. It would, in fact, be just as improper if, in the analysis of bread, or wine, or fruit, the nitrogen were set down as so much previous manure contamination. I have, however, heard nothing in the course of the discussion which justifies such a method of representing facts. In further proof of the injury which is occasioned by this method of description, I may say that it impedes the progress of knowledge, by directing public attention at all times and in all places to the water as the cause of all outbreaks of disease, and thus taking for granted that which has to be proved and inquired into. I hold in my hand a copy of the Registrar-General's opinions on the water question from the year 1854 to the time of the last outbreak of cholera. They have been printed, I believe, by the Registrar-General, and distributed among all those who have had to do with inquiries into the water supply of London; and the obvious tendency of them is to prejudge the whole question, and to influence the minds of persons improperly. I do not think that this is becoming of the Registrar-General; and I am bound to say that his method of dealing with the statistical facts of his department is entirely different from that which is used by the corresponding public functionaries on the Continent. Here is the last monthly return of the statistics relating to the births, deaths, meteorology, water supply, etc., of Paris; and although there is ample statistical information of these subjects, there is not a single word of comment. In conclusion I venture to hope that the results of this public discussion of the subject will be carefully considered by the Registrar-General and by the officers of his department.

The PRESIDENT reminded the meeting that they had been sitting in judgment on the Registrar-General and on Dr. Frankland in their absence, and they must feel conscious that the language used had at times been hardly parliamentary. He proposed a vote of thanks to Dr. Letheby for his valuable paper which had given rise to this important and lengthy discussion, and the meeting closed after a sitting of about three hours and a half.

STATISTICAL SOCIETY.

TUESDAY, APRIL 20.

W. NEWMARCH, ESQ., F.R.S., in the Chair.

THE PLEA OF INSANITY IN CRIMINAL CASES.

(Being the Second Part of Dr. Guy's Paper.)

UNDER this head, Dr. Guy examined the question whether the admission of the plea of insanity in criminal cases encourages crime; and he used for this purpose the facts taken from the Summary Table to be found in the "Judicial Statistics" in the successive volumes from the year 1836 to the year 1867 inclusive in the two columns of that table headed respectively "Acquitted as Insane," and "Found or Declared Insane"—that is to say, acquitted at the trial, or soon after it. These facts were first presented in a tabular form for the thirty-two years comprised in the Reports, in which were shown first for each year the sum of the two classes found insane at or after the trial; then these figures reduced to the uniform standard of 20,000,000, being an approximation to the population of England and Wales, out of which these insane criminals have come; and lastly these figures, thus corrected, grouped in periods of two, four, eight, sixteen, and three years respectively. One fact was patent on the face of every column of this table. The first figure was uniformly larger than the last—in other words, there were more persons found insane, at or after trial, in 1836 than in 1867, in 1836-37 than in 1866-67, in the four years 1836-39 than in the four years 1864-67, in the eight years at the beginning of the series than in the eight years at the end of it, and, again, in every group of three years at the head of the table as compared with the corresponding group at the tail of it. So considerable was the difference that the corrected figures for 1836 were exactly double the corresponding figures for 1867. Another fact which revealed itself with equal clearness was the fluctuating character of the figures of the table, and the absence of any long cycles of increase or decrease. If these fluctuations, with the shortness of the cycles of increase or decrease, and the falling off of the numbers in later years, were taken (as they not unreasonably might be) as reasons for thinking that crime had not been encouraged by

the admission of the plea of insanity, the experienced worker with figures, Dr. Guy stated, would not rest satisfied with this inference, however plausible it might appear at first sight. The fluctuations, and the short cycles of increase or decrease, might possibly be traced to some causes acting at short intervals, and the falling off in numbers which marks the last third of the table might be due to some cause wholly unconnected with the plea of insanity—perhaps some state of things coming into play for the first time at or about the two years 1854-55, or in the very year 1855. Dr. Guy proceeded to try this question by dividing the whole body of crimes into two groups—the first consisting of crimes characterised by passion, violence, and malice, the second by fraud—placing in the first class murder and murderous attempts, manslaughter, assaults, sexual offences, burglary, and arson, with a few others; in the second, larceny, forgery, receiving stolen goods, and several similar offences. Now, while the facts relating to crimes of passion, violence, and malice displayed, on a cursory examination, no remarkable falling off in the figures, the second column, which related to fraudulent offences, showed, for the year 1856, a sudden decline from 15 to 4, followed by low figures subject to considerable fluctuation. The cause of this sudden fall and continuous decline was found in the operation of the Criminal Justice Act (18 and 19 Vict., cap. cxxvi.), which empowered justices of the peace at petty sessions and metropolitan police magistrates to deal summarily with cases of simple larceny where the value of the property stolen does not exceed 5s., and with cases where the value exceeds that amount, the accused pleading guilty. This Act of Parliament came into full operation in the year 1856 (it bears date August 14, 1855), and it was in that year that the fall from 15 to 4 took place. That it was competent to bring about this considerable reduction, was clearly shown by an appeal to the returns, and Dr. Guy showed that the Act had had the effect of sending straight to prison more than a third of those persons who had previously been detained for trial by jury at sessions or assizes under circumstances favourable to the outbreak or detection of insanity, and that this had led to a reduction of cases of insanity among fraudulent offenders from 46 in the three years prior to 1855, to 15 in the three years subsequent to it. But between the figures for the first twenty years comprised in the table, there was a very close resemblance, and in this Dr. Guy recognised a forcible argument in favour of the safety to the public of entertaining the plea of insanity; for among the crimes of violence were to be found all those acquittals on the ground of insanity which most excited the public mind, and gave rise to the most serious misgivings, while the residue consisted wholly of cases in which the public had no cognisance whatever of the fact of insanity having been made the subject of inquiry. In other words, the complete publicity attending the acquittal of such men as McNaughten and Dadd, and such women as Martha Brixey, the escape from the gallows of Oxford and Francis, and from the lash of Lieutenant Pate, seems to have left no mark on the column which registers their cases that is not equally impressed on the column that records the madness of the unnoticed petty thief or practitioner of the many forms of fraud. This inference was found to be borne out by a critical study and examination of the several crimes of violence, passion, and malice—namely, murder, attempts to kill and injure, manslaughter and assaults, rape, and offences *contra naturam*, burglary and arson, with a small number of other malicious offences. The insane criminals who had committed these crimes were found to have increased in number. But it was argued that this increase had not been due to the admission of the plea of insanity and encouragement to crime thence arising, inasmuch as a more marked increase showed itself in respect of the crime of arson, in which the fact of insanity being found at or after trial excites little public interest, than in respect of murder and the crimes allied to it, which, when the plea of insanity is set up, attract to themselves extreme publicity and give rise to lively controversy. It was observable, too, that all the figures exhibited fluctuations scarcely consistent with the notion of encouragement acting either continuously or renewed at short intervals by cases provoking more or less discussion at every fresh session or assize. The paper next proceeded to display in a tabular form the facts relating to the crime of murder, and the plea of insanity, as set up at and after trial, the years being marked in which those cases that had most attracted public attention had occurred. Here, too, the same tendency to increase was apparent. The assumed constant population of twenty millions yielded an increasing number of insane murderers, the increase, when one group of twelve years was compared with another, amounting to about one-fifth. But that this increase, again, was not dependent on encouragement afforded by the acquittal of insane homicides was apparent on the very face of the table, in which were placed opposite the years 1843, 1845, 1855, and 1863 the cases of McNaughten, Brixey, Buranelli, and Townley, notorious trials that gave rise when they occurred to an amount of controversy which must have carried the fact of their acquittal or condemnation into every household in which public affairs are heard or talked of. Now, those who think that to entertain the plea of insanity is to encourage the crime of murder, must suppose the encouragement to take effect on persons either of sound or of unsound mind: if of sound mind, it will show itself by the figures which record the trials for murder; if of unsound mind, by those which record the numbers found insane at or after trial. An increase in the figures for the year following some famous trial would be evidence of encouragement; a decrease would indicate discouragement. But here again the figures were found to give no sort of support to the popular opinion that acquittals or commutations of the sentence of death on the ground of insanity afford encouragement to homicidal acts in the persons of the sane or the insane, while, on the contrary, sentence of death carried into effect would appear to act as a discouragement. Thus every figure in the cases of McNaughten and Townley, who were not hanged, spoke the language of discouragement, and two out of three in the case of Buranelli, who was executed, the language of encouragement, the third figure yielding an uncertain sound. Again, in the case of Martha Brixey, two figures out of three spoke the language of discouragement, where the opposite result would have been in accordance with the theory. Of the four cases there was not one that did not exhibit for the year following the trial, figures in direct opposition to the popular theory; while in one only of the three (the case of Martha Brixey) was there any show of support to it as respects the whole body of criminals tried for murder and murderous assaults; and here the increase was only from 65 in the year of the trial to 68 in the year following, with a slow increase in the two succeeding years. As the four cases which were thus used as tests of the opinion that crime finds encouragement in the plea of insanity were selected prior to any examination of the figures, Dr. Guy thought he might fairly regard them as conclusive, for it was extremely improbable that by the selection and like treatment of cases which produced less public excitement a contrary result would be arrived at. This, then, was a convenient point at which to pause, and express in few words the conclusions which this second part of the inquiry seemed to warrant. They were as follows:—1. That the figures of the "Judicial Statistics" which show the numbers found insane among those brought to trial for all offences would lead to a false inference that insanity had diminished among the population of criminals if we did not take into account the operation of the Criminal Justice Act of 1855, which withdrew upwards of a third of our criminals from the sessions and assizes, and placed them under circumstances unfavourable to the development and recognition of insanity. 2. That after the separation of the large number of fraudulent offences influenced by this Act of Parliament, the number found insane, on or soon after trial for acts of violence, passion, and malice, shows a tendency to increase at the slow rate of three cases in four years; but that this increase is subject to interruptions and fluctuations inconsistent with the idea of encouragement, either acting continuously or renewed year by year by the events of the trials at sessions or assizes. 3. That the interruptions and fluctuations in question are quite as observable in the case of crimes which excite little public interest or discussion as in the case of murders or murderous assaults. 4. That on testing the trials that have excited most public interest, and led to most discussion, by the figures which represent either insane homicides or sane murderers in the year or years immediately following, there are no signs of encouragement where the penalty of death is not inflicted, or of discouragement when it is. 5. That, on the contrary, the figures would seem to justify the inference that neither to the sane nor to the insane does the prospect of long imprisonment or detention for life in a lunatic asylum offer any attraction or temptation, while the punishment of death (perhaps only as formerly inflicted) seems as if it might have exercised a certain attraction or fascination. The rest of Dr. Guy's paper was devoted to an attempt to explain the fluctuations and general tendency to increase in murder and in crimes of violence, passion, and malice; and reasons were assigned for thinking that such periodical excitements of the public mind as elections, and such influential causes of nervous disorder as cholera and other zymotic maladies, were not without their effect upon the figures. The effect of increasing knowledge of insanity among Medical men was also pointed out as still more influential in bringing about an

apparent increase of numbers. In the absence of the tabular statements which formed the framework and scaffold of Dr. Guy's paper, it is not possible to do justice to his treatment of the difficult question which he thus for the first time submitted to the ordeal of the numerical method. For fuller information the reader must needs be referred to the pages of the *Statistical Journal*. The author finished his communication by asking the serious attention of statesmen to the number of imbeciles collected in our convict prisons, or allowed to be at large to the serious injury of the public, and to the proof which he believed that he had given of the safety of admitting the plea of insanity.

A discussion followed the paper, in which Mr. Lumley, Mr. Dudley Baxter, Mr. Bischoff, Dr. Webster, Dr. Balfour, and others took part. Dr. Guy then replied, and thanks were voted to him in the usual manner.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen passed their primary examinations in anatomy and physiology at a meeting of the Court of Examiners on the 11th inst., and, when eligible, will be admitted to the pass examination :—

Adams, Robert, of University College.
Barnes, Edwin, of St. Bartholomew's Hospital.
Barnes, J. J., of the Manchester School.
Bullpit, James, of the London Hospital.
Charlesworth, C. S., of the Leeds School.
Cheyne, G. E., of St. Bartholomew's Hospital.
Cowan, John A., of the Edinburgh School.
Dove, W. W., of St. Bartholomew's Hospital.
England, A. J., of University College.
Firminger, E. A., of St. Bartholomew's Hospital.
Grimes, Charles, of St. Bartholomew's Hospital.
Hibberd, H. J., of Guy's Hospital.
Kelly, M. J., of the Dublin School.
Kemmis, H. M., of the Dublin School.
Lammiman, Cleland, of St. Bartholomew's Hospital.
Lee, Edmund, of the Manchester School.
Mainwaring, J. G., of the Birmingham School.
More, J. H., of the Manchester School.
Parker, R. W., of St. Thomas's and the London Hospitals.
Parkinson, E. T., of the Manchester School.
Penkivil, J. H. T., of St. Bartholomew's Hospital.
Purcell, J. G., of the Dublin and Manchester Schools.
Ticehurst, C. S., of Guy's Hospital.
Tubb, Benjamin, of Guy's Hospital.
Waddy, H. E., of Guy's Hospital.
Weatherhead, J. F., of St. Bartholomew's Hospital.
Younger, E. G., of Guy's Hospital.

The following passed on the 12th inst. :—

Beadwell, G. D., of St. Bartholomew's Hospital.
Berry, George, of St. Thomas's Hospital.
Cole, G. M., of St. Mary's Hospital.
Doyle, Jeremiah, of Dublin.
Gabb, J. E., of St. Bartholomew's Hospital.
Gibbs, Robert, of St. Bartholomew's Hospital.
Higgins, W. H., of Edinburgh.
Hutchings, R. H., of Guy's Hospital.
Jones, H. T., of Dublin.
M'Brien, W. F., of Toronto.
Owen, A. J., of St. Bartholomew's Hospital.
Phillips, S. R., of the Westminster Hospital.
Rodwell, T. H. B., of Guy's Hospital.
Saunders, H. J., of Dublin.
Scoresby-Jackson, T., of Edinburgh.
Terry, W. F., of New York.
Tomlins, James, of Manchester.

It is stated that fourteen out of the fifty-eight candidates examined on the 11th and 12th inst. failed to acquit themselves to the satisfaction of the Court, and were referred for three months' further anatomical study.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, May 6, 1869 :—

Anderson, Richard Benjamin, Theddlethorpe.
Cuffe, Alfred Gordon, Haverstock-hill.
Haynes, Horace Eyre, Evesham.
Lucas, Robert Harry, Burwell, Cambs.

As Assistants in compounding and dispensing medicines :—

Goodwin, Felix, Crowland, Lincolnshire.
Gudgeon, Fredk. George, Kimbolton, Hunts.
Ward, John Slinger, Stockton-on-Tees.

The following gentlemen also, on the same day, passed their First Examination :—

Allen, Matthew Septimus, Birmingham General Hospital.
Allwork, Charles, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Gooch, James Wyard, M.R.C.S.E.—Assistant to the Visiting Surgeon at Windsor under the Contagious Diseases Act.

Patrick, R., M.R.C.S.E., etc.—Honorary Medical Officer to the Bolton Infirmary, *vice* Dr. J. Livy, resigned.

Payne, Joseph Frank, M.B. Oxon.—Assistant-Physician to the Hospital for Sick Children.

NAVAL AND MILITARY APPOINTMENTS.

Admiralty.—William London Gordon, M.D., has been promoted to the rank of Staff-Surgeon in her Majesty's fleet, with seniority of April 17, 1869; Edward B. Broster, Assistant-Surgeon, to the *Fisgard*.

48th Foot.—Staff Surgeon William Robert Burkitt to be Surgeon, *vice* Rowland Wimburn Carter, appointed to the Staff.

Medical Department.—Surgeon Rowland Wimburn Carter, from the 48th Foot, to be Staff Surgeon, *vice* William Robert Burkitt, appointed to the 48th Foot. The resignation of Staff Assistant-Surgeon John Holden Webb to bear date March 18, 1869, and not April 17, 1869, as stated in the *Gazette* of the 16th ult.

BIRTHS.

Dickinson.—On May 10, the wife of W. H. Dickinson, M.D., of a son.

Evans.—On May 8, at Dyffryn Ceri, Newcastle Emlyn, the wife of T. Evans, M.R.C.S., L.S.A., of a son.

McConville.—On May 5, at 27, Elmbank-place, Glasgow, the wife of John McConville, M.D., of a daughter.

MARRIAGES.

Gillespie—Freeth.—On April 3, at St. Paul's, St. Helena, Franklin Gillespie, M.D., Staff Assistant-Surgeon, to Harriet Eliza Phillis, only daughter of Colonel Sampson Freeth, Royal Engineers.

Milligan—Gibson.—On April 29, at the church, Constitution-road, Dundee, Wyndham C. A. Milligan, Esq., of Liverpool, to Margaret Whitson, youngest daughter of William Lockhart Gibson, M.D., Dundee.

Watson—Richards.—On May 6, at St. Andrew's Church, Plymouth, James Watson Watson, R.N., to Di, eldest daughter of the late Joseph Richards, Surgeon, of Oxford-terrace, Islington, formerly of Newcastle-street, Strand.

Werry—La Fontaine.—At Smyrna, on April 27, Augustus Werry, M.D. Edin., to Fanny, daughter of Frederick La Fontaine, Esq., Director of the Imperial Ottoman Bank. No cards.

DEATHS.

Girdwood, Gilbert Finlay, M.D., at 19, Howley-place, Paddington, on May 5, in the 68th year of his age.

Glasco, John, M.D., Staff-Surgeon, retired, at Dinan, France, on April 27, in his 87th year.

Harwood, Lucy, widow of William Harwood, M.D., at Upper Norwood, on May 7, aged 75.

Lloyd, Elizabeth Maria, relict of the late William Lloyd, M.D., late of the Madras Army, at Bath, on May 6.

M'Cormick, James Vandersloot, M.D., eldest surviving son of Andrew M'Cormick, Esq., of Air Mount, New Ross, Ireland, at 87, Talbot-road, Bayswater, on May 10, aged 48.

Moscrop, Henry, P. and O. Company's Service, eldest son of the late Henry Moscrop, Surgeon 54th Bengal Native Infantry, at Shanghai, after seven days' illness of typhus fever, on March 12.

Muttlebury, Elizabeth Margaret, widow of the late James Muttlebury, M.D., Inspector-General of Hospitals, and eldest daughter of the late John Rutherford, Esq., of Sue River, in the island of Jamaica.

Simpson, Herbert Willmott, youngest child of Henry Simpson, M.D., Manchester, on May 2, aged fourteen months.

Spencer, John, M.D., at 17, Regent's-park-terrace, on May 4, aged 48.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Carlow Union.—Medical Officer for the Borris Dispensary District. Candidates must possess the qualifications prescribed by the Poor-law Board. Applications and testimonials to the Hon. E. S. Stopford, Borris Lodge, Borris, Kilkenny, on or before the 17th inst. Election on the 18th inst. Personal attendance on the day of election will be required.

Castlebar Union.—Medical Officer for the Castlebar Dispensary District. Candidates must be legally qualified. Applications and testimonials to J. C. Larminie, Esq., Spencer-park, Castlebar, on or before the 15th inst.

Denbighshire Infirmary and Dispensary.—House-Surgeon and Secretary; must be duly qualified, unmarried, and understand the Welsh language. Applications and testimonials to the Chairman of the Committee of Management on or before May 19.

Dingle Union.—Apothecary for the Workhouse and Dingle Dispensary. Candidates must be properly qualified. Applications and testimonials to P. Kennedy, Esq., Clerk at the Union, on or before the 20th inst. Election the same day. Personal attendance will be required.

Faringdon General Dispensary and Lying-in Charity, 17, Bartlett's-buildings, Holborn.—Honorary Surgeon. Applications and testimonials to Mr. S. Green, St. Michael's House, St. Michael's-alley, Cornhill, on or before the 24th inst. Election on June 1.

Hartlepool Hospital.—House-Surgeon and Secretary; must possess both Medical and Surgical qualifications, and be registered. Applications and testimonials to James Rawlings, at the institution, on or before May 18.

Hospital for Women, Soho-square.—Assistant-Physician; must be M.R.C.P.L. and a Graduate in Medicine of some recognised University. Applications and testimonials to the Secretary on or before May 21.

Leamington Provident Dispensary.—Dispenser; a married man without family preferred. Applications and testimonials to the Honorary Secretary, 15, Charlotte-street, Leamington.

Lincoln County Hospital.—Physician; must have a diploma from one of the Universities of Great Britain or Ireland, and be F. or M.R.C.P. Lond., F.R.C.P. Edin., or F.K.Q.C.P. Applications and testimonials to Mr. John William Danby, the Secretary, Lincoln, on or before May 17. Election on May 20.

Metropolitan Free Hospital, Devonshire-square, E.C.—Surgeon; must be F.R.C.S. Applications and testimonials to the Committee on or before May 20.

Mullingar Union.—Medical Officer for the Ballinacargy Dispensary District. Candidates must be legally qualified. Applications and testimonials to James J. Eivers, Esq., Tristernagh Abbey, Ballinacargy, on or before the 22nd inst. Election on the same day.

Newcastle-upon-Tyne Infirmary.—Senior House-Surgeon and Junior House-Surgeon. The Senior House-Surgeon must have both Medical and Surgical qualifications. The Junior House-Surgeon must be duly registered and have one qualification. Applications and testimonials to the Secretary on or before June 22. Election on July 1.

New North Staffordshire Infirmary.—Resident Medical Officer; must have both Medical and Surgical qualifications and be registered. Applications and testimonials to the Secretary at the Infirmary, Etruria, Stoke-on-Trent, on or before the 26th inst. Election on June 3.

North Riding Infirmary, Middlesborough-on-Tees.—House-Surgeon; must be unmarried, and be F. or M.R.C.S., and possess a Medical qualification recognised by the Medical Council. Applications and testimonials to the Secretary on or before June 1. Election on July 1.

Reading Medical Dispensary.—Resident Surgeon; must be duly qualified. Applications and testimonials to the President, at the Institution, on or before May 27.

St. Mary's Hospital and Dispensary for Women and Children, Manchester.—Resident Medical and Surgical Officer; must be M.R.C.S. and L.S.A., or M.R.C.P., and be registered. Applications and testimonials to the Secretary on or before May 20.

St. Pancras and Northern Dispensary.—Honorary Physician; must be M.R.C.P.L., and a Graduate in Medicine of one of the Universities of Great Britain or Ireland, not practising pharmacy. Further particulars on application to the Hon. Secretary, S. S. Higg, Esq., 33, Gordon-street, Gordon-square, W.C.

Sheffield General Infirmary.—House-Surgeon; must be M.R.C.S., or a Licentiate of the Faculty of Physicians and Surgeons of Glasgow, and L.R.C.P.L. Applications and testimonials to J. Kirk, Secretary, on or before May 22. Election on June 2.

Sheffield Public Hospital and Dispensary.—Honorary Physician; must be a graduate in Medicine of a University, or F. or M.R.C.P., not practising Midwifery or Surgery. Applications and testimonials to the Honorary Secretary. Election on May 26.

West London Hospital, Hammersmith.—Dispenser; a Member of the Pharmaceutical Society preferred. Applications and testimonials to the Secretary. Candidates will receive notice requiring their attendance.

Westminster General Dispensary, Gerrard-street, Soho.—Honorary Physician; must be M.D. or M.B. Applications and testimonials to the Secretary on or before May 22.

West Sussex, East Hants, and Chichester Infirmary and Dispensary. House-Surgeon and Secretary; must be M.R.C.S.E. and L.S.A., or L.R.C.P.L., and be registered. Applications and testimonials to the House-Surgeon and Secretary on or before June 1. Election on the 17th.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Altrincham Union.—Mr. C. A. Merriman has resigned the Tabley District; area 14,307; population 5869; salary £60 per annum.

Bellingham Union.—Dr. Pole has resigned the Third District; area 46,209; population 1052; salary £15 per annum.

Durham Union.—The Southern District is vacant.

Hartlepool Union.—Dr. George Kirk has resigned the Stranton District; area 3100; population 13,601; salary £50 per annum.

APPOINTMENTS.

Alston with Garrigill Parish.—George Henry Savage, M.D. Lond., M.R.C.S. Eng., L.R.C.P. Lond., to the Second District.

Beverley Union.—Francis Calvert, M.R.C.S. Eng., L.S.A., L.M., to the Third District.

Cardiff Union.—Richard Lougher, L.R.C.P. Edin., L.S.A., L.F.P. and S. Glas., to the Roath District.

Ely Union.—Charles Thomas Ennals, M.R.C.S. Eng., L.S.A., to the Littleport District.

Halifax Union.—Thomas M. Dolan, M.R.C.S. Edin., M.R.C.P. Edin., L.S.A., to the Workhouse.

Malton Union.—William Young, L.S.A. Lond., Lic. Med. Univ. Dur., M.B. Univ. Dur., M.D. Univ. Dur., M.C. Univ. Dur., to the Norton District.

Poplar Union.—Matthew Brownfield, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., to the Middle District.

St. Ives Union.—William H. D. Menee, M.R.C.S.E., L.S.A., to the Somersham District.

Stepney Union.—Henry Beattie, M.D. St. And., M.R.C.S. Eng., to the Ratcliff, Shadwell, and Wapping District.

Uttoxeter Union.—Robert Earlam, L.R.C.P. Edin., L.F.P. and S. Glas., to the Abbots Bromley District. Henry O. Hawthorne, M.R.C.S. Eng., L.S.A., to the Leigh District.

Whitby Union.—Charles Quinton, M.R.C.S., L.S.A., to the Egton District.

Académie de Médecine.—At the last meeting, Professor Vulpian was elected into the Section of Anatomy and Physiology by the votes of fifty of the seventy-three members who were present.

The President and Council of the Pharmaceutical Society have issued cards for their annual *conversazione*, to be held at the house in Bloomsbury-square on Tuesday, May 18.

Pleuro-pneumonia is said to be spreading amongst the cows in the London dairies. The employment of energetic preventive measures is demanded.

Potted Beef.—A man of the name of George Purdy, a dealer in tripe and potted (!) beef at Birkenhead, has just been sentenced to six weeks' imprisonment and hard labour for "having in his possession meat unfit for human food."

A case of attempted suicide is noticed in the papers at the Clerkenwell Police-court, in which a Swedish gentleman attempted to destroy himself by "cutting the veins of both wrists with a razor on the 29th ult." The case did not terminate fatally.

University College Hospital.—Prince and Princess Christian visited the Hospital on Tuesday. They were received by the Treasurer, Mr. E. Enfield, Mr. Goldsmidt, Sir W. Jenner, and the other members of the Medical staff. The new children's ward attracted much attention.

Presentation of a Testimonial. — The resident officials of the Asylum at Littlemore have presented Mr. Sankey, the superintendent, with a handsome dining-room clock of black marble, inlaid with malachite and gold, surmounted by a chaste figure of Patience.

The Lord Chancellor has granted the Commission of the Peace to Benjamin Barrow, Esq., F.R.C.S., Senior Surgeon to the Isle of Wight Royal Infirmary and Honorary Sanitary Officer to the Borough of Ryde, of which borough he is therefore now a magistrate.

Presentation. — A valuable chronometer has just been presented to Dr. A. C. Chalmers, of Thornhill, in the Vale of Nith, on the occasion of his leaving that district for Sheffield. Mr. Murray, the clergyman of the parish, on presenting the testimonial, said that a sum still greater than that expended on the timepiece was still at the disposal of the committee for Dr. Chalmers's benefit.

Sudden Death on a Railway Platform.—An inquest was held on Wednesday, by Dr. Lankester, on the body of a woman aged 56, who had died suddenly at the railway-station in Farringdon-street. A post-mortem examination revealed fatty disease and displacement of the heart; the left lung was entirely gone. Two hydatids were found "in the left side." It appeared in evidence that the deceased had been much excited in hurrying to catch the train; hence the fatal result.

A community of deaconesses has been formed at Tottenham, where a "Hospital" capable of holding fifty was opened on Saturday last. The duties of the "sisters" will be to attend at the Hospital, nurse the sick in private families under certain conditions, and they will also attend the Ragged School and the Orphans' Home. The institution is supported by voluntary contributions. It is, we believe, unconnected with the Established Church.

Pulverisation of Mineral Water.—M. Sales-Girons states that the mineral waters of Eaux Bonnes, in the Pyrenees, which twelve years since were farmed out at 14,000 francs per annum, at the present time, owing principally to the employment of pulverisation and their consequent greater efficacy and frequentation, are at the present time farmed for 70,000 francs.

The Lynn Poisoning Case.—A lengthened adjourned inquest was held on Wednesday last on the body of the child Charlotte Langford. Evidence was given of the finding, by Dr. Letheby, of strychnia in the stomach. The symptoms under which the child had laboured were those of poisoning by strychnia. Verdict: "Death from strychnia, administered to the deceased by Mary Ann Langford, she then being in an unsound state of mind." The body of Langford, the husband of the prisoner, has been exhumed with the view of examining the contents of the stomach. He died some time since under suspicious circumstances.

Canvassing in the Election of Medical Officers. —At a late meeting of the Town Council of Wigan, on the election of Mr. Rigg to the office of Surgeon to the police force, the following proceedings took place:—The motion that Mr. Rigg be appointed was carried without dissent. Mr. Melling said he proposed to move that in any future vacancy no canvassing be allowed. He thought the canvassing that had taken place about this vacancy had been highly improper. Mr. Woodcock would be very glad if they could carry that out in other matters besides apointments to the Council. No one had ever canvassed him, he was happy to say. Mr. France asked how the resolution was to be enforced. Mr. Woodcock: What

do you call canvassing sufficient to disqualify a candidate? Would sending testimonials be allowed? Mr. Melling: I mean personal canvassing. The motion fell to the ground for want of a seconder. The Mayor: No doubt, after your intimation, Mr. Melling, no one will promise his vote to any candidate till the election.

FREE ADVICE.—In the report of the Royal Manchester Eye Hospital it is stated that "out of 4600 patients newly entered in 1868 full one-half were admitted without tendering any recommendation, against not quite two-fifths of the cases last year. Among the 140 patients who in 1868 made their first appearance at the Hospital with either one or both of their eyes irrecoverably lost, there were fifty in whose cases that loss was of quite recent date, and a number of whom had *spent time in searching for recommendations.*"

UNWONTED LIBERALITY.—We are informed that at a meeting of the Devizes Board of Guardians on Tuesday last it was proposed and unanimously resolved to increase the salary of the Surgeon to the workhouse, G. Waylen, Esq., by the sum of £30 a year, he having held that post for more than twenty years, and never having applied for or obtained any advance of salary since he undertook the duties, though they are now more than double what they were when he first undertook them. Such unwonted generosity on the part of a board of officials is so unprecedented an occurrence that we feel quite justified in recording our approval of the event. We may mention that some members of the board even expressed surprise that Mr. Waylen had never applied for an advance of salary.

A PROVIDENT DISPENSARY has been established in Pimlico. It differs little from institutions of the kind, except that the promoters make this remarkable statement:—"To prevent abuse of the advantages of the institution, only those persons are eligible who are not liable to pay income-tax." As far as we know, this is the first attempt that has been made to draw a line between those who are fit and those who are unfit persons to become members of a so-called self-supporting dispensary. We say this because we observe in the prospectus that it is to be supported by voluntary contributions and the subscriptions of members. Are we, then, to assume that this "provident dispensary" is only partially self-supporting? We object to this half charitable and half independent way of affording Medical relief. Let it be one or the other—either wholly charitable, or entirely dependent upon the subscriptions of members. It is a mistake to call it a provident dispensary so long as it depends in any way upon charitable contributions to enable it to sustain its existence.

POOR-LAW MEDICAL SERVICE.—*Holborn.*—The guardians have appointed a committee to consider the establishment of Dispensaries in the Union. *Darlington.*—Mr. W. H. Arrowsmith has been appointed Medical officer, *vice* Mr. Piper, resigned. *St. Luke's.*—The Poor-law Board agree to a rearrangement of Medical districts. *West Ham.*—The guardians have determined to appoint an additional Medical officer for Plaistow-marsh. *Islington.*—The Poor-law Board have consented to the appointment of four vaccinators, although regretting that the guardians did not appoint one only for the whole parish. Drs. Ducat, Greenwood, and Simpson, and Mr. Harston, district Medical officers, attended to complain of the loss sustained by them in being deprived of the office of vaccinator, and of the manner in which the recent appointments had been made. They contended that the highest number of vaccination returns in the year did not depend upon the diligence of the inspector so much as on the character of the district. The guardians replied that they had come too late. *St. Pancras.*—Dr. Saul has been appointed temporary Medical officer of the workhouse.

CHARING-CROSS HOSPITAL DINNER.—On Wednesday, the 12th inst., a dinner in aid of the funds of this Hospital was held at Willis's Rooms, St. James's. There has been no such festival in connexion with this charity for the last nine years, and, as funds were wanted, especially for enlarging the out-patient department, it was resolved that an effort should thus be made for the above purpose. Mr. W. H. Smith, M.P. for Westminster, kindly consented to take the chair, in which he was supported by the Duke of Wellington and other men of eminence and note. The experiment was in every way a success; one of the largest parties we have ever seen assemble in Willis's Rooms sat down to dinner, in number amounting to nearly 200. From a pecuniary point of view the affair was also very successful, for before the termination of the dinner the treasurer announced subscriptions and contributions to the amount of more than £2500, and this large sum will no doubt be still further supplemented.

HEALTH OF SCOTLAND.—The last quarterly return of the Registrar-General shows that 20,431 deaths were registered in Scotland during the first quarter of 1869, being in the annual proportion of 25·4 deaths in every thousand persons, or 2·54 per cent. The average mortality of the quarter during the ten previous years was 24·9 deaths in the thousand persons, or 2·49 per cent. The death-rate, therefore, has been very high. In England, on the other hand, the mortality of the quarter was below its average, being at the rate of 24·8 deaths in every thousand persons, while the average of the quarter during the ten previous years was 25·3 deaths in every thousand. This fact shows that, though Scotland and England are closely adjoining, weather and other baneful influences act very differently on the health and lives of the inhabitants during the same period of time. The death-rate in the various-sized towns and in the rural districts bore a close relation to the birth-rate in each during the quarter, being highest where the greatest number of human beings were massed together, and lowest in the sparsely inhabited rural districts. Thus, the proportion of deaths during the quarter in every thousand persons of the estimated population was 35·0 deaths in the principal towns, 28·8 deaths in the large towns, 23·8 in the small towns, but only 18·9 deaths in the rural districts. The same fact was shown with regard to each of the eight divisions of Scotland. In the sparsely inhabited Northern division only 16·5 deaths occurred in every thousand persons, but 31·1 in the populous manufacturing and mining South-Western division. Of the eight principal towns, the mortality was highest in Glasgow and lowest in Perth. Thus, for every thousand persons in each town there died in the proportion of 22·3 in Perth, 26·4 in Leith, 27·2 in Aberdeen, 28·1 in Paisley, 32·3 in Edinburgh, 33·4 in Dundee, 35·8 in Greenock, and 39·8 in Glasgow. Of the 20,431 deaths, 6619 were registered in January, 6172 in February, and 7640 in March, being at the rate of 213 deaths daily during January, 220 daily during February, but 247 daily during March.

DR. MARCET, in a paper in the April number of the *Philosophical Journal*, attributes the formation of the falsetto, or head sounds of the human voice, to the vibrations of the edges only of the vocal cords. These cords, he says, are made to vibrate so that there will be a combination of harmonies, the one belonging to the vocal cord as a membrane, the other to the thin edge of the cord as a true cord.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

John Macdonald.—Undoubtedly on the average receipts. The banker's book should be produced.

B.—Apply to W. Powell, Esq., Tenbury. The Tenbury water contains chloride of calcium and small quantities of bromide and iodide, and answers to what used to be called a *deobstruent*.

Humanity.—There is probably some exaggeration and misconception respecting the case of Dr. Von Trautvelter as reported in the Berlin papers. If not, however, surely he could be treated as an offender against the statute laws.

Harvey Memorial.—A subscription has been opened to raise a fund for the memorial window to Harvey in Folkestone Old Church.

Volunteer.—Professor Longmore's treatise on the "Transport of Sick and Wounded Troops," although a Government publication, may be purchased for the small sum of five shillings. It is undoubtedly the best work on the subject. By all means consult it.

M. A. B.—Green copperas contains no copper, but is a sulphate of iron, which on meeting with organic and earthy matters in water and soil, becomes the well-known insoluble rust of iron, and is quite inoffensive. Very likely, after the copperas has been used to disinfect the sewage, it may be detected in a neighbouring well. This would show that the drains are not water-tight, and that the well is liable to sewage contamination, and ought to be shut up.

A Reader.—We believe that the first Medical Practitioner who resorted to the transfusion of blood as a remedial agent in disease was Dr. R. Lower. He died at his house in King-street, Covent-garden, in 1690, of a cold contracted in extinguishing a fire which had broken out in his chamber chimney. His body was carried to Cornwall, and interred in the church St. Tudy, near Bodmin, in which parish he had purchased an estate some years previously. By his will he gave one thousand pounds to St. Bartholomew, five hundred pounds to the French Protestant refugees, five hundred pounds to the Irish Protestant refugees, fifty pounds to the poor of the parish of St. Paul's, Covent Garden, and forty pounds to the poor of the two parishes of Cornwall where he had land.

Wire Spring Speculum.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Can any of your readers inform me who was, or is, Kelley Snowden, whose name appears in German ophthalmic works as the inventor of the spring speculum? When and through what channel was the invention of this instrument first made public? I am, &c.

May 6. J.

The Formation of Nitrates.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In this interesting and important discussion upon the origin of oxidised nitrogen in wells and streams, have the eminent chemists any definite explanation to give of the natural processes in the formation of the nitrates of potash and soda in the plains of Mexico, Peru, India, and other violent thunderstorm latitudes from which those saline products are chiefly obtained for commerce? It is reported that in Mexico the undisturbed surface of large tracts of land becomes hoary with a film of nitrates and nitrites. If so, what is the true chemical explanation thereof? and whence are the bases derived? Also, is sufficient consideration given to the saline incrustation on some stone and brick walls and old cinder heaps? In the two last, the bases of potash, soda and lime, could not, after burning, exist as nitrates. Is an oxidising nitrogenous power in the atmosphere under varying meteorological conditions sufficiently appreciated?

Northampton, May 12. I am, &c. John H. Webster, M.D.

Appeal to the Benevolent.

The widow of a member of our Profession has recently, by the death of her son, been deprived of all means of support. Her husband was for long engaged in active practice in a country district in Norfolk, where he was able to make a certain amount of provision for the future. Through an event over which he had no control, his savings were, however, entirely lost. Her son, also a Surgeon, subsequently maintained his widowed mother and, to a considerable extent, a sister also. The death of this son six months ago has left the widowed lady, now advanced in years, wholly without means of subsistence. Her friends hope to obtain for her a small annuity, and thus qualify her for admission into the Medical Benevolent College, to which they hope subsequently to obtain her election. Believing that the case is one which commends itself to the benevolence of our Profession, we, whose names are undersigned, venture to make this appeal.

We shall be glad to receive donations of money or promises of votes, and shall also be happy privately to give any further information that may be wished.

Edwin Lankester, M.D., F.R.S.
Andrew Clark, M.D., 23, Montagu-place, W.C.
Jonathan Hutchinson, 4, Finsbury-circus, E.C.

COMMUNICATIONS have been received from—

Dr Ogston; Dr. W. D. Moore; Dr. Fairbank; Dr. B. W. Richardson; Dr. Lionel S. Beale; Dr. R. Beveridge; Mr. T. Bayant; Mr. J. Chatto; Dr. Letheby; Mr. Spencer Wells; J.; Dr. Simpson; Dr. J. F. Payne; Mr. H. B. Ingram; Mr. Fowler; Mr. Lawson Tait; Dr. Buss; Mr. W. J. Marsh; Mr. T. Evans; Mr. R. Patrick; Mr. Le Neve Foster; Dr. J. Macdonald; Mr. J. B. Blackett; Dr. J. H. Webster; Dr. Buchanan; Dr. Vinen; Mr. D. Biogar; Dr. Clark; Dr. Lankester; Mr. Hutchinson.

BOOKS RECEIVED—

Report of the Southport Convalescent Hospital—Hankow Medical Mission Hospital Report—Manchester Royal Eye Hospital Report—Longmore on the Transport of Sick and Wounded Troops—Parkes on Hygiene, third edition—Staffordshire Asylum Report—Quarterly Journal of Psychological Medicine, April—Bell on the Antiseptic Use of Carbolic Acid—Transactions of the Obstetrical Society, vol. x.—Smith's Reflections on the Means for Instructing Deaf Mutes—Report of the Health of Glasgow for the First Quarter of 1869—Historical Review on the Origin and Progress of Ovariotomy in Italy—Ringer's Handbook of Therapeutics—American Journal of Medical Science, No. 114—Laycock's Mind and Brain Dublin Quarterly Journal of Medical Science, May—Eclectic Journal and Medical Free Press, Nos. 16 and 17.

NEWSPAPERS RECEIVED—

Indian Medical Gazette—Brighton Times—Oxford Chronicle—North British Daily Mail—New York Medical Gazette—Wigan Observer—Liverpool Mercury—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 8, 1869.

BIRTHS.

Births of Boys, 1063; Girls, 962; Total, 2025.
Average of 10 corresponding weeks, 1858-67, 2032·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	717	704	1421
Average of the ten years 1858-67	658·7	640·2	1298·9
Average corrected to increased population	...	...	1428
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small Pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	...	1	2	1	16	5	5	...
North	618210	...	4	11	...	20	12	3	...
Central	378058	...	6	2	2	9	7	3	...
East	571158	...	5	30	2	17	9	5	...
South	773175	3	5	8	2	29	10	3	...
Total	2803989	3	21	53	7	91	43	19	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·480 in.
Mean temperature	50·5
Highest point of thermometer	67·5
Lowest point of thermometer	33·3
Mean dew-point temperature	46·9
General direction of wind	Variable.
Whole amount of rain in the week	1·28

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 8, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1863.)	Births Registered during the week ending May 8.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending May 8.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3170754	40·7	2025	1462	1421	67·5	33·3	50·5	1·28	129
Bristol (City)	169423	36·1	102	76	*76	63·9	36·1	50·3	1·42	143
Birmingham (Boro')	360846	46·1	175	175	113	63·0	35·2	47·2	2·35	237
Liverpool (Boro')	509052	99·7	343	295	276	60·0	38·0	45·2	1·41	142
Manchester (City)	370892	82·7	234	210	*185	62·2	37·0	47·1	1·48	149
Salford (Borough)	119350	23·1	90	60	58	60·5	37·0	45·2	1·67	169
Sheffield (Borough)	239752	10·5	160	126	117	61·0	31·7	43·9	2·80	283
Bradford (Borough)	138522	21·0	67	71	55	57·2	35·5	43·5	2·22	224
Leeds (Borough)	253110	11·7	130	129	112	59·0	37·0	44·6	2·17	219
Hull (Borough)	126682	35·6	62	59	59	57·0	32·0	40·9	1·72	174
Nwestl-on-Tyne, do.	130503	24·5	84	69	58	50·0	34·0	40·3	1·99	201
Edinburgh (City)	178002	40·2	128	86	103	55·7	30·0	43·2	0·90	91
Glasgow (City)	458937	90·6	342	268	315	54·7	32·5	43·4	0·61	62
Dublin (City and some suburbs)	320762	32·9	145	158	132	54·6	36·5	45·7	2·72	275
Total of 14 large Towns	6546587	35·5	4087	3244	3080	67·5	30·0	45·1	1·77	179
					Week ending May 1.	Week ending May 1.				
Vienna (City)	(1863) 560000	...	...	...	346	...	...	55·6	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·480 in. The barometrical reading decreased from 29·93 in. at the beginning of the week to 29·01 in. on Thursday, May 6.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

May 15. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Metropolitan Association of Medical Officers of Health, 7½ p.m. Dr. B. W. Richardson, F.R.S., "On the Registration of Disease in England."

Royal Institution, 3 p.m. Prof. Seeley, "On Roman History."

17. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

18. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Anthropological Society, 8 p.m. Meeting.

Pathological Society, 8 p.m. Meeting.

Royal Institution, 3 p.m. Prof. Grant, "On Stellar Astronomy."

19. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

20. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Harveian Society, 8 p.m. Mr. A. T. Norton, "What is Pyæmia?"

Royal Institution, 3 p.m. Prof. Tyndall, "On Light."

21. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Royal Institution, 8 p.m. Prof. Jenkin, "Submersion and Recovery of Submarine Cables."

ORIGINAL LECTURES.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, Physician to King's College Hospital, and Professor of Physiology and of Morbid Anatomy in King's College, London.

LECTURE V.

OF NERVE TISSUE — GERMINAL MATTER AND FORMED MATERIAL OF NERVE—NO ENDS TO NERVE FIBRES—ULTIMATE NETWORKS—DIFFERENT KINDS OF NERVE FIBRES — NERVE CENTRES — ACTION OF NERVE FIBRES AND NERVE CELLS—OF MENTAL NERVOUS ACTION.

(*Continued from page 405.*)

OF NERVE ACTION.

It has been generally concluded that the peripheral excitation of a nerve was due to some change taking place in the nerve-fibre itself; and it must be admitted that some of the most recent anatomical observations in Germany favour this view, inasmuch as fine filaments of nerve-fibre destitute of germinal matter are said to ramify amongst the anatomical elements of certain tissues. And these fibres are represented as terminating in free ends, which may reach the surface, and even come into actual contact with anything touching it. But those who describe and figure such fibres amongst the epithelial cells of an epidermic tissue, fail to tell us how they were formed, and how they came into the positions in which they are said to be. Careful observation under most favourable circumstances has forced me to dissent entirely from these conclusions, for in every case in which I have been able to demonstrate the finest nerve-fibres I have succeeded in proving the existence of germinal matter in connexion with them.

There is, however, no doubt that nerve action of a certain kind does take place in nerve fibres alone. In many nerves of the higher animals a considerable length of axis cylinder intervenes between the nerve centre and the peripheral distribution of the nerve-fibres, which is destitute of germinal matter, but which, nevertheless, receives and transmits nervous impressions. So that, although absence of germinal matter from a considerable extent of peripheral nerve-fibre does not justify the conclusion that the nerve-fibre in question is not an active fibre, the mere statement that very fine fibres have been seen amongst epithelial or other cells, and constitute the essential part of the peripheral apparatus, must be received with the greatest caution. Until these supposed nerve-fibres have been actually followed into undoubted nerve-trunks, and the manner in which they were formed has been pointed out, it is not possible to assent to the conclusion that the appearances described are really due to nerves at all. In all tissues of vertebrata in which I have studied the very fine peripheral nerve fibres, I have traced them into undoubted nerve trunks, and I have always detected numerous masses of germinal matter in these fibres, as will be found figured in my drawings. That these masses of germinal matter, which I have shown to be numerous in all ultimate nerve fibres of all nervous organs, besides taking part in the formation of the fibres, are concerned in nervous action, appears to me probable from the following facts:—

1. They are very numerous in the peripheral ramifications of all nerves.

2. All special peripheral nerve organs, as the retina, the expansions of the olfactory and auditory nerves, the papillæ of touch and taste, as well as the peripheral nervous expansions beneath sensitive mucous membranes, the skin, etc., are remarkable for the great number, as well as for the large size, of the masses of germinal matter.

3. The proportion of germinal matter is always very great in nerve centres which there is abundant reason for regarding as the principal seats of development of the nerve power.

4. The principal change which takes place in a texture which in health appears to be but slightly sensitive, and becomes eminently so when inflamed, as the peritoneum, is a very great increase in the germinal matter which it contains, and this often proceeds to such an extent that the ramifications of the nerves appear as lines of masses of germinal matter, so that when a tissue which in the healthy state gives no evidence of sensation becomes acutely painful when inflamed, the feeling of pain must be due in some way to an increase of the germinal matter of the nerves as well as that of other tissues.

From a consideration of the facts we are led to conclude that the nerve-fibre in all cases transmits the nerve-current as a conductor, and that pressure, etc., upon any part of its course will affect the rate of transmission of the current and the conducting property of the fibre.

The nerve-current itself results from changes occurring in the germinal matter or in the substance formed by it, and it is probable that the masses of germinal matter in the peripheral nerve-organs may give origin to nerve-currents as well as those in the nerve-centres. In disease the currents formed at the periphery of the nerves probably undergo an increase in intensity.

With regard to the nature of the nerve-current itself little positive is known, the general opinion of physiologists being that it is some mode of force correlated with heat, electricity, etc., but not exactly identical with any known form of force. The arguments upon which this opinion is based appear to me very inconclusive. Is it reasonable to assume new modes or forms of force? To me it appears that the evidence is strongly in favour of the view that the nerve-current is electricity, and I think that most, if not all, the phenomena familiar to us may be explained upon this view. Some physiologists have sought to account for the wonderful phenomena of the nervous system by supposing that some force or power of a peculiar and exceptional kind is at work, and it seems scarcely to have occurred to them, if ordinary force, as electricity, be made to travel in different directions, and the currents combined in various ways and made to traverse series of conducting cords very differently arranged, according to design, the phenomena may be accounted for without resorting to the hypothesis of the existence of a peculiar mode or form of force not yet discovered.(b)

But if conclusive proof had been afforded that the nerve current was electricity, we should not even in that case have ascertained the whole truth, and, indeed, should have advanced but a little way towards a true explanation of nerve phenomena. For *action* and *work* are due not to force alone, but to the machinery by which the force is conditioned, and this is determined in nerve organs by the arrangement of the fibres and centres—in short, by the form or structure of the nerve apparatus. And this form and structure are the result of a long series of changes of the most complex character, which cannot be fully explained in the present state of our knowledge, but can be proved to be dependent upon the germinal matter; and since it has been shown that the nervous system at an early period consists entirely of germinal matter, and that in the fully developed state there is much germinal matter associated with every part of it, it is obvious that we cannot advance one step towards the explanation until we have determined the nature of the changes occurring in germinal matter.

But unfortunately we are not yet acquainted with the exact *structure* even of the simplest nervous apparatus. We do not know exactly what is essential for nervous action, and the investigation of the ultimate active part of nerve fibres is a matter of the greatest difficulty. How, therefore, can we hope, without an accurate knowledge of the construction of the simplest type of nerve instrument, to learn much about the nature of the work of the most complex nervous apparatus? Is not the kind of work performed by an ordinary machine determined by its construction, and has not every particle of the work done a particular form or character stamped upon it which may be traced, as it were, through the machine to its designer? To say that the work done by any machine is the result of force, is, therefore, but a half truth, —nay, it is not truth at all, for force alone cannot do the work or produce the machine which performs the work. Both the work and the machine exhibit *form*, and this *form* was not derived from force, but from mind, or whatever that may be called which governs, designs, directs. There is no mechanism, animate or inanimate, simple or complex, which has resulted only from the influence of ordinary force; and although it has been asserted that force *formed* and *built* tissues, not the slightest evidence can be advanced in support of this somewhat

(b) Physicists and chemists see no difficulty whatever in assuming the existence of many modes of force of which they can form no conception, and think it very satisfactory to refer phenomena which they cannot understand to some at present undiscovered form or mode of ordinary motion; but if any one attributes these same phenomena to the influence of some equally undiscovered form of force having no connexion whatever with motion, he is ridiculed, because, say the physicists and chemists, "there is but one force in kosmos!"

popular dogma. Force cannot form or build, any more than it can design or originate. Nor will all the energy, authority, and influence the physico-chemical school can bring to bear upon the unlearned succeed in forcing thoughtful and intelligent people to accept such assertions. What strikes one as most wonderful is that any one should maintain that ordinary force can *form*, or has ever *formed*, any mechanism or other thing in this world capable of working or acting.

(*To be concluded.*)

ORIGINAL COMMUNICATIONS.

ON APHASIA AND THE LOCALISATION OF THE FACULTY OF SPEECH.(a)

By FREDERIC BATEMAN, M.D.,
Physician to the Norfolk and Norwich Hospital.

(*Concluded from page* 488.)

It was in 1861 that M. Broca promulgated his theory of the localisation of the faculty of articulate language in the third frontal convolution, and the first case observed by him has been quoted by writers in all parts of the world. The subject of it was a man who, at the age of 30, suddenly and definitely lost his speech, being only able to employ the single word *Tan;* ten years later right hemiplegia ensued. The patient died at the age of 50, and at the autopsy the greater part of the left frontal lobe was softened, and because the loss of substance was most marked in the third left frontal convolution, M. Broca considers that the primary seat of mischief was probably in this convolution, extending from thence gradually to the others, and that this process of disorganisation corresponded to the first stage of the clinical history, during which period the faculty of speech alone was abolished, and it was upon this and upon another case that soon afterwards came under his notice, that M. Broca founded his somewhat startling theory.

Now quite recently a fact has been communicated to me in reference to this very case, which robs it of all its value. The present Professor of Clinical Medicine at the Hôtel-Dieu, M. Béhier, has informed me that this very man was under his observation previous to the period when M. Broca's history of him began, and, on referring to his notes, M. Béhier finds that, at that time, this man had aphasia with *left* hemiplegia. I wish to make this very clear, as it seems to me most important. Here is a case which may be called the foundation case of a new theory, a case which has been published in almost all the languages of Europe as a case of aphasia with right hemiplegia, and it now turns out that at the very onset the paralysis was on the opposite side—in fact, that it was in the first instance a case of aphasia with *left* hemiplegia. Truly one may exclaim, *difficillima est observatio.* At all events, Professor Broca's advocates can get but small comfort from a careful analysis of his own pet case, the very case upon which he has founded his theory.

But I have also formed an opinion upon M. Broca's theory from the consideration of cases observed by myself. Of the cases of aphasia that have fallen under my own immediate observation, a careful autopsy was made in five instances, and the frontal convolutions were invariably found healthy. Time will not allow me to give even the leading features of these cases, although I must crave permission to make a passing allusion to one of them. The subject of it was a waterman, aged 51, who, in the spring of 1865, after having unloaded his vessel, went into a tavern with the intention of asking for some beer, when, to his astonishment and concern, he found he was unable to speak—the power of articulation was suddenly and completely suspended. There had been no previous indication of cerebral disorder, and the loss of speech was not only sudden, but unaccompanied by any other paralytic symptom; for although speechless, he proceeded by train to his home at Norwich, a distance of twenty-two miles, and then walked from the station to his own house, a distance of another mile. At the expiration of three days he could say a few words, and at the end of a fortnight there was a marked improvement in his power of speech. I have given the details of this curious case at great length in the *Journal of Mental Science.* Suffice it to say that some months later he began to lose the memory of words, the aphasia assumed the amnesic form, epileptiform convulsions occurred at intervals of a few months, and the patient lived three years without ever having had any persistent paralytic symptom.

At the autopsy there was found well-marked softening, of the size of an apricot, in the left posterior lobe, the same condition existing, although to a less extent and degree, on the opposite side. The central ganglia were healthy, as were the anterior lobes, the frontal convolutions being examined with great care, but no trace of disease was discoverable.

The defenders of Broca's theory will charitably say that there may have been some slight disease of the frontal convolutions, not patent to my means of investigation. This is an objection that may be raised against all negative cases; but, granted that there may have been some slight change in the texture of the left third frontal convolution not appreciable to my senses, the whole history of this case points to the certain conclusion that the *fons et origo mali* was in the posterior lobes, and here must have been the commencement of disease when three years ago the first and only morbid symptom showed itself in the total suspension of the faculty of articulate language.

It will be observed that I have hitherto considered this question solely from a pathological stand-point, but it seems to me that the physiologist and the comparative anatomist can do us good service, and that it is from their researches, perhaps even more than from those of the clinical Physician, that we are to look for the removal of the cloud which now envelopes the obscure subject of the localisation of the faculty of speech. What does physiology say to Dax's theory, which has in its favour the undoubted frequency of aphasia with right hemiplegia, as compared with loss of speech as an accompaniment of sinistral paralysis? This may be explained possibly by the anatomical difference between the origin of the right and left carotids, making the supply of blood to the left side of the brain more direct than that to the opposite hemisphere. As a cognate question, I would ask, why are we right-handed? Is the human race right-handed by mere accident? Although there are a few left-handed people in the world, the immense majority of persons use the right hand for every mechanical act. Is this a question of education or of mere imitation? If we concede this, we must admit that our ancestors in remote ages must have been influenced in their choice by some cause connected with the organisation itself. If it were a mere chance that had determined the choice of the right hand, we should find some left-handed people in certain parts of the world, which I believe I am right in stating is not the case. Besides, this question may be set at rest, says M. Broca, by the consideration that, notwithstanding all their efforts to counteract it, there are left-handed people who remain left-handed, and one must in their case admit the existence of an inverse organic predisposition, against which imitation, and even education, cannot prevail.

The study of embryology may assist us here. An eminent foreign physiologist, Gratiolet, says, that in the development of the brain the frontal convolutions of the left hemisphere are in advance of those of the right, and that the left are already properly figured whilst the right are not yet even visible. Thus, according to Gratiolet, the left hemisphere, which holds in its dependence the movements of the right limbs, is more precocious in its development than the opposite hemisphere, and thus the young child uses by preference the limbs of which the innervation is the most complete, or, in other words, he becomes right-handed. From the same cause which thus makes us use the left hemisphere for mechanical acts may arise the circumstance of our using it, in preference, for speech, and we thus become left-brained—*gaucher du cerveau*, to use the expression of M. Broca, whose ideas I have just been developing.

But is this theory of the early development of the left frontal convolutions true? Gratiolet says it is. Carl Vogt, an equal authority, denies it. There must be some members here to-night who can speak with authority on this subject, and I suggest it as one of the topics for discussion.

Does the study of comparative anatomy throw any light upon our subject? One of the great distinctions between man and animals is the possession of articulate language. Now, one of the differences between man and the more intelligent animals is the degree of development of the cerebral convolutions. The Rodentia, the least intelligent of the Mammalia, have no convolutions; the Ruminantia, more intelligent than the Rodentia, have convolutions; the Pachydermata, who possess still more intelligence than the Ruminantia, have still more; and so on, the number continuing to increase as we ascend to the Carnivora, then to the apes, the orangs, and

(a) Read before the Medical Society of London, February 1, 1869.

lastly to man, who is the richest of all animals in cerebral convolutions. This gradation in the number of the convolutions undoubtedly has a relation to the intelligence of the animals, and it would seem to give an *à priori* reason for concluding that the highest product of intelligence—speech—may well have some connexion with the development of the convolutional grey matter. It would be extremely interesting to know, and I would suggest it as a subject for inquiry, whether the quasi-articulatory power of the parrot can be explained by any peculiarity in the arrangement of the convex surface of its brain.

Many years ago M. Bouillaud made some very interesting experiments on the brains of pigeons, rabbits, and dogs. One of these consisted in perforating with a gimlet the anterior lobes of a dog, from side to side, at about the part which corresponds to Broca's region. The dog survived this operation, but although he could utter cries of pain, he seemed to have lost the power of barking. Now, whilst fully admitting the want of analogy between the speech of a man and the bark of a dog, experiments of this kind have a remote connexion with our subject, and deserve at all events a passing allusion.

Let us consider for one moment the comparison which Carl Vogt makes between our quadrumanous cousins and ourselves. According to this distinguished naturalist, the apes, as well as the microcephali, have an extremely imperfect development of the third frontal convolution; therefore, he says that as neither the apes nor the microcephali can speak, comparative anatomy gives a subsidiary support to the theory which places the seat of speech in this convolution. Professor Vogt further states that this defect in the third frontal convolution can be traced to a peculiarity in the embryonic development. He compares a fœtus of the mammalia to a bean with a large infero-lateral sinus, corresponding to the island of Reil and the surrounding parts, and he says that in the human fœtus this large space is gradually covered by the rapid growth of the third frontal convolution and by the slow growth of the central folds, whereas in the apes and the microcephali the process is reversed, and this space is filled by the slow growth of the third frontal convolution and the rapid growth of the central folds.

With the view of obtaining some confirmation of Professor Vogt's views as to the arrest of development in the third left frontal convolution of the microcephali, I have consulted Mr. Marshall's extremely interesting paper in the *Philosophical Transactions* for the year 1864, in which he gives a detailed description of the frontal convolutions of a microcephalic woman and boy, neither of whom had possessed the power of articulation. In both these brains the frontal convolutions are described as being singularly short and defective as compared with their wonderfully tortuous and complex character in the perfect brain—in fact, Mr. Marshall adds that they were even far more simple than in the orang's or the chimpanzee's brain. In only one of these microcephalic brains, however, was the want of development most apparent in the third frontal convolution. Further investigations would therefore seem necessary before admitting, with Carl Vogt, that the conformation of the microcephalic brain gives a direct support to the localisation of speech in the third left frontal convolution.

It will be observed that my remarks have hitherto had reference solely to the question of articulate language. But we must not forget that there are other forms of language, such as mimiery, or the language of signs, dactylology, writing, both hieroglyphic and phonetic; and it seems to me that the study of the loss, lesion, or perversion of these other forms of language should not be ignored by those who are engaged in this field of observation. It is not my intention to trespass upon the time of the meeting by entering upon this subject further than to mention a curious case of aphasia with exaggeration of the faculty of mimiery, to which Dr. Auguste Voisin kindly called my attention during a recent visit to La Salpêtrière.

The subject of it was a woman, aged 56, who had right hemiplegia with aphasia, and who, although she never spoke, repeated all that was said. For instance, Dr. Voisin addressed her thus, "Voulez-vous manger?" She said instantly, "Voulez-vous manger?" I then said to her, "Quel âge avez-vous?" She replied, "Quel âge avez-vous?" I then said to her in English, "You are a bad woman." She instantly said, "You are a bad woman." I said, "Sprechen Sie Deutsch?" She retorted, "Sprechen Sie Deutsch?" In the words she thus echoed her articulation was distinct, although the foreign phrases were not repeated by her in quite so intelligible a manner as the French. Not only did this woman echo all that was said, but she imitated every gesture of those around her. One of the pupils made a grimace; she instantly distorted her facial lineaments in precisely the same manner. Another pupil made the peculiar defiant action, common in schoolboys, of putting the thumb to the nose and extending all the fingers, called in French *pied-de-nez;* the patient instantly imitated this elegant performance. Just as we were leaving her bedside a patient in an adjoining bed coughed; the cough was instantly imitated by this human parrot! In fact, this singular old woman repeated everything that was said to her, whether in an interrogative form or not; and that with the most extraordinary exactitude and precision. It would seem that all impressions made upon this patient's optic or acoustic nerves caused a kind of involuntary automatic rebound, if I may use the expression. Perhaps my friend Dr. Hughlings-Jackson, who has written on automatic speech, will favour us with his views of the pathology of this exceptional case.

In conclusion, I would say that I am aware that my remarks may be said to be of an iconoclastic character. I may be told that I have set up the authors of the four popular theories for the mere pleasure of knocking them down, without substituting any theory of my own in their place. In reference to these theories, the truth and value of which I have called in question, it is no fault of mine if the pedestals upon which they stand are rotten. In lieu of offering any hypothesis myself as to where the cerebral centre of speech may be, I would ask, is it certain that there is a cerebral centre for speech at all? May not speech be one of those attributes the comprehension of which is beyond the limits of our finite minds? Does the loss of it necessarily imply organic lesion of structure? The brilliant experiments of our President of freezing the cerebrum of animals, which it has been my privilege to witness, conclusively show that various functions may be completely and temporarily suspended, without leaving any permanent defect, and consequently without any trace of organic mischief; and I confidently predict that the question of the localisation of our different faculties will receive considerable elucidation from Dr. Richardson's valuable researches. May not loss or lesion of speech depend on chemical action, on an altered electrical condition, or some other cause not appreciable to the sense of vision—to the eye—for microscopic examination is only the aided eye? Without doubt there may be changes going on in nerve tissue which escape our means of investigation. I am supported in this view by one of the greatest Continental histologists, Professor Robin, who, in conversing with me about softening of the brain, said that he believed there were changes of structure not revealed by the microscope, but which were patent to the sense of touch.

As a proof that loss of speech does not always depend on lesion of structure, I would mention the fact that its restoration, in several instances, was due to a severe mental shock. We are all familiar with the story in Herodotus of the son of Crœsus, who had never been known to speak, but who, at the siege of Sardis, being overcome with astonishment and terror at seeing the king, his father, in danger of being killed by a Persian soldier, exclaimed aloud, *ὦ ἄνθρωπε, μὴ κτεῖνε Κροῖσον*—"O man, do not kill Crœsus." Herodotus is universally admitted to be a trustworthy historian, but if it be thought far-fetched to illustrate a subject by allusion to a work written 500 years before the Christian era, I need not remind my audience that such cases have been met with by other observers. My friend, Mr. Dunn, has recorded a similar one, and a few months ago I myself was requested by Mr. Allen, of Norwich, to see with him a man who had been in his usual health up to the day preceding my visit, when, during a meal, his wife noticed that all his limbs were shaking, and from this time he became speechless. This suspension of speech was unaccompanied by any symptom of paralysis, and the loss of the faculty of speech continued for six days, when, being asleep on his couch, he suddenly started up, and was heard to say three times, "A man in the river!" From this moment speech was restored, and when I saw him, an hour afterwards, he told me he had dreamed that a man was falling into the river; the mental shock produced by this dream was salutary, for it resuscitated the previously dormant faculty of articulate language.

It seems to me that observations of this kind conclusively prove that loss of speech may depend on certain altered conditions of the nervous system, other than structural disease of the nervous centres themselves.

Practitioners of the healing art are no longer divided, as in the good old days of yore, into solidists and humourists, and I am inclined to think that in our over-anxiety to connect every

disorder, in some way or other, with structural lesion, we are apt to overlook the condition of the fluids of the body, and in corroboration of this view I would refer to the recorded cases of loss of speech from the effect of certain drugs, such as stramonium, belladonna, etc.; also from the introduction into the lymphatic system of a poison from the bite of a snake.

Possibly the discovery of the perivascular canals of His, and of the existence of miliary aneurisms in the minute arteries of the brain, may serve as an element for a better understanding of certain functional disturbances of that organ.

And now, Mr. President, it only remains for me to thank the Society for the courtesy and attention it has conceded to me in my feeble attempt to bring under its notice some of the difficulties with which this obscure subject is surrounded; and in inviting the freest criticism upon anything I may have said, I would deprecate all idea of dogmatically urging my own views upon the Society. I have endeavoured to show that in spite of all that has been said and written about aphasia during the past few years, the question of the localisation of speech must still be considered as *sub judice*, and although I have ventured to call in question the stability of doctrines held by men for whom I have the greatest admiration and esteem, I would say, "Non hypotheses condo, non opiniones vendito; quod vidi, dixi."

NOTES OF A CASE OF URÆMIC CONVULSIONS OCCURRING DURING THE LAST MONTH OF PREGNANCY.—RECOVERY.

By F. R. FAIRBANK, M.D.

M. H., aged 26, single, one of a family which does not bear a good name for chastity. Lives with her mother, with whom she is on good terms. Five years ago gave birth to a child; the labour was natural. She had never suffered from any form of convulsions until the present attack, nor had any other member of the family.

On March 27, 1869, I was requested late in the evening to see her, as she had been suffering during the latter part of the day from fits of convulsions. On arriving at the house I found that, for the previous ten days, she had been suffering from a severe attack of parotiditis, that she was nine months gone in pregnancy, and that she had been exposed to a very cold wind the day before I saw her. She was lying in bed unconscious, with pupils dilated and fixed; breathing easy, tongue much bitten, swollen, and protruding from the mouth; head cool, and lips a natural colour; pulse 70, compressible and irregular. The urine was reported thick and scanty. She had had several fits of convulsions during the afternoon and evening; they came on whenever she was disturbed. She remained unconscious between the attacks, but could be easily partially roused. There were no signs of labour. I ordered a grain of tartar emetic, and five minims of tincture of opium in an ounce of water to be taken every hour, and the feet to be kept in hot water for twenty minutes, also to take plenty of hot tea to induce free action of the skin.

On the next day, March 28, I found her in much the same state as when I last saw her. She had had a severe fit during the night. Pulse 70. Towards evening she passed about twelve ounces of urine, which was very turbid and brown, having much the appearance of *café au lait*. It was imperfectly cleared by heat, then became nearly solid, with a dense deposit of albumen; specific gravity, 1029. Under the microscope it was seen to be loaded with blood-corpuscles, renal epithelium, and a few transparent tubular casts. This was the only urine she had passed during the twenty-four hours, with the exception of a small quantity passed involuntarily during the convulsions. The tartar emetic did not produce sickness; six grains were taken in the manner above mentioned; the quantity was then reduced to half a grain every four hours, and mutton broth was given frequently.

March 29.—Much more conscious. Pulse 65, almost imperceptible at the wrist. Very giddy when raised. Urine passed freely, clear and yellow; specific gravity, 1014. Heat produced a light flocculent cloud of albumen. Ordered bromide of potassium, ten grains; carbonate of ammonia, two and a half grains in an ounce of camphor water every three hours. Also a little wine occasionally.

April 2.—Much improved in strength. Urine still contained albumen, blood-discs, and epithelium; specific gravity, 1012. Had no recollection of having been seriously ill. Movement of the child *in utero* felt frequently.

On April 15 she was safely delivered of a fine healthy male child at 1.30 a.m. The labour was natural. When seen at 11 o'clock the night before, the os uteri was fully dilated and the membranes unruptured, the head presenting. In order to expedite the labour, the head being delayed in the brim of the pelvis, I administered three twenty-minim doses of liquor secalis cornuti, with an interval of a quarter of an hour between each. This speedily had the desired effect, with the result above named.

Convalescence was rapid and complete. The milk began to flow on the third day after delivery. The urine remained albuminous, with a specific gravity 1012, till after the confinement. There was no œdema in this case.

Remarks.—This case is a good example of one form of puerperal convulsions—that resulting from disturbance of the functions of the kidneys. From the history of the case it is probable that this woman had been suffering from albuminuria for some time previously, and that the exposure to cold during the occurrence of a febrile attack brought on acute congestion of the kidneys with suppression of secretion. The convulsions did not recur after the flow of urine was re-established, although it remained albuminous until after parturition. The birth of a live child under such circumstances is, I believe, sufficiently uncommon to be worthy of note.

Lynton, North Devon.

ON THE BEHAVIOUR OF THE WHITE BLOOD-CELLS IN INFLAMMATION IN THE KIDNEYS AND LUNGS.(a)

By Professor AXEL KEY.

Translated from the "Hygiea" for December, 1868, p. 530,

By WILLIAM DANIEL MOORE,

M.D. Dub. et Cantab., M.R.I.A., L.K.Q.C.P.I.,

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Partly by means of local, chemical, or mechanical irritants, partly by the injection of putrefying substances into the blood, I have produced a large number of various pathological changes in the kidneys, from a slight parenchymatous irritation to the most violent suppurative inflammation. At the same time cinnabar injections were thrown into the blood, to enable me to follow the behaviour of the white blood-cells in these processes. I have thus, among other things, succeeded in observing that even in slight irritation, without interstitial changes and without any hæmorrhage, white blood-cells escape from the vessels into the glomeruli, and force their way into the tubes, sometimes one by one, sometimes several together. They are found afterwards in the urine, under the appearance of pus-cells; but not merely from the glomeruli, but also from the capillaries between the tubes, white blood-cells seem capable of travelling into the latter without any accumulation of cells in the interstitial tissue necessarily taking place.

In irritations which produce interstitial changes with cellular infiltration in the interstices, from slighter degrees to actual suppuration, the cellular infiltration depends, at least in the first instance, on the escape of blood-cells from the capillaries and on their accumulation in the interstices. From the interstices the cells may pass through the tunicæ propriæ into the tubes, partly by pressing into or through the epithelium, partly by pushing aside the epithelial cells, and, after the epithelium has been abraded and broken up, they may entirely fill the tubes. The cells which have penetrated into the tubes are not necessarily devoted to destruction. On the contrary, they seem capable of being developed on the walls of the tubes into epithelial cells, and of thus replacing the lost epithelium. So far back as the scientific meeting in Copenhagen in 1860, and subsequently in my essay on the various forms and development of the tube-casts, etc., in the *Medicinskt Archiv*, Bd. I. 1863, I maintained that epithelium destroyed in the renal canals could be regenerated, and that this takes place through elements from the connective tissue. Not only in nephritis in man, but also in the inflammations produced by me in animals, I was able to satisfy myself as to the existence of such an epithelial restitution. As I have now, in my latest experiments, ascertained that the newly formed elements in the

(a) An abridgment of a paper read at the meeting of Natural Philosophers in Christiania in July, 1868.

interstitial connective tissue proceed in the first instance from migrated blood-cells, and as I have, moreover, seen these elements penetrate into the tubes, and there form epithelium, I believe that I am justified in the above conclusion respecting the power of the white blood-cells in this manner also to minister to health. To look upon these types of cells, which have as yet in their partial development lost scarcely any of the characteristic vital properties of protoplasm, under all circumstances as pus-cells so soon as they have left their vessels, is an absurdity, and leads to a false idea of their signification.

At the scientific meeting in 1860, I also showed, in describing the structure of the glomeruli, that on the surface of the latter we often find, in old kidneys, isolated cells which do not represent a permanent epithelium, but, on the contrary, seem to occur occasionally, to be subsequently thrown off and disappear. Of this perfectly correct observation I could not at the time give any other explanation than that the cells occurring on the surface were gradually developed from cell elements in the fine connective tissue which holds together the loops in the glomeruli. But that these cells, which O. Beckmann also observed, are nothing else than migrated white blood-cells, I have now satisfied myself. It seems that they may occur sparingly and pass off with the urine without any proper irritation of the kidneys being present.

In morbid changes in the kidneys, the cells which have migrated from the glomeruli and from the interstices into the tubes, and which resemble pus-cells, may occur in great abundance in the urine, both isolated and forming whole cylinders, without the slightest trace of suppuration or actual pus formation being discoverable in the kidneys.

The pneumonic process was long the subject of my studies without my being able satisfactorily to explain it, until, through Cohnheim's researches, we became aware of the power of the blood-corpuscles to escape out of the vessels. Continued investigations and experiments with cinnabar injection into the blood, while inflammatory processes were produced in the lungs, have principally led to the results which I shall now as briefly as possible communicate.

In inflammation in the vesicular parenchyma (pneumonia) the epithelial cells play throughout no essential part. Even in the first stage of croupy pneumonia, where there is great dilatation of the vessels and accumulation of blood-corpuscles in the capillaries, and while a serous effusion goes on, white and also red blood-corpuscles escape without any hæmorrhage taking place. Apart from accidentally occurring hæmorrhages, the course of the process consists essentially in this—that more and more, especially white blood-corpuscles escape and progressively fill up the alveoli (air-cells.) Even in the second stage, that of red hepatisation, the alveoli are thus filled chiefly with white blood-cells, with red ones in smaller number. Between them is a network of fibrinous filaments. This network may be stronger or slighter. Not unfrequently it is so inconsiderable that it is not apparent until after the cells have been brushed away in hardened preparations, when it is seen in the form of delicate filaments enveloping the cells in its meshes. The lymphoid cells which have migrated into the alveoli, seem to be in a state of progressive subdivision, and may in this manner undoubtedly increase outside the vessels.

Through the continued escape of white blood-cells and their progressive subdivision, the cells in the alveoli are gradually increased, the migrating red blood-corpuscles are decolorised and disappear, and thus arises the third stage, or that of grey hepatisation, while the vascular dilatation is diminished. No new turn of the process occurs, such as, for example, Rindfleisch has lately described. The fresh cell-formation on the walls arises in this stage also, not from pre-existing elements in the walls or from epithelium, but from the migrated blood-corpuscles. These, through their power of motion and through pressure, may alter their shape, spread out, and even assume forms resembling epithelial cells. If the contents of the air-cells be brushed out, the walls in this stage also are so unchanged that any alteration in them is scarcely perceptible. This is rather chemical, expressed by brittleness, than morphological.

Various results may take place. If resolution sets in, the contents of the alveoli are usually drawn together; they separate from the walls, gradually break up, and melt away, while the cellular migration is arrested, or continues for a time in a very slight degree. Resolution then goes on fully and quickly, but if the escape of the cells be not arrested, but continue, a central fusion goes on, indeed, in the contents of the alveoli, but peripherally fresh migrated cells are incessantly deposited on the alveolar walls, or those already deposited there continue to live and subdivide. Resolution is then always protracted. It may subsequently be completed by the peripheral cells being thrown off from the walls and breaking up; but the process may become chronic. The peripheral cells on the alveolar walls (walls of the air-cells) may undergo connective-tissue organisation, and a chronic indurating process may thus go on. The cell formation and connective-tissue change may at the same time either gradually proceed from the periphery in towards the centre of the alveolus, so that the latter is finally replaced by connective tissue, while it is usually diminished in size, or the alveoli are completely filled anew, after resolution has once set in, with migrated embryonal cells. These also grow through the partition walls between the alveoli, and a more or less gradually progressive connective-tissue organisation of the whole contents of the alveoli may at the same time go on, whereby the cells may arrange themselves in rows, running through the neighbouring air-cells quite independently of the alveolar walls. After the connective-tissue formation has been completed, we often find the elastic filaments persistent, and by their arrangement distinctly marking out the original alveoli. A half-organised condition of the cellular deposition in the alveoli may last for a time, and afterwards pass into complete organisation, into breaking up and resolution, or into cheesy metamorphosis.

It would seem as if sometimes the whole original cellular deposition in the alveoli might, without intervening fusion or fresh migration, pass directly from the third stage into organisation and induration. If neither resolution nor organisation occur, but migration and partition of cells go on to a large extent, actual purulent infiltration sets in, with fusion, while the partition walls are gradually perforated and destroyed by the growth of the cells.

The acute or chronic, circumscribed or diffuse, pneumonic process, which usually is the foundation of cheesy metamorphosis, and which is called at one time cheesy, at another catarrhal, at another gelatinous pneumonia, at another diffuse tubercular infiltration, and for which I should wish, with a certain limitation, to retain the name gelatinous pneumonia, depends not, as is generally supposed, and as is stated even in the most recent works, upon epithelial proliferation, but also on the exudation and subdivision of white blood-cells. It does not necessarily lead to cheesy degeneration, but in it also complete connective-tissue degeneration may take place, and often does take place, in certain parts or in smaller groups of alveoli, while the cheesy metamorphosis is met with in the adjoining cells. The organisation may also in it proceed from the periphery to the centres of acini, or go on in the whole acini after they have been filled with cells. Frequently a half or incomplete organisation takes place, and may apparently last comparatively long before the cheesy metamorphosis or complete connective-tissue formation sets in.

The details and fuller proofs of the propositions here announced must be reserved for a more complete account of the subject, which will soon be published in another place.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE MIDDLESEX HOSPITAL.

A SERIES OF CASES OF INJURIES TO THE HEAD, WITH REMARKS.

Case 1.—*Contusion of Brain—Lesion of Optic Thalami—Death after Eleven Days.*

(Under the care of Mr. DE MORGAN.)

M. S., a servant girl, aged 23, strong and healthy, was admitted into the female accident ward, under Mr. De Morgan's care, on December 31, 1867. She had gone out after dark, and had fallen into an excavation twenty feet deep made in some street repairs. When brought to the Hospital she was quite insensible, bleeding slightly from both nostrils, bruised about the hands and arms, and with cold extremities. There was some ecchymosis into the left orbit, and the pupils were unequally dilated and sluggish. Pulse 88, respiration 36. As the day passed on some apparent paralysis of the left side and left facial paralysis were noted, with dilatation and insensibility of the left pupil. The unconsciousness continued, and was accompanied with such constant restlessness that she was laid on

mattresses on the floor and carefully watched. She rolled constantly over from side to side, using apparently the left side less than the right, and strongly resisting when the movements were checked in any way. She passed her urine under her. For many days she remained in the same condition, rolling continually from side to side, never once regaining consciousness, and taking hardly any nourishment. Beef-tea injections were administered, as much beef-tea and brandy given by the mouth as could be taken, the bowels opened slightly by repeated enemata, and a blister applied to the forehead; but she gradually lost strength, and the rolling movements ceased only just before death on the eleventh day.

At the autopsy very careful search failed to reveal any fracture of the skull, and the only lesions of the brain had their seat in the optic thalami. The brain and its membranes, together with the spinal cord, were intensely congested, and at first the seat of injury was overlooked. Further search, however, showed certain dark spots scattered over the surface of both optic thalami to be really minute ecchymoses, and a distinct rent four lines long and about two lines deep was found in the posterior part of the upper surface of the right optic thalamus. There was a slight extravasation of blood into the sheath of the left temporal muscle, but no scalp wound. With the exception of some recent pleurisy of the base of the right lung, all the viscera were healthy, though generally greatly congested.

Case 2.—Fracture of Base of Skull—Recovery.

(Under the care of Mr. DE MORGAN.)

Mr. O'D., aged 45, a tailor, was admitted under Mr. De Morgan's care on January 25, 1868, having been knocked down by a passing vehicle while staggering along the street intoxicated. He was picked up insensible, and bleeding from the mouth, and was in this state when brought to the Hospital, some blood also issuing from the right ear, and from a small scalp wound at the back of the head. The pupils were equal and sensitive, and he breathed calmly. Next morning he was apparently more conscious, although not attempting to answer questions. He had passed a restless night, and there was still free oozing of bloody fluid from the ear. Twenty ounces of urine were drawn off, and a blister put to the nape of the neck. Towards evening he passed water naturally, and seemed more sensible of what passed around him. On the day following he was so far recovered as to protrude the tongue when bidden, but still refused food, and generally lay in a drowsy quiet state. Six grains of calomel were given, and the blister on the neck repeated. This was followed by a copious evacuation of the bowels, and the man began to take nourishment. By the fourth day he mumbled his name, and began to mutter indistinct nonsense about his being an Irishman and a Fenian (to the no small dismay of his friends, who were urgent in contradicting his statements.) On the sixth day he was much improved, though still drowsy and slow in answering questions. The oozing from the ear had stopped, and he complained only of some frontal headache. In a few days these symptoms cleared off, and by February 12 he was strong enough to leave the Hospital.

Case 3.—Fracture of Base of Skull—Recovery.

(Under the care of Mr. DE MORGAN.)

J. K., aged 35, a cabinetmaker, was admitted into the male accident ward of the Middlesex Hospital on October 1, 1868, under Mr. De Morgan's care. The patient had been struggling with another man whilst drunk, and, falling against the door of the loft in which they were, both fell out into the stone-paved yard below, some twenty feet. When brought to the Hospital a few minutes after the accident, he was in a semi-conscious state, both pupils acting and equal, protrusion of the right eye, with much and rapidly increasing ecchymosis beneath the conjunctiva; pulse 40, and irregular. Answers questions with drunken stupidity.

He was put to bed, and ice applied to the head. He vomited up much fluid with the smell of beer, mingled with clotted blood, but gradually lapsed into a comatose condition, and within two hours the conjunctivæ were quite insensible, and the breathing stertorous.

Next day was still unconscious, and breathing noisily; very restless; pulse irregular; pupils contracted and unequal; marked loss of power of the left side, the man brushing away any irritation of the left limbs with the right hand; marked coolness of left side also, as compared with right. He passed all his motions under him into the bed. No convulsions. Towards the evening he gradually recovered consciousness, and answered questions coherently.

On the day following he was fairly sensible, but the paralysis of the lower limbs was more marked, and he continued to pass his motions and urine into the bed.

During the next (the 4th) and three following days he remained in a doubtful state, occasionally delirious, but with intervals of complete consciousness. The paralysis passed off from the leg, leaving the left arm still powerless. He complained much of headache also.

From this time until his discharge on the 26th day he steadily improved. The pulse gradually increased to 70 beats in the minute; the headache cleared off, and he went out fairly convalescent, but with still some comparative loss of power in the left arm. The treatment consisted merely in absolute rest, ice to the head, occasional purgatives, and mild diet.

Case 4.—Fall Downstairs—Subarachnoid Hæmorrhage, with General Tuberculosis—Death.

(Under the care of Mr. MOORE.)

C. W., aged 60, said to be a Surgeon, was found in the middle of the night of May 21, 1868, lying at the foot of the staircase of the inn at which he was staying, insensible, bleeding freely from a wound in the chest, and with a broken chamber utensil lying beside him. He was brought at once to the Hospital and placed under Mr. Moore's care. When admitted he was insensible, breathing easily, surface cold, pulse 60, small and weak, and he had evidently lost a large quantity of blood from a lacerated wound over the seventh rib, close to the left scapula. A mass of effused blood lay in the cellular tissue about the wound. The wound was closed, stimulants and restoratives administered, and by eight o'clock in the morning he had so far recovered consciousness as to shake his head when asked if in pain, and to resist examination. The pulse was now 86 and small, the respirations 40, and the pupils active, but there was apparently right hemiplegia. There were many bruises over the limbs and body, and the knees and ankles were slightly grazed. Strong beef-tea injections were given, and mustard poultices applied to the chest, but he did not rally, and died on the same evening. At the autopsy, sixteen hours after death, the body was seen to be well built, but much emaciated. Several slight bruises and skin grazes were found over the surface. The wound near the left scapula was quite superficial, but the fifth and sixth ribs were broken across midway between the sternum and spine, without wounding the pleura. Studding the muscles in many parts were small extravasations of blood, quite away from external bruises. The lungs were extensively tubercular, the apices riddled with small cavities, and the remainder loaded with patches of grey and yellow tubercle. There was also an old tubercular pneumothorax limited to the lower half of the left pleura. The liver and kidneys were also studded with grey miliary tubercles visible to the naked eye. There was no scalp wound nor fracture of the skull, nor superficial bruise of the scalp, but a recent blood clot under the arachnoid covered the posterior half of the upper surface of the left cerebral hemisphere, dipping in between the convolutions. A similar, but smaller, blood effusion existed on the right side in the anterior part. The membranes and some portions of the brain substance were much congested, but the septum lucidum, fornix, and adjacent parts were very soft and white. No tubercle was found at the base of the brain, nor was there any distinct laceration of the brain substance.

Case 5.—Fracture of Base of Skull—Extensive Lesions—Death after Thirty Days.

(Under the care of Mr. MOORE.)

C. S., a tailor, aged 56, in good health, was crossing a crowded thoroughfare on March 29, 1869, when he was struck by the shaft of a passing cab, and thrown to the ground with considerable violence. He was brought at once to the Hospital, and admitted under Mr. Moore's care. When first seen he was much collapsed, bleeding freely from a large lacerated wound over the right temple, and blood was also issuing from the mouth, nose, and left ear. The pupils were contracted and unequal, pulse full, 100, breathing irregular and catching. He remained unconscious during the night, passing urine and stools beneath him, and often vomiting, and next morning lay in same state, breathing heavily and resisting disturbance, and with chemosis of the right conjunctiva. He remained in much the same condition until his death, right facial paralysis being noted on the fourth day, difficulty in swallowing on the fifth, and nearly complete paralysis of the right arm and leg on the sixth. A strong mousy odour was noticed on the fifth day, which increased in intensity later. The hemiplegia cleared off to some extent about the end of the second week, and on two

occasions he exhibited doubtful signs of consciousness, seeming to mumble answers to questions, and picking his eyelashes. Blisters were applied over the nape of the neck, and purgatives administered from time to time with nourishing diet; but the patient gradually lost strength, and died after four weeks with symptoms of pneumonia, remaining unconscious to the last.

At the autopsy the wound on the right temple was found nearly healed, and beneath it an irregular fissure of the bone was found leading downwards across the roof of the orbit into the cribriform plate of the ethmoid bone on the right side. A second crack, commencing in the squamous portion of the left temporal bone, crossed the petrous portion, and ended in the left foramen rotundum. Beneath the dura mater a large flat clot covered all the posterior half of the left cerebral hemisphere. This clot was of a light brown tint generally, deep chocolate about the centre, and still distinctly red when cut into. It was some three or four lines thick, adherent firmly to the dura mater, but separated from the brain, excepting one spot where the torn brain-substance was mixed with the clot for about half a square inch in extent. There were a few scattered subarachnoid hæmorrhages over the upper surface of the cerebrum, and the convolutions were much flattened. This was found to be due to distension of the ventricles with blood-stained serum. Two other clots were found imbedded in the brain-substance, and much altered in appearance—one, the size of a pea, in the right optic thalamus, and another twice this size in the cerebral substance immediately above the roof of the right lateral ventricle. About these clots the nervous tissue was freely stained and slightly softened. In all the clots abundant rhombic crystals of hæmatoidin were discovered. The other viscera were generally congested, and both lungs the seat of inflammatory changes, the right lung being solidified in nearly its whole bulk, save the apex, and the base of the left lung also passing into a state of grey hepatisation.

Case 6.—*Comminuted Depressed Fracture of Skull—Trephining—Death.*

(Under the care of Mr. HULKE.)

L. F., aged 60, a French cook, was brought to the Hospital at midnight on February 10, 1869, with the history that he had fallen from a balcony through a skylight on to the stone floor of a workshop, a height of some twenty feet. He was thought to have been intoxicated at the time of the accident. Within an hour he was at the Hospital, and Mr. Hulke was at once sent for. He found the man lying quite unconscious, breathing heavily with some stertor, with the right pupil dilated, and a pulse of 40. Through an incised wound over the occiput two inches long, blood flowed freely, and lacerated brain substance protruded. The finger passed into the wound felt the bone at one side of the fracture to be depressed. Mr. Hulke at once enlarged the wound, trephined, extended the opening so made with the bone forceps, and removed a portion of greatly depressed bone. Just before this step was taken the respirations had been 24 and the pulse 40, but directly the bone was raised the breathing went up to 32, and the pulse to 80. The patient, however, remained in the same unconscious state, the pulse dropped to 60, and the respirations rose to 40 within an hour, and he died ten hours after the fall.

At the post-mortem examination, besides the large fracture through the upper part of the occiput, which had been comminuted, and the edge of which had furnished the depressed bone removed by the operation, two cracks were found leading from this opening, one leading forwards and to the right for three inches along the posterior fossa of the skull, and another to the left and forwards through the squamous portion of the temporal bone, and thence downwards and inwards in front of the petrous portion nearly to the foramen ovale. No loose or depressed fragments were remaining. The brain was freely torn opposite to the larger fracture and much shaken at other places, causing minute lacerations and subarachnoid hæmorrhages. The base and central portions were uninjured. Besides the head injury six ribs were broken—two on the right and four on the left side—and the kidneys were much diseased, the right one containing in its pelvis a calculus the size of a nutmeg.

Remarks.—Of the group of cases of injury to the head here brought together, the first is perhaps the most interesting. The extreme and constant restlessness pointed to laceration of the brain; but further than this it was impossible to go in forming a diagnosis. The hæmorrhage into the orbit seemed to indicate surely a fracture of the bone, and yet none such was found after the most careful search. The left facial paralysis, too, suggested lesion of the seventh nerve—probably fracture of the petrous portion of the temporal; but neither was this confirmed after death. Eleven days after the accident there was still intense congestion of the brain and cord with their membranes, and some minute lacerations of the optic thalami, but nothing more than this. Remembering, however, the results of removal or breaking up of one optic thalamus in an animal—how the creature falls upon the opposite side, not so much from a complete paralysis of those limbs as from a want of balance between the two sides—this case seems peculiarly instructive; for here, too, there was apparently marked left hemiplegia, the main lesion being in the right thalmus; but both thalami being more or less injured, the hemiplegia was masked to a considerable extent by the constant rolling movements, which indicated an impairment of the balance between the two sides, and, indeed, might well have suggested injury to the cerebellum. The coma was probably due to the great general congestion present. The next two cases are mainly interesting as examples of speedy recovery after symptoms pointing to fracture of the base. The bleeding from the mouth in Case 2 might have been from many other injuries, but the free and continued discharge from the ear—too free to admit of its being the liquor Cotunnii—together with the prolonged semi-comatose condition, seem clear evidences of the grave nature of the injury. In Case 3 also the protrusion of the eye and rapidly increasing ecchymosis beneath the conjunctiva, with the gradual supervention of complete coma and hemiplegia, clearly indicated fracture of base with extravasation of blood. The fourth is curious in many points. Thus, from a Medico-legal point of view, it might be of the first importance to be able to give a decided opinion upon the manner in which the man met with his death. An elderly man is found at midnight lying severely wounded and insensible at the foot of the stairs, and he dies before recovering sufficiently to be able to account for his condition. In the absence of any evidence of violence, the post-mortem appearances in this case explain the sequence of events readily enough; but if any suspicion of foul play had been excited, it would have been impossible to say that he had not been thrown downstairs, the fall causing the fatal intracranial hæmorrhage. On the other hand it might be argued that the man, in a state of great exhaustion, with active general tuberculosis, left his room for purposes of nature, and on his way downstairs was seized with either a form of epileptic fit, sometimes occurring in that condition, in which he fell, and made with the broken vessel the chest wound, the arachnoid hæmorrhage resulting also from the fall; and in favour of this view might be urged the scattered ecchymoses in the muscles, and the white and softened state of the central parts of the brain, or an apoplexy suddenly supervened and caused the fall and its results. Under any circumstances a patient in so deplorable a general condition could not be expected long to survive such a shock. The fifth case is noteworthy for the length of time—thirty days—during which the patient lay in a comatose condition. Here the blood, covering the left cerebral hemisphere, was probably, judging from the gradual supervention of the one-sided paralysis, slowly poured out. The blood issuing from ear, nose, and mouth, and the extravasation into the orbit, were explained by the position of the fractures. The effusion into the ventricles was the result probably of inflammatory action set up by the close proximity of a softening clot in the cerebral substance. The last case we have reported, chiefly because of the comparative rarity of the operation of trephining in the present day, and because, in this instance, although, on account of the severe brain and other lesions, recovery was wellnigh hopeless, the propriety of the procedure was shown by the marked and instant relief, the pulse rising at once from 40 to 80. Since it is impossible to judge of the extent of brain injury with coma and depressed bone, it is clearly proper to use the trephine in all such cases as soon as possible.

THE New Orleans *Journal of Medicine* for April contains some account of a rather curious case. Dr. Callen, of Gilmer, Texas, was called to see a negress in labour, she being at the time under the care of another Medical man, who desired Dr. Callen's aid. On his arrival, he found projecting from the *anus* of the woman the lower extremity of a fœtus in a state of decomposition. *The perineum was entire.* There was very great pain and tenderness, and the parts were spasmodically contracted, so that the fœtus could not be withdrawn, even after it was broken up. The woman got some opium, and next day was better, and in a day or two more the fœtus was removed almost entirely. The woman recovered well, but nearly six months after passed some bones by her rectum. She is now quite able to attend to her duties.

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Medical Times and Gazette.

SATURDAY, MAY 22, 1869.

"NATIONAL REGISTRATION OF DISEASE"—A CRY FROM THE SANITARY RANKS.

As year by year the care of the public health becomes more and more perfectly recognised to be a duty of the State, and one of the highest obligations incumbent upon local authorities—as efforts are extended in this direction, and men skilled in preventive medicine are being employed about the country in this important work, the cry for a *national registration of disease* waxes louder and louder. And it is one to which the Government cannot much longer turn a deaf ear. The men who raise it are not mere *dilettante* sanitarians; they are a body of men whom Parliament has itself commissioned to proclaim the approach of the enemy and to lead the army of defence. And their cry has been taken up and echoed by two of the most important associations which concern themselves with such subjects—the British Medical Association and the Association for the Promotion of Social Science. The reason of the demand is twofold. First, it is evident—for attempts to use it have been made and have failed—that the registration of mortality which we have now had in this country for over thirty years is valueless for the determination of many of the most important questions in etiology, which it is necessary should be immediately solved. This is the aspect in which Dr. Richardson viewed the question in a paper read last Saturday "On the Registration of Disease in England" at the Metropolitan Association of Medical Officers of Health.

"The natural history of disease," he said, "as a whole, of disease as influenced by season, geographical distribution, age, sex, occupation, mode of life, and intercommunication, can never be faithfully written until it, as a series of phenomena, is studied comprehensively under all these influences; so that every negative influence be excluded as it is discovered to be negative, and until the true cause is reached and retained as known. Can scarlet fever originate from a simple external influence? Can a first case be manifested in a locality without the importation of contagion from a preceding case? That question no one can answer on our present narrow basis of investigation. Yet it is a vital question; it covers the origin of all the communicable disorders. It would be solved in twelve months by a perfect system of registration of disease. Does consumption prevail most in damp districts? and, if so, in those districts is there no other factor except damp? Is stone in the bladder in Norfolk due to water supply or food of a special kind? Is cancer confined comparatively to special localities? These questions can only be answered by a comprehensive and perfect registration of disease. I admit, and gladly, the value, the unmatched value, of the reports on mortalities of the Registrar-General. For calculating the mean vitality of a people, for proving the relative tension of fatal diseases, they are simply perfect; they proclaim, however, not disease, but one result of it—death. From the fact of death from a given disorder to the fact of the first impulse of such disorder, there is a gap so wide, with intervening changes so numerous, it were impossible to reason on the subject of cause from the data of mortality. We may, for example, have a widespread epidemic of a particular kind, with a mortality from that one disease which shall not raise the general mortality of the district in any appreciable degree. We may have a limited epidemic of the same disease—limited, that is to say, in respect to the number of persons attacked in a given area—and yet have a mortality that shall so raise the general mortality as to excite even panic."

In a paper read last summer at Oxford before the Public Health Section of the British Medical Association, Dr. Ballard urged a very similar argument, and showed conclusively, from records of public sickness which he had kept for many years in the district of London assigned him, how very imperfectly the mortality records, although laboriously corrected by himself, represented the sickness prevalent from time to time among his population. In the discussion which succeeded the reading of Dr. Richardson's paper, he again demonstrated this truth by some charts which he had prepared in relation to the sickness and mortality for five years from the four contagious diseases, small-pox, scarlet fever, measles, and hooping-cough. Secondly, a registration of sickness is absolutely necessary if the work of the Medical Officers of Health in London and in the various large towns in the kingdom is to be carried out at all efficiently. These officers can only act on information received, and provision should be made for their obtaining it, not, as at present, some week or two after a longer or shorter illness from some spreading disease has terminated in death, but immediately on the occurrence of a first case. Except when time has run on against them and against their population too far for them to catch up, they are, so far as any official or certain information is concerned, in ignorance of the very thing which it is most essential for the execution of their office that they should know. The result is that, in place of being in a position to protect the public by the measures applicable to a first case alone, their labour is not only multiplied forty-fold by the multiplication of epidemic foci, but the very evil which they are established to obviate has taken place without a finger being lifted to prevent it. So strongly has this practical difficulty been felt, so deeply sensible of the want have been the Medical Officers of Health of the Metropolis, that almost at the very outset of their work they established, by voluntary effort, a registration of the public sickness in London, and for nearly two years it was carried on and the record published, at the expense of the Government, for public instruction. Unfortunately, as the system was arriving at perfection, a spasm of printing economy drew close the purse-strings of the Treasury, and the grant of money, trifling as it was compared with the public benefit it conferred, was withdrawn. The publication of the record ceased, and the organisation which had been built up for the purpose fell to pieces. But notwithstanding this discouragement, there are health officers in London who have continued the practice of collecting statistics of sickness from the books of Poor-law Medical Officers, Hospitals, and Dispensaries, and among them are Dr. Ballard at Islington, the late Dr. Dundas Thomson, and, since him, Dr. Whitmore, in Marylebone, Mr. Liddle in Whitechapel, and Dr. Buchanan in St. Giles. The Manchester and Salford Sanitary Association register disease in their district, and have published charts, embracing the Marylebone statistics for purposes of comparison, out of which some important truths have been evolved; and similar records are now made and published by Dr. Philipson at Newcastle. Dr. Ballard's records have been used by himself in attempts to establish the meteorological relationships of disease. In 1855, Dr. Richardson made a successful attempt, which was fruitful in results, to gather statistics of disease from as many as forty-four stations scattered over various parts of England, but, like all

such voluntary enterprises, it fell through at last on account of the expenses attending it. Yet all these efforts prove this—that the registration of sickness is a thing which can be effectually compassed; that there is in the Profession public spirit enough to render it practicable; that the aid of the State is loudly called for, and is the only thing necessary to render it an accomplished fact; and that the benefits to be anticipated are not only such as all agree to be incalculable, but even within sight, and all but within reach. Medical Officers of Health are in the position of Tantalus. As Dr. Richardson pointed out the other day, and as Dr. Ballard insisted at Oxford, the records of disease in England exist and have existed for years past in the cupboards and cellars of the guardians of the poor throughout the kingdom, and are being written now, day by day, in the books which Union Medical Officers are compelled to keep under the orders of the Poor-law Board. What care boards of guardians for the nature of diseases among the people they have to relieve? It is very doubtful if this column in the books is ever consulted by them for any purpose whatever. If it is of any value at all, it can only be utilised in the way that Dr. Richardson suggests; and then who can tell what an amount of disease and death the country at large might be spared? There are already extant (omitting Hospitals, etc.) no less than 3233 stations where disease is thus observed and its existence and progress recorded. All that is requisite is that week by week these existent statistics should, like the records of mortality, be gathered together by a central Government office and printed for public warning. As Dr. Richardson says, "a registrar educated to his work already exists in every district. Lastly, in London there is a central office, the office of the Registrar-General of Births, Deaths, and Marriages, where every appliance is at hand for analysing the whole mass of facts as they should week by week be returned. There would thus be acquired in ten years more precise knowledge as to the human causes of human maladies than has been chronicled in all the books of Physic since the time of that Æsculapius who, because he taught the art of Medicine with a little more subtlety than his fellows, was received into the number of the gods."

EGGS.

The high price of meat has directed the attention of many persons to other articles of diet which may, to a certain extent, be made substitutes for it. Looking at the nutritious qualities of the egg, to its rich flavour, to the many modes of cooking it, and to its moderate price, it is a matter of surprise that it is so little used as diet, and, in the main, is regarded by the mass as a luxury. While eggs range in price from ten to sixteen for a shilling, they should become, on the score of economy and usefulness, part of the "daily bread" of the million. It is calculated that three-fifths of the eggs consumed in England are obtained from abroad, but mainly from France, and almost all that are used in the metropolis come from that source. The importation of eggs into English ports in 1867 amounted to 397,934,520, in 1868 to 383,969,040. As far as it is known of the imports of the present year, the numbers are larger than ever. Now, taking the calculation from the number stated, and estimating the population of England at 22,000,000, the average number of foreign eggs consumed by each person would only be eighteen, and, with the addition of English and Irish, the average might be raised to thirty. From this, however, must be deducted an immense quantity used by confectioners and others, which are fully equal to 15 per cent. of the imports. It seems remarkable that the average is so small; but such is the fact, and it may be asked whether, if the demand should increase, the supply would increase in proportion. We think it would, and that, too, with sufficient rapidity. The French farmer makes the rearing of poultry and the sale of eggs one of the main sources of his income, and there can be no doubt the business is highly remunerative. If we required twice the number from our neighbours which we now consume, that number would be soon forthcoming. A French writer gives the number of eggs annually produced in France at 700,000,000, and if we average sixty eggs as the number each fowl would lay, there would be at least 117,000,000 fowls, and these at three francs each would give £14,625,000 sterling as the value of the poultry stock in France. It is evident that the supply might be extended almost without limit. And in regard to the quality and freshness of the French eggs sold in the metropolis and other large towns of England, it may be stated that the transit of eggs from all parts of France to this country would not average more than four days; or if, even in outlying districts, it took seven days from the various markets to their arrival in London, they would be equal to the eggs that are collected from farmhouse to farmhouse in different parts of England, and sold in London as country eggs. Besides the supply being augmented from abroad, the production of eggs in this country might be increased. We need not go into the question of the proper mode of keeping poultry for egg-laying, neither into the mode of preserving eggs, beyond saying that one of the best plans in use is to cover the shell with lard when fresh made, and therefore warm; but it is stated that on a voyage to Australia lasting ninety-one days the passengers had a supply of eggs during the whole time. They were merely packed in bran at some little distance from each other, and occasionally turned by the steward.

As we have, however, mainly in view the use of the egg as an article of diet in health and disease, let us briefly recall to the reader's mind the leading points as to the chemical composition, the nutritive qualities, and the modes of cooking eggs, as well as their use in Medicine and pharmacy.

As to the chemical composition (referring those who want more information to Dr. Letheby's excellent Cantor Lectures), we may quote from Dr. E. Smith to the effect that the egg contains about 75 per cent. of water, 15 of carbon, and 2 of nitrogen. The contents of an ordinary egg weigh about 400 grains; and when they are cheap and meat dear, they afford nitrogenous food at an economical rate. Ultimate chemical analysis, however, guides us a very little way towards the uses of an article of diet; but proximate analysis concurs with the universal experience of mankind in stamping the nutritive qualities of the egg as high as possible. The bulk of the egg is composed of albumen, "the true starting-point of all the tissues," as Liebig describes it, akin to which all food must be converted in the stomach in order to render it soluble and fit to enter the circulation. There is the rich, phosphorised, yellow oily matter of the yolk, with its suggestions of protagon and nervous matter. There is the abundant ash, with its iron and lime. The yolk is the matter employed by nature in the origination of the animal primordia, and the surplus, as in birds and fishes, is used as nutriment during the earliest stages of infant life. The stimulating and vivifying properties of the yolk have been celebrated alike by Brillat-Savarin and Lord Byron. The egg affords to the poorer classes the means of enriching any diet, however meagre, at the least cost of money and trouble. Egg may be added to bread—the staff of life—in a dozen easy ways. The driest and most insipid crusts soaked in egg beaten with milk are converted into a delicious cake or pudding. Eggs may be added to milk, tea, coffee, the habitual beverages at two daily meals. To any stimulating drink, be it beer, wine, or spirits, eggs add a sustaining virtue which renders less of the stimulant necessary. There is no vegetable that will not go well with eggs. Mashed potato in particular is improved and enriched. They form an excellent ingredient in soups and broths, as the Dutch soup, made of broth thickened with yolk of egg, and of course not raised to the point of coagulation of albumen; or they may be hard-boiled and rubbed up in a granular state. To all over-salted, dried, indigestible, stimulating articles, as salt ham, salt fish, and the like, eggs are added to obtund their acrimony and confer freshness and digestibility. Conversely, there is one defect in eggs as an article of diet for

the active adult—their insipidity, their want of properties which stimulate the liver and bowels, and the consequent accusation that they are heavy, cloying, bilious, and constipating. All these may be remedied by the addition of highly seasoned pungent articles, of which watercresses and other kinds of salad are the readiest for those who have no access to a greater variety of vegetables. Whether raw eggs be mixed with salad, or savoury herbs be cooked with eggs into an omelette, the result is highly nutritive at little cost. Of course either combination should be eaten with plenty of bread. But it would be impossible in the limits of an article even to hint at the outlines of the dietetic use of eggs.

As for their use in Medicine and pharmacy, how they serve as vehicles for oils, how they offer an excellent medium for the administration of camphor, chloroform, and various other stimulants, it is almost superfluous to speak. But we would offer this suggestion to the Practitioner. In a climate and state of society in which cod-liver oil is extensively prescribed, it certainly seems reasonable to make large use of the oily and albuminous ingredients of the egg, whether as preventive or curative. Children as they grow up too often show by their teeth, their enlarged glands, or some other constitutional defect, that their nourishment has not been up to the mark; and, without underrating the importance of other hygienic conditions, we cannot help thinking that the addition of the oily and nitrogenous egg to their breakfast might save much trouble in after life.

THE WEEK.

TOPICS OF THE DAY.

The debate on the resolutions upon which the Budget will be founded left Mr. Lowe's scheme unaltered. The fact that, in one or two of its principal provisions, it is a rich man's, and not a poor man's, Budget, was insisted on by several speakers. The country Doctor or curate, for instance, who has hitherto managed to get through his labours with a one-horse carriage and a stable boy under eighteen, will find himself taxed four and sixpence more than in past years, and if his crest be on his harness the increase of duty on the whole turn-out will amount to twelve and fourpence. A neighbouring peer, on the other hand, as Mr. Ward Hunt observed, who has heretofore paid £76 duties on his establishment, will save £30 by the new arrangement. Mr. Lowe admitted the truth of the criticism, but pleaded the necessity of uniformity, and of cheapening the collection of taxes. It is difficult, however, to see that this lessens the injustice.

The gentlemen who composed the very influential deputation from the Obstetrical Society, that waited on the Home Secretary on Tuesday last week to ask that Obstetric Medicine might have adequate representation in the General Medical Council of Education and Registration, whilst they have undoubtedly some strong reasons to urge for their claims, must not be surprised if they are met with a good many arguments in opposition to them. For the proposal there is a strong plea undoubtedly to be drawn from the great importance of Obstetric Medicine in the commonwealth, and from the fact that midwifery has not had the position assigned to it in legislation which it may fairly claim, one of equality with Medicine and Surgery. If special examinations in Medicine and Surgery are instituted by the bodies who are specially represented in the Medical Council, and degrees and licences given in these branches of knowledge, the interests of the public equally demand that a like culture and prominence should be given to Obstetric Medicine, and that a like special provision should be made to insure competency on the part of its Practitioners. Then it is a fact that there are but few of the members of the Medical Council who have more than the general knowledge of the subject which is possessed by every fairly educated Medical man. There is no Professor of Midwifery, and but few of its practitioners at the board. These are the main arguments advanced in the memorial of the Obstetrical Society, and we are far from undervaluing their importance. But, on the other hand, it may be urged that Midwifery is regarded by nearly all the examining bodies represented in the Medical Council as an integral part of Medical science—that there is scarcely an examining body which does not make Midwifery an important part of one or more of its examinations. The principal exception, the Royal College of Surgeons of England, has lately announced a reform on this particular. Moreover, there is already one special Midwifery licence, that of the Royal College of Surgeons, which may be registered by the Council. It is a mere accident that the various Universities and Colleges which examine in Midwifery and have seats in the Council have not sent their midwifery examiners and professors to represent them there. There is no reason why an Obstetric Physician should not represent the College of Physicians of either of the three kingdoms, or the University of Edinburgh or of London. Theoretically, the Council may be supposed as fully to represent Midwifery as it does Medicine or Surgery, and far more directly to represent it than it does, for instance, the departments of Ophthalmic and Aural Surgery, in neither of which does it specially supervise examinations or register licences. Still, the fact remains that whilst there are a large preponderance of pure Physicians and pure Surgeons in the Council, there is not a single man who has made midwifery his special pursuit. The easiest remedy for this state of things would be that the Crown should, as a matter of good policy, nominate two or more obstetricians. If this, however, should not meet the expectations of the Obstetrical Society, there are two courses open to it. It may either agitate for a charter and the power to grant licences in obstetrics, which if it obtain, it may fairly claim to send a representative to the Medical Council; or it may try to obtain representation for Obstetric Medicine by using its influence with the Government to get a clause in the Medical Amendment Act which shall throw the choice of the representatives of the different examining bodies into the hands of their licentiates and graduates, when there can be little doubt that the object would be practically obtained.

On Tuesday the Pathological Society held its last sitting for the present session, which, as the President, Dr. Quain, truly observed, has been a very useful and instructive one. Two of the subjects discussed on Tuesday night were of the highest interest. One was the relation in point of time of atheromatous and calcareous deposits in the arterial coats to aneurisms, a conversation on which was originated by a statement made by Dr. Crisp, who said that he had met with many instances of aneurism in the horse, and that in every case the aneurism had originated from violence which injured the internal coat of the artery, whilst calcareous deposition in the walls of the resulting aneurism had been an after process. Another very interesting topic was brought before the Society by Dr. Charlton Bastian. He said that in consequence of the published observations of Salisbury, Hallier, and others, he had instituted examinations of the blood in various diseases for the purpose of investigating the truth of the statements which had been made as to the existence in it of bacterides, fungi and spores of fungi. Without forestalling our report of his communication, we may say that his observations have led him to acknowledge the existence of freely moving organic particles in blood which has been drawn from patients in various diseased conditions. But his observations do not give support to the idea that these are spores or germs introduced from without. On the contrary, he looks upon them as the results of changes in the elements of the blood itself. He has seen such minute bodies in blood drawn from anæmic patients, and he believes that they are particles separated from stellate or mulberry-like red globules. In some fevers, on the contrary, he thinks that such spore-like bodies may have their origin in altered conditions of the blood plasma.

The magistrates of Lynn have committed Mrs. Langford to take her trial for the murder of her husband and infant child

by the administration of strychnine. It is, of course, in the interest of society that such cases should be most carefully investigated, but the published accounts of Mrs. Langford's conduct previous to the murder give a strong impression that she was of unsound mind. This was the verdict of the coroner's jury, and is no doubt the correct one. No strychnine was discovered by Dr. Letheby in the viscera of Mr. Langford, although, on the wife's confession, a large dose was administered to him. The Medical evidence proved that he presented the symptoms which are produced by strychnine, and although he lived for some time afterwards it seems probable that his death was accelerated by the poison. As it appears from the published reports that he was the subject of some serious disease of the nervous centres, it would probably be difficult to define the exact part which the poison played in his case.

Various alterations are, it is said, to be made in Lord Russell's Life Peerage Bill in committee. We have not seen that an alteration has been proposed in the preamble by which the propriety of conferring on eminent members of our own Profession the honour of life peerages has been specially acknowledged. We cannot say that we should wish to see many Medical Lords, for on attaining the position of a peer of the realm an accomplished Surgeon or Physician would be *de facto* excluded from ordinary Professional life. But the Profession is never without at least one such man whose eminence and services to society would entitle him to the honour, whilst his circumstances would enable him to bear it easily. We have already representatives in the Lower House, and we hope that their number will be increased; but the fact of supplying an occasional member to the Upper Chamber would, in the present state of things at least, advance the social position of the whole Medical body.

The dispute between the *ex-officio* guardians and the ratepayers as represented by the elected guardians of St. Pancras has occupied much space in the daily papers during the past week. As far as the Workhouse Infirmary forms an element in the quarrel, two things are tolerably clear. First, that the old Infirmary was too small for its purpose, and that its drainage was very bad. These facts are put beyond dispute by a letter from Mr. Nelson Hardy, the Surgeon who had temporary charge of the Infirmary during an illness of Dr. Gibson, which appeared in the *Times* of Thursday. On the other hand, it is equally clear that this state of things in the old Infirmary has been made an occasion for the adoption of a scheme for the erection of a large Hospital at Highgate, by which a great burden will be laid on the ratepayers, the sick will be removed to a distance from their own homes, and a general encouragement will be given to persons who find it more convenient to be supported at the public expense when ill than by the exercise of self-denial to make provision for such misfortune. A man who knows that when sick, if only he can show that he has spent every farthing he earned when well, he will be taken at the public expense to a magnificent Hospital situated in a delightful suburb, and there will be aired, and fed, and treated on a scale which he could not possibly by the exercise of the most virtuous self-denial attain to in his own home, is not very likely to exercise that self-denial or to save his wages. As has been frequently said, this may be charity, but it is not justice to the poorer classes of ratepayers.

THE PROPOSED UNION OF THE MEDICAL SOCIETIES.

Another long evening has been spent by the Medical and Chirugical Society in discussing the scheme of union sent down to it from the Council, and, as Mr. Holmes pathetically remarked, at a late period of Monday evening nothing had been done beyond a proposed alteration of the name of the Society—a proposition which might in its turn be reversed. The whole affair has been a mistake. All that it was requisite for the Society to do was to accept the scheme as a fair and equitable one in its general details, which every one seems willing to do, to send it to the other societies for discussion, and then, after the whole affair had been matured by a general committee, to take it fully into consideration. To spend so much valuable time on a scheme necessarily half-formed is ill-judged. The main question of the evening undoubtedly was how to divide Surgery and Medicine into two sections. The Council proposed that this should be done by forming a clinical division similar in extent to the existing Clinical Society; this, however, was vehemently opposed, and the proposition to separate Medicine from Surgery was urged in opposition. Finally, however, the Council's scheme was adopted. The scheme was also advanced by the passing of certain resolutions as to the formation and constitution of the new body. During this portion of the discussion the apt enough question was asked as to what the President and Council were to do when elected. It was admitted that, in the first instance, the President's post would be ornamental rather than useful; but it was also pointed out that as Presidents would in all probability only be elected from among those who had presided over departments, they would already have had their fill of work. One of the very few amusing episodes of the evening was Dr. Wynn Williams's proposition to invest the property of the Society in five trustees, three to be a quorum. This was deservedly saluted with a shout of laughter.

VACCINATION FROM THE HEIFER.

Of the objectors against vaccination, some allege that it is useless, others that it is mischievous. Of the latter class some affirm that it introduces diseases or ill qualities which savour of the brute, others that it contaminates the blood with human diseases. Of course, as vaccination is *ipso facto* a disease of the cow, we must take it with all the risks of the former order, which time has shown to be wonderfully small. We seldom now hear of tufts of red cow's hair growing upon vaccinated children, as was prophesied in Jenner's days. But we do hear from time to time stories of the transplantation of human diseases, and, microscopic as the amount of mischief may be, the prejudice which they create against this beneficent operation are more mischievous still. These at least are avoided by going back to the cow as the source of vaccine lymph; and we know that at Naples, Paris, Brussels, and other Continental cities, where the chance of infection with human disease is greater than in England, vaccination from the heifer is sanctioned and promoted by Government. In England these things are left to private enterprise, and we are glad to find that Dr. Blanc, already famous as one of the dearly ransomed Abyssinian captives, has devoted himself to this undertaking. At the rear of his residence—9, Bedford-street, Bedford-square—he has a stable for calves, who are received and vaccinated, and dismissed when the disease is over. Dr. Blanc has constructed an operating-table on which the calf is securely fixed; then the lower part of the abdomen round the teats is shaved, and from forty to fifty punctures or scratches made in rows, with a lancet charged with cow-pox, whose origin was direct from the cow, and had not passed through human veins. We saw there a calf which had been vaccinated ten days ago. The animal seemed in perfect health, cool, and playful. We also saw the first three children who had been vaccinated from this calf. One child presented six vesicles of the eighth day, one of the ninth, and one of the tenth. Although two of the children were hand-nursed miserable little objects from St. Giles's, we were struck with the vigorous and normal development of the vesicles, and at the same time with the absence of anything like extraordinary irritation or feverishness. We hope that Dr. Blanc's undertaking will meet with the support which its intrinsic merits, and his readiness to co-operate with his Professional brethren, deserve. For revaccination of the inmates of schools and institutions, the operation direct from the calf offers many advantages.

CONTAGIOUS DISEASES.

Our military readers will be glad to hear that it is not the intention of the War Office authorities to reintroduce the rule of weekly personal inspection of soldiers, as had lately been suggested to them. The subject has for some time been under serious consideration, and the reasons advanced by the Director-General of the Army Medical Department against the renewal of the custom have been considered to be valid against those urged by the advocates of the system. At the same time, the greatest vigilance is necessary, during the present limited application of the Contagious Diseases Act, to prevent as far as possible the introduction of fresh sources of contagion into garrisons and camps where the Act is in force, and troops entering such stations have for several months past been carefully examined. We have heard that there is some suspicion that the arrival of militia regiments at Aldershot has lately caused an increase in venereal diseases in that camp. It is much to be regretted if such result be attributable to previous inspection having been omitted in their case. A further argument for uniformity of system between the militia and the line will, however, have been supplied by the fact.

NAVAL MEDICAL NEWS.

We hear that it is the intention of the Admiralty to make very considerable changes at the end of the current quarter, by removing from their present appointments many of the senior Surgeons who have held them over five years. We doubt not that it will be remembered that in several instances their appointments were given as a premium for services which gave promotion and honours to those executive officers who were present on the occasion, and therefore should rightly cease on promotion or by age for retirement. It is said, too, that some honorary distinctions are about to be conferred on the Inspectors-General who were lately compulsorily retired. We are glad of these changes, so long as the interests of individuals are somewhat respected, as they all tend to widen the circle of benefit to deserving officers. By the death of Retired Deputy-Inspector William Folds, an Honorary Surgeoncy to her Majesty falls vacant.

MEDICAL SERVICE DINNER.

We have pleasure in directing the attention of our Medico-military readers to the announcement in our advertising columns that the officers of her Majesty's British and Indian Medical Services propose to dine together at Willis's Rooms, King-street, St. James's, on Friday, the 28th inst., at 7.30 p.m. It is hoped that the dinner may prove to be the inauguration of a series of annual re-unions similar to those held by the officers of most of her Majesty's regiments. As an agreeable means to a highly desirable end—namely, the furtherance of departmental sociability and good fellowship—we trust that our military brethren, full-pay and retired, may muster in force, and "that good digestion may wait on appetite, and health on both."

MEDICINE IN CALIFORNIA.

The last number of the *California Medical Gazette* shows that our cousins on the shores of the Pacific are occupied with questions similar to those which engage the attention of ourselves. The first "leading article" has reference to "venereal contagion," in which the writer advocates the examination of prostitutes and their limitation to licensed houses to prevent the spread of venereal diseases, which at the present time appear to be frightfully prevalent in San Francisco. The writer says, "So long as there remain in our city alleys and dens swarming with the most depraved and diseased of Chinese, European, and American women, so long will there flow from San Francisco a sea of misery, whose poison will be felt in every portion of our fair Pacific slope." The second article refers to vaccination and revaccination. The conclusions arrived at are:—"Revaccination is a precautionary measure, primary vaccination is only a precautionary measure likewise, and we hold that the former is as necessary as the latter, and that it should be as systematically performed." Quackery is rampant in San Francisco. It is asserted that one quack alone spends 2500 dollars a month for a column or two of a morning paper, in which "he sets forth his wonderful medicine and his intuitive talent in curing disease, backed by a host of mendacious certificates." It appears that the daily papers who do not get the advertisements of this great quack are loud in their denunciations of the "miserable old braggart charlatan." The origin of the outcry was the exposure of an ordinary swindle by the quack in question in a recent number of the *Pacific Medical Journal*. The editor of the *Medical Gazette* states that he should be very much gratified if the indignation expressed were really felt; but unfortunately, with rare exceptions, all the daily papers published in San Francisco advertise any charlatan's "notice," be it simple, vicious, or otherwise. It appears from the San Francisco Directory that 354 persons in that city claim to be disciples of Æsculapius, and, supposing the population to be 135,000, it gives one "Professor" to every 381 persons. This does not include *other Physicians* or irregular Practitioners under various designations.

ANALYSIS OF DRINKING WATER IN HOLLAND.

Mynheer van Dunck had some kind of reason in his madness about the necessity of avoiding water. A report just issued by the Dutch Government gives the result of a most elaborate inquiry into the state of the various Dutch drinking waters, and the connexion between the state of them and the state of public health where they are drunk. The commission to make this inquiry was issued in July, 1866, and the thoroughness with which the work has been done may be judged of by those persons who have had possession of the thick volume they have produced. It is to be observed that the Commission began its work some time before the publication of the new methods of water-analysis, and, from the obvious necessity of preserving uniformity, had to go on as they had begun. Wanklyn, Chapman, and Smith's method dates from Midsummer, 1867; Frankland and Armstrong's was published about the same date, but not explicitly in full detail until Spring, 1868. The circumstance that neither the one nor the other is adopted in the report does not imply any kind of censure on either. It is, however, but fair to Messrs. Wanklyn, Chapman, and Smith to state that their method of water analysis has been fully tested by three of the Dutch chemists, and has been of great service in the examination of the Dutch water.

Inspecting the tables of analyses given in the report, we are struck by the extraordinary impurity of much of the water—100 grains, and sometimes much more, solid matter per gallon is not of unfrequent occurrence. The amount of permanganate of potash reduced is sometimes enormous, and in the different kinds of Dutch water varies very much. Certainly the condition of these waters goes a long way to establish confidence in the permanganate of potash as a test for markedly bad water. Dr. Letheby, Dr. W. A. Miller, as also Messrs. Wanklyn, Chapman, and Smith, all agree in considering permanganate of potash to be perfectly available for very bad waters; only the latter three gentlemen have insisted upon it that it is not sufficiently delicate in its indications to distinguish between two waters one of which is *very* pure and the other only moderately pure. The amount of ammonia exhibited by some of these waters is very high and very various. Ammonia, either free in the water at the time of its examination or obtained by the destruction of the organic matters in water, is the measure, according to Wanklyn, Chapman, and Smith, of the organic nitrogenous impurity of water. Both nitrates and *nitrites* have been tested for, but not esti-

mated. Probably the commission considered the nitrates to be *too remotely* connected with organic impurity to repay the trouble of estimation.

The statistical portion of the report has been done with extreme care, and the conclusion can hardly be resisted that cholera is connected with the state of the drinking water. We have translated the following striking conclusions, which embody the pith of the report:—In 15 communities wherein drainage water was drunk there died of cholera 17·7 out of every 1000 inhabitants. In 22 communities drinking either pump, well, or fountain water, 16·8 died of cholera out of every 1000. In 18 communities drinking river water the number of cholera deaths was 11·9 out of 1000. In 16 communities drinking rain water only 5·3 died of cholera out of every 1000 inhabitants. These facts speak for themselves. It will be observed that they are independent of the water analysis. In Holland it is only by drinking rain water that the inhabitants can enjoy comparative immunity from cholera.

We subjoin a specimen of the results of analysis, and add, for the sake of comparison, one of Dr. Frankland's analyses of London water.

Name.	Date.	Solids per 1,000,000 parts of water.	Free ammonia per 1,000,000 parts of water.
Rotterdam (Delft Canal)	Feb. 18, 1868	215·0	1·83
Other Rotterdam waters (1)	,,	210·0	0·00
,, (2)	March, 1867	337·5	9·99
Frankland's Analyses of London Waters.			
West Middlesex (Thames)	May 1, 1867	271·6	0·04
New River	May 15	246·8	0·04

FROM ABROAD.—CLAUDE BERNARD, SÉNATEUR—DISTURBANCE AT THE PARIS FACULTY—FRACTURE OF THE LOWER THIRD OF THE LEG.

M. Latour thus speaks in a recent *feuilleton* of the elevation of Professor Claude Bernard to the Senate, and of the Medical candidates at the elections which are to take place next Sunday:—

"We have now three of our *confrères* in the Senate, the quite recent nomination of M. Claude Bernard forming, with M. Conneau and M. Nélaton, a Medico-senatorial triad, the like of which has never been seen at any time or in any country. May God grant that nothing may happen amiss with the health of the Senate, for otherwise what a chorus of pleasantries we shall hear as to what can be done against three! Never mind, young *confrères*, but look at the encouraging and magnificent example given you by Claude Bernard. Who, twenty-five years since, could have said that the young pharmacy student, repairing from a humble provincial shop in order to sudy Medicine in Paris, would one day have attached to his name the brilliant titles of Professor at the College of France, the Museum, and the Faculty of Sciences, and of Member of the Academy of Medicine, and Academy of Sciences, and now of Senator? If there are poor labourers in science who remain unknown in the shade, without encouragement and without reward, let us at least recognise with satisfaction, in this striking example of M. Bernard, that things do not always take this sad course. Let us also recognise that youth, talent, and industry are not always without their protectors. Claude Bernard certainly owes a portion of his scientific good fortune to the generous and devoted protection of two of his illustrious masters—Magendie and Rayer. I dwell on this as a means of encouraging the young, too much inclined to believe in neglect and too much disposed to look only at the worst side of the events of this world. It is too true that there are unfortunate examples of desperate struggles of talent with fortune, silence, and isolation, and the names of Laurent, Gerhardt, and Gratiolet especially rise into the mind with their aureola of talent, labour, and misfortune; but it is precisely from the painful emotion which these sad examples have produced in public opinion that I draw the consoling conclusion that such afflicting cases are rare and exceptional. If it were a general rule, public opinion would not be so concerned about it.

"Well, then, we have now got three Doctors in the Senate, and with M. Dumas we may even say four; and while acknowledging that M. Nélaton alone represents in that body active, militant, practising Medicine, M. Dumas represents the Medicine of scientific chemistry, M. Bernard the Medicine of experimental physiology, and M. Conneau the Medicine of affection, devotion, and courage. There are still places there for the Medicine of the army and of the fleet, and names worthy of occupying them are not wanting. From the Senate let us pass to the Corps Législatif. To gain admission into the Senate only one vote is wanting, that of the Sovereign occupying the Tulleries, and that vote is not to be got by whoever desires it. For the Corps Législatif it is another sovereign who has to be captivated and seduced, and of this sovereign numberless are the votes that have to be obtained. Well, in face of such a task, a thousand times more difficult than the twelve labours of Hercules, a considerable number of our *confreres* do not hesitate. Up to this time I have counted more than forty Doctors (I do not yet know all of them) who are electoral candidates. I shall not enumerate them, for any whom I might forget would be furious against me; but I find them in all directions—North and South, East and West, at the extremities as well as the centre, and even in Paris itself. Yes, in Paris; for M. Berrier Fontaine, one of the Emperor's Physicians, is a candidate in opposition to no less a person than M. Thiers, while in the arrondissement de Sceaux there is almost a Medical candidate in the person of M. Bouley, the veterinarian, member of the Institut and of the Academy of Medicine. In the last Chamber there were five or six Doctors. How many shall we have in the next? I see nothing but advantage in having a certain number returned, if, as it is stated, the next Chamber is to have laid before it a bill for partial or total Medical reorganisation."

Disturbances have again broken out in the Paris Faculty, the pharmacy class being the seat of the rioting this time, and Professor Regnault the victim. Several of his lectures have been entirely stopped by the cries and disturbances that have interrupted them. The interference of the Dean was unable to restore quiet, and the few who wish to hear the lectures undisturbed have had to be admitted by a private entrance. The disturbance seems to have arisen from a persuasion that M. Regnault had exercised his functions as an examiner with undue severity, the cause of the rejected students being vehemently adopted by their comrades. It seems to be agreed that there is something wrong in the examinations on the accessory subjects, either as to the period of the student's career at which they take place, or the amount of proficiency expected to be exhibited; but a main defect would seem to be that the Professors of the Faculty are both the teachers and the examiners.

At the last meeting of the Paris Surgical Society, a discussion took place on the appreciation of the amount of danger attendant upon compound fracture of the lower third of the leg, with possible penetration into the joint, and how far amputation or an attempt to save the limb should be the rule of practice in such cases. M. Le Fort distinguished these three circumstances:—1. When the fracture is complicated by a wound of slight extent, unaccompanied by much shattering or considerable splinters of bone, an attempt should be made to preserve the limb by converting the compound into a simple fracture by the aid of occlusion effected by the application of goldbeaters' skin and collodion, thus substituting a kind of artificial skin for the lost external integument. In this way a considerable number of such fractures may be successfully treated. 2. When the injury is more considerable, and there exist splinters, but there is reason to believe that the joint has not been penetrated, conservation of the limb may still be attempted. The splinters are to be removed, and the end of the bone which projects is either to be reduced or excised, treating the subsequent inflammation by appropriate means—*e.g.*, by continuous irrigation. 3. When there is good reason to believe that the joint is penetrated, which is almost always the case when the perforation of the skin has been made from within outwards by the issue of the bone, then the best chance of saving the patient's life is by immediate amputation. It is especially in the cases of fracture termed spiroid and V-shaped that M. Lefort, in common with M. Bérenger-Ferand, is a partisan of immediate amputation. M. Panas has tried in three cases to preserve the limb in compound

fracture situated at two or three fingers' breadth above the joint. Two terminated fatally, the fracture being found communicating with the joint, and the other recovered, there being reason to believe that in this the communication did not exist. In two other cases M. Panas practised immediate amputation, both patients dying, and in both communication with the joint existing. In two of his cases alcoholism and the hygienic conditions under which the patients were treated may have contributed to the fatal termination. Seeing the frequency with which these fractures do communicate with the joint, he is of opinion that when they are situated near it and are complicated with wounds, immediate amputation constitutes the best practice. M. Demarquay believed that no positive indications for the Surgical treatment of these cases can be laid down, for there exists no sign enabling us to ascertain with certainty whether the fracture has penetrated the joint or not. Nothing can be more simple and expeditious than the precept always to amputate, but experience has shown that some of these patients can be completely cured without amputation. Still, M. Demarquay is not disposed to overlook the gravity of comminuted fractures of the lower end of the tibia; but except in cases of extreme urgency, wherein the amount of the injury decides practice, he sees nothing but doubt and uncertainty in all that concerns the indications and contraindications of immediate amputation, and in a case of doubt he inclines to the side of conservative Surgery. M. Trélat observed that the anatomical diagnosis of comminuted fractures of the lower end of the leg by no means necessarily carried with it the prognosis; and, in the present state of science, it is impossible to determine in advance the issue of a given complication. Thus, it cannot be foretold whether a fracture with penetration of the joint will be followed by a cure or not; for cases are met with in which formidable accidents arise, while in others recovery takes place without any grave complication occurring. It is a question of prognosis rather than of anatomical diagnosis. M. Trélat has had occasion to treat five individuals in full vigour of age and constitution who were subjects of fractures of the lower third of the leg, the fractures being comminuted, with fragments projecting, of the spiroid variety, regarded as dangerous beyond all others, and in all probability communicating with the joint. These were all cured without amputation, through the aid of various means, employed separately or combined, as occlusion with goldbeater's skin and collodion, special adjusting apparatus, large incisions laying open the centre of the fracture, reduction, excision, drainage, ablution, detersive and disinfecting injections, etc. Thus, in these young and robust persons conservative Surgery completely triumphed, notwithstanding the severest complications; and it is indeed impossible to lay down any certain indications as to the performance of immediate amputation in such cases, because it is impossible to foresee the issue of the lesions which accompany this description of fracture, even the severest of which may be followed by recovery when the patients are placed in favourable general and individual conditions. M. Marjolin added that account must also be taken as to whether the fractures have been produced by direct or indirect causes. He agreed with other speakers that it is impossible to say at first whether the fracture will or not allow of preservation of the limb.

PARLIAMENTARY.—PHARMACY ACT AMENDMENT BILL—CONTAGIOUS DISEASES ACT.

In the House of Commons on Thursday, May 13,

The Pharmacy Act (1868) Amendment Bill was read a third time and passed.

Mr. Bruce moved for a Select Committee to inquire into the working of the Contagious Diseases Act, 1866, and to consider whether, and how far, and under what conditions it would be expedient to extend its operations.

Mr. Mitford stated that, in consequence of Lord Morley having given a pledge in the other House that the matter would be taken up by the Government, persons interested in it had been prevented from taking action in the matter. The Government should at least have taken some notice of a memorial signed by Physicians and Doctors, and endorsed by the heads of colleges at Oxford and Cambridge and the Vice-Chancellors of the Universities.

Colonel North also expressed a hope that the Government would proceed earnestly in the matter, which was of the deepest importance to the troops, if not to the community generally.

The motion was agreed to.

DEATH BY LIGHTNING.

(*From a Correspondent.*)

Dr. Richardson, in his most valuable and instructive lecture, delivered on the 11th inst. in the Polytechnic Institution, "On the Cause and Phenomena of Death by Lightning," reported in full in this journal of the 15th inst., informed his hearers that the statement made by John Hunter in his "Treatise on the Blood, Inflammation, and Gunshot Wounds," published in 1792, that animals killed by lightning did not become rigid after death, was for nearly fifty years received as a matter of faith, taught in the schools, published in text-books, extorted by examiners as a proof of sound knowledge, and implicitly believed by ninety out of the hundred Professional men, and perhaps still believed by the majority, was discovered not far from twenty years ago by Dr. Thudichum to be a fallacy. It struck us, on hearing Dr. Richardson's statement, that the fallacy had been detected and demonstrated at a considerably earlier period, and, on reference to Sir Benjamin Brodie's "Lectures on Pathology and Surgery," published in 1846, we find that in a lecture delivered in the theatre of the Royal College of Surgeons of London, so long ago as the year 1821, on death from lightning, Sir Benjamin Brodie detailed the results of experiments which he had himself made of a nature very similar to those displayed by Dr. Richardson in his lecture of the 11th inst. He discharged the shock from an electric battery of nine jars through a guinea-pig, in the direction from the head to the tail; the animal fell on one side; there were convulsive actions; it never breathed; in three minutes he opened the chest, and found the heart acting with regularity and vigour about eighty times in a minute, and circulating dark-coloured venous blood. "On dissection no preternatural appearances presented themselves in any part of the body, and the muscles contracted readily when submitted to the influence of a voltaic battery. In this experiment it was evident that the electric shock did not destroy the irritability of the muscular fibre, nor did it affect the action of the heart."

In another experiment death did not immediately result, as in five hours after the infliction of the shock the animal was still insensible and subject to occasional convulsive actions of the voluntary muscles, "but on the following morning he was found dead and stiff."

Sir Benjamin thereupon remarks: "It has been stated on no less an authority than that of Mr. Hunter that in a person killed by lightning there is an instantaneous and complete destruction of the vital principle in every part of the animal machine; that the muscles are relaxed and incapable of contraction; that the limbs do not become stiffened as after ordinary death, and that the body immediately begins to undergo the changes which are the result of putrefaction. That lightning never produces such phenomena as these I am not prepared to assert; but in the experiments which I have described such an instantaneous extinction of vitality certainly did not take place."

Sir Benjamin Brodie's conclusions are that the influence of lightning or of electric shocks is expended chiefly in disturbing or destroying the functions of the brain, and the treatment which he recommends in suspended animation from such cause is to maintain the animal heat and to inflate the lungs.

Steatomatous Tumours of the Scalp.—Dr. Krafft-Ebing says that since 1863 he has removed many of these tumours, varying in size from a bean to a pigeon's egg, by a very simple procedure. This consists in the subcutaneous injection of a few drops of a solution (0·65 in 15 parts of water) of tartar emetic. In two or three days the skin ulcerates sufficiently to discharge the contents of the tumour without inducing erysipelas or nausea. He has not in any of his cases met with return of the tumour.—*Berlin Wochenschrift*, March 15.

ANOTHER GRIEVANCE IN THE INDIAN MEDICAL SERVICE.

(*From a Special Correspondent.*)

The Indian Medical Service has another bitter grievance to complain of, and, this time, a most serious one. Medical officers cannot get home on furlough because, forsooth, the Secretary of State for India will not send a sufficient number of Medical officers out to complete the required strength. The privileges of Medical officers are being tampered with in a way that, if they had any friends in the House of Commons to ask disagreeable questions and to elicit startling replies, would not be tolerated by an English Parliament. Such things never happened in the old days, when it was only necessary to point out a grievance to the East India Company, and it was at once inquired into, and, if real, removed. Has the Indian Medical Service no friends in England who will ask the Duke of Argyll why it is that Medical officers, after years of hard work zealously spent in the service of Government, are debarred from going home to enjoy their well-earned furlough? The Secretary of State for India may say that the question is very easily answered, thus:—"The maximum number allowed to be absent from India—viz., 20 per cent.—has been reached." True, but the Medical establishment is not recruited up to its required strength. So many Medical officers have been permanently removed for special duties that there are not enough left to carry on the ordinary Medical duties of the country. The men who have been withdrawn cannot of course be reckoned; consequently, the 20 per cent. is arrived at sooner than it would be if the necessary complement were present. Indeed, if it was, there would still be a deficiency, as the number—fixed by the "Medical Salaries Commission," which sat in Calcutta between three and four years ago—has been found in practice to be too limited. And not only so; the "uncovenanted" source of supply, from which so much was expected, is a failure. On all sides, therefore, the paucity of Indian Medical officers is very considerable. The personal grievance of not being able to get home to one's family when fairly entitled to do so, is bad enough. But the grievance is also a public one. The work of the State is inefficiently performed, and very soon (as Medical, like other officers, will contrive to leave India on sick certificate, if their furlough be thus unjustly stopped), if a war should break out, there may be, in official parlance, "most serious complications."

It is very uncharitable and unchristian to wish discomfort to any one; but, if justice to a worthy body of English gentlemen can be secured in no other way, one would like to hear of the Secretary of State for India being doomed to pass a few successive hot seasons in the plains of India, alternating between Mooltan, Cawnpore, and Banda, without any intermediate changes to the refreshingly cool climate of a hill station; then he would probably estimate a furlough home at its full value.

REPORT OF THE SANITARY COMMISSION FOR MADRAS, 1867.

Surgeon-Major J. L. Ranking, of the Madras Medical service, having been nominated on October 29, 1867, as the successor of the Hon. Mr. Ellis, C.B., in the office of Sanitary Commissioner for Madras, entered upon his duties on November 30, almost at the close of the year the occurrences of which it has devolved upon him to report. Mr. Ellis, having been appointed Chie Secretary to Government, is now in a position of much influence and power, which he is able to use in support of the Sanitary Department which he organised, and over which he presided so ably. Surgeon-Major Ranking has received from him the most cordial support and assistance on all occasions on which it has been necessary or advisable to consult him.

The health of the military and civil community of the Madras Presidency during 1867 contrasts most favourably with that observed during the preceding year. The reduced death-rate is mainly attributable to the unusual immunity from cholera. The average strength of H.M.'s British troops was 10,793.

			Ratio per mille.	
Admissions into Hospital		14,968	1386·8	
Deaths	In Hospital.	188	17·4	19·9
	Out of Hospital	27	2·5	
Total invalided		590	54·6	
Average daily sick		668	61·8	

So that the total loss by deaths and invaliding during the year amounted to 74·5 per mille. To these numbers, however, have yet to be added deaths of invalids on the homeward voyage and at Netley before discharge from the service, which information is generally given in the annual reports of the Army Medical Department published in this country. The admissions in the native army amounted to 750·1, total deaths to 9·6, and average daily sick 29·5 per mille. In the general civil population the deaths are estimated at 16·4 per mille. In the gaols the admissions into Hospital were at the rate of 1012·4, and the deaths 53·9 per mille. The average death-rate of prisoners in 1866 was 124·5 per mille. The average death-rate of the civil population for the same year was 26·8, and for the native army 13·7, so that 97·7 persons in every 1000 prisoners perished in excess of those who would have died in the same number of the free population, and 110·8 in excess of the deaths amongst a like number of the native army. The death-rate in the Madras gaols has hitherto been higher by 20 per mille than that recorded in gaols in Bengal and Bombay. The Hon. Mr. Ellis affirmed in 1866 that the Madras gaols were extremely bad as regards overcrowding and defects of ventilation, being in these respects much inferior to those of the other Presidencies. Active measures were taken in 1866 to remedy the defects by building large central gaols and improving those already in existence, and in 1867 considerable progress had been made. Three central gaols were finished, three others were well advanced, the overcrowding in the district gaols has been relieved, and several improvements in general accommodation, ventilation, and other sanitary requirements have been effected. A reduction in the death-rate of 70·6 and in the admission rate of 237·3 per mille has already resulted, and the average daily sick (40·7 per mille) is lower than that of the gaols in Bengal in any year from 1859 till 1865 inclusive, or in Bombay from 1862 till 1865. There are no means of comparing the average daily sick-rate of prisoners in 1867 with that of preceding years in Madras. Such a rate of mortality among prisoners is most lamentable, and it is to be hoped that the amendment already recorded may be permanent.

Madras still maintains the unenviable position, as relates to "admissions" and "constantly sick," of the last place in relative salubrity amongst all stations in the Madras Presidency, and last but one in reference to its death-rate. The admissions were 1848·4, the constantly sick 84·8, and the deaths 31·9 per mille. These high rates, however, are largely made up of sick men sent to the Presidency for change of air; but, even on these being eliminated from the general return, the broad fact remains that the admission, daily sick, and death rates of the British troops at Madras for the last two years are higher than those tabulated at any other large station, except in the one instance of Secunderabad, where the death-rate only has been higher.

There has not yet been any change effected in the sanitary condition of Fort St. George. The offensive miasma from the great sewer which discharges itself into the sea at the north of the fort still continues, especially during the north-east monsoon, to diffuse an intolerable stench throughout the barracks, particularly when the mouth of the sewer is opened during low water at night. The insalubrious state of the fort ditches still exists. This state of affairs will admit of no remedy until Captain Tulloch's scheme for drainage of the Presidency town shall have been completed and put into operation. That officer is now in England maturing his plans and studying the most recent and improved system, not only of main, but of house sewerage, and of the utilisation of sewage in the fertilisation of land.

The expense of the dry system of conservancy has been found to be enormous, and, even in carrying it out to a limited extent, the greatest difficulty is experienced in disposing of the refuse. It has been spread upon waste land, and it has been buried; but the objections to both courses, particularly the former, on account of the stench, are insurmountable, and to the latter on account of its surrounding the place with a chain of ordure pits, which must sooner or later further contaminate the already impure water supply. Hence "cinerators" have been proposed to burn off all organic refuse, and one is to be built as an experimental measure.

The water supply of Madras continues in a very unsatisfactory state. In the report for 1866 the hope had been expressed that, on the completion of works then in a forward state, the Spur tank would by the end of 1868 receive an almost abundant supply of good water. While the method of distribution was still under consideration the Spur tank system fell out of favour; it was found that the machinery and working charges for maintaining the water supply under pressure would be more than the

municipal funds could afford, and an entirely new system of distribution by gravitation is about to be proposed. A new local act will be necessary to legalise the non-adoption of the pressure system decided on in 1867. This cannot be done until the new scheme is approved, which again, in its turn, cannot be carried out until legalised, so that there must still be considerable delay before a good water supply can be made available for Madras.

The new cantonment of Trimulgherry, about three miles from Secunderabad, does not stand in such a favourable light as it hitherto enjoyed as regards its salubrity, in comparison with Secunderabad. The 2nd Battalion 21st Fusileers exhibits a very high ratio in all points, with a death rate of 47·5 per 1000. The comparative results for the year are as follows:—

	Secunderabad. Ratio per mille.	Trimulgherry. Ratio per mille.
Admissions	1777·70	1395·40
Daily sick	78·90	78·70
Deaths in and out of Hospital	31·24	35·13

In 1864 the death rate at Trimulgherry was 7·61 per mille, in 1866 26·8, and in 1867 35·13. This sad increase of mortality is attributed chiefly to intemperance, consequent upon the distribution to the troops of large sums as "prize" and arrears of pay. This is a subject of extreme importance as regards the health of our troops both at home and abroad. Reform in the system of distribution of bounty, prize money, etc., is urgently needed on sanitary, moral, and financial grounds. It appears to us that there should not be much difficulty in arranging such matters that all sums so accruing to soldiers should be funded at a moderate rate of interest, so as to be available as capital on final discharge. By so doing the health and general efficiency of the army would be protected; if a man will kill himself by drink, it is better that he should do so as a civilian or pensioner than at the expense of the country while under contract as a soldier. The probability of his doing so on receiving his capital on discharge would, however, be considerably diminished by the knowledge of the value of money which would have been attained during the period of its detention in Government securities rendering a moderate half-yearly interest.

There are other factors in the increased mortality of Trimulgherry in the shape of filthy tanks and swampy cultivation in close vicinity to the barracks. These were pointed out in 1863 by Surgeon-Major Ranking, whose opinions have been lately confirmed by Mr. Hadaway, the present Inspector-General of Hospitals H.M.'s British Troops in Madras, and it is to be hoped that their representations will have the effect of producing action on the part of Government on these points.

Rules for the prevention of venereal diseases, though in force in some stations, have not yet been introduced into many others, chiefly from want of accord between the "civil" and "military" authorities; this difficulty is, however, being smoothed away, and it is hoped that the Contagious Diseases Act may soon be extended throughout all the military stations. Surgeon-Major Ranking has divided the stations of the Army into two groups —namely, those at which there are Lock Hospitals, and those at which such institutions do not exist. The former are eight in number, and furnish an aggregate admission rate of 201 admissions per 1000 of strength. The latter, fifteen in number, show 224·9 admissions per 1000 of strength—which, as Surgeon-Major Ranking remarks, does "not say much for the working of those institutions under the rules and regulations in force during the year. Fort St. George (Madras) holds the most unenviable place, the admissions being 412·7 per mille." On the other hand, Trichinopoly, at which there is a Lock Hospital, gives 412·3 admissions per 1000. A Lock Hospital is about to be built at Madras, and the Indian Contagious Diseases Act of 1868 is to be applied to the mercantile marine in the harbour. On the whole, the admissions for venereal diseases have been less than during any year since 1860, but it is evident that the utmost vigilance and most unremitting care must be exercised in the working out of the Contagious Diseases Act, in order to attain an amount of success equivalent to the unavoidable expense.

A Well-paid Operation.—Dr. Magni, Professor of Ophthalmology in the Bologna University, has been sent for to operate upon a merchant of Lima, in Peru, for cataract. He has already set off, accompanied by Dr. Regnoli as his assistant. It is said that the remuneration is to amount to 100,000 francs (£4000), besides all the expenses of his journey, which will last for three or four months, and we augur it will be a pleasant one for the illustrious Professor and his able assistant. *Gazetta Med. di Torino*, May 10.

REVIEWS.

RECUEIL DE RAPPORTS SUR LES PROGRES DES LETTRES ET DES SCIENCES EN FRANCE.

Rapport sur les Progrès Récents des Sciences Zoologiques en France. Par M. Milne-Edwards. 1867. Pp. 498.

Rapport sur les Progrès de la Physiologie Générale en France. Par M. Claude Bernard. 1867. Pp. 238. Paris: Hachette. London: Williams and Norgate.

Amongst the permanent benefits resulting to science from the late Paris Exhibition must be placed a series of very elaborate reports, published under the auspices of the Minister of Public Instruction, on the recent progress of the various departments of science in France. Two of the most valuable of these reports are those by Milne-Edwards on "The Recent Progress of the Zoological Sciences," and by Claude Bernard on "The Recent Progress of General Physiology."

Milne-Edwards's Report consists of a brief historical introduction and four chapters treating respectively (1) of works relating to the multiplication and development of animals, (2) of works relating to the mode of organisation of different animals, to their zoological characteristics, and to their laws of distribution, (3) of works relating to the history of the functions of the animal economy, and (4) of works relating to general zoology. Under the first of these heads the reporter gives an excellent sketch of the prolonged discussion on spontaneous generation that has disturbed the French physiologists, and, indeed, the scientific world at large, ever since Pouchet, in 1858, first propounded his heretical views on a point that was regarded as definitely settled by the experiments of Schulze in 1836. While fully admitting that M. Pasteur's rigorous experiments have quite settled the question, he adds that "the ideas which have so ably been sustained by M. Pouchet are not abandoned by all physiologists; thus MM. Joly, Musset, and Meunier in France, M. Montegazza in Italy, Schaffhauseu in Germany, Dr. Child in England, and Dr. Wyman in America,(a) consider themselves justified in maintaining that microscopic animalcules may, as it were, form themselves from their constituent parts and assume vitality without the intervention of a previously living being" (p. 33). If, he adds, observers of such a class as these hold views directly opposed to those generally entertained, it is at all events expedient that the causes of such discrepancies should be investigated. One of the circumstances which may have led the partisans of spontaneous generation into error probably is the extreme power of resisting the destructive action of high temperatures possessed by different minute organisms. Thus, M. Gavarret has found that tardigrades and rotifers which have been completely dried may be exposed to a temperature of 110°C. or 240°F. without their vitality being destroyed. The volvox (a well-known vegetable microscopic organism) possesses the same property, and while the pages of this Report were passing through the press M. Pouchet made the announcement that certain vegetable embryos had a far greater power of resisting the destructive action of heat than is generally supposed. Thus, the seeds of an American plant of the genus *Medicago* may be boiled for four hours without losing the faculty of germinating. As an illustration of the tenacity of life, we may also refer to the experiments of Davaine, who preserved alive for five years, in a weak solution of chromic acid, the eggs of an intestinal worm (*Ascuris lumbrieus*) occurring in the common *Testudo græca*. Again, several observers have seen the Colpodæ and certain other infusoria evolving from their bodies a coagulable matter which solidifies round them and may protect them from external destructive influences; and further, it has been shown by M. Pasteur's researches that infusoria and their germs are capable of traversing bodies, such as mercury, which might be supposed to offer an insuperable obstacle to their passage. The last-named fact may serve to explain the recent curious experiments of M. Donné, who, on covering freshly laid eggs with carded cotton so as to protect the shell from contact with atmospheric dust, and leaving only one small orifice in the envelope, found that, after a time, microscopic vegetations were developed in the interior of the eggs thus treated, and if a little water was introduced, animalcules in great numbers appeared. The same results follow if the egg has been hard-boiled.

The mode of origin of intestinal worms and other parasites infesting man and animals is next considered. The reporter

(a) To these names may now be added those of Professors Owen and J. H. Bennett.

somewhat ingeniously claims for a Frenchman, M. Felix Dujardin, one of the first discoveries in this direction, because his investigation in 1842 of the habits of *Mermis* led the way to the admirable researches of Siebold regarding the necessary migrations of the *Filaria* generally; and he all but maintains that Van Beneden, who gained one of the prizes offered by the Academy for the best essay on the development of the cestoid worms, is a Frenchman, on the ground that Belgium is French in its language and in its scientific tendencies, as well as in its origin. Frankly enough, however, he associates with the name of Van Beneden those of Küchenmeister (of Zittau), Siebold (of Munich), and Leuckart (of Giessen), in regard to the grand discovery of the life-history of the tape-worm. The researches of Davaine and others on the presence of Bacteria, which appear to be the larvæ of some of the *Filaria*, in the blood of the frog, rat, cat, dog, and man, are then noticed. In man their presence is associated with carbuncular disease, which may be spread from one individual to another by blood inoculation. The presence of these organisms in the blood of sheep is the cause of one of the diseases which are most fatal to this animal.

The abstruse subjects of life and vital force are next considered. "At first sight," he observes, "the motor power which animates all the parts of the living machine appears to be single and indivisible; but this conception of the life of an individual is obviously incompatible with many well-attested facts, and, to comprehend many physiological phenomena of the greatest importance, we must believe that every *organite* or anatomical element of which the animal body is composed possesses its own vitality." (P. 52.) How else can we explain that the tail of a lizard, which is separated from the body with great ease, will continue moving for several hours? or why do very small fragments of ciliated mucous membrane continue swimming about rapidly for more than a day? Such phenomena as these were formerly explained by supposing that a certain quantity of nervous force developed by the organs essential to the life of the individual and transmitted to the peripheral parts of the organism were in some way stored up in those parts, and consumed there after separation from the mass of the organism. The recent observations of Vulpian, Bert, and others show that separated parts—as the tail of a lizard or of a tadpole—continue to execute movements for a considerable period, in consequence of their constituent tissues possessing a vitality of their own, which is independent of the general vitality of the organism collectively. In one experiment the amputated tail of a tadpole remained alive for nine days, and grew very perceptibly during that interval. Moreover, the healing of the stump at the seat of amputation affords evidence of the independent vitality of the tail. But as this animal fragment did not possess the physiological instruments necessary for carrying on its due nutrition, it perished after a time in the futile attempt, as Milne-Edwards observes, to convert itself, like a young polyp produced by scission, into a new and complete zoological individual.

The singular experiments of grafting one part of a living animal into the body of another, commenced by John Hunter, and more recently carried on by Dr. Bert, of Bordeaux, also show very distinctly that in the higher animals (mammals) as well as reptiles the anatomical elements possess a personal vitality independent of the general life of the organism to which they pertain. In one of his experiments Dr. Bert succeeded in engrafting into the back of a living rat the free extremity (of course with the skin removed) of the tail of another rat, which he had just amputated. The transplanted tail not only continued to live, but increased in size, "and consequently possessed the faculty of organised crude materials (*la matière brute*), and of communicating to them the vital principle." We may add—although the fact is not mentioned by the reporter—that this compound animal was well, and was made the subject of exhibition more than a year after the operation, and that after about six months the supplementary tail was found to be unquestionably sensitive.(b)

Amongst other facts bearing upon and supporting the view that the different anatomical elements possess a personal life independent of the general life of the organism may be mentioned the artificial production of osseous tissue by the engrafting of periosteum (a subject with which M. Ollier's name will be always associated), and the production of new nerve-tubes in a segment of the lingual nerve of a dog, introduced under the skin in the femoral region and allowed to remain there for six months. Evidence of a totally different nature is afforded by the beautiful researches of Claude Bernard on the action of curare (the South American arrow poison) which possesses the property of destroying one class of the anatomical elements while the other constituents continue to live. The nervous conductors which normally excite muscular contractions are killed, while the nervous centres from which they proceed and the muscles which they supply retain their physiological power. It is true that the general life of the individual is soon extinguished, but this is an indirect result consequent on the suspension of the necessary movements of respiration.(c) Those who wish to pursue this subject further would do well to read Vulpian's lecture on "Vital Force" contained in the volume which was reviewed in this journal a year or two ago.

The reproduction, development, and metamorphoses of animals are next considered, and as most of our knowledge on these subjects is of comparatively recent date, the report on their progress occupies upwards of forty pages. In this part of it are recorded the marvellous observations of M. de Quatrefages,(d) one of the reporters, on the mode of production of certain annelids (*Syllis* by De Quatrefages, and *Myrianida* by Milne-Edwards). The bodies of these animals are composed of segments or rings, whose number increases with their age. The new segments are always formed between the penultimate ring and the terminal segment. The process of reproduction is analogous to the reparative process by which a lost part is replaced in a lizard, but it is much more powerful; for in Myrianida the bud-like growth which is evolved from the penultimate ring soon becomes developed into an entirely new animal, and before the young individual thus produced separates from the parent stem, it similarly gives birth to a second infant worm, in front of the former one, which is thus thrust backwards. It is uncertain how often this process can be repeated, but in one of Milne-Edwards's figures a series of six young animals of different ages are seen attached to the parent, and arranged in order of primogeniture, the eldest one being next to the tail, and the youngest to the head of the mother. A similar case has been recently noticed in which, in an annelid of the genus *Terebella*, the reproductive faculty lay in one of the anterior segments. Modern French researches on comparative embryology are next considered, and the importance of the study of this subject in relation to classification is pointed out. But a history of embryology which excludes, in consequence of its plan, all reference to the names of De Baer, Rathke, Bischoff, Vogt, Kölliker, Löwen, Martin Barry, Nelson, and Agassiz, is obviously so gross an absurdity that the reporter, regretting doubtless the bonds by which he is restrained, has done the best that lay in his power, both here and elsewhere, to supplement his text by historical foot-notes regarding the labours of those physiologists who had not had the good fortune to have been born Frenchmen. The practical value of researches on the fecundation of some of the lower animals was recognised by De Quatrefages(e) in 1848, who pointed out that by artificial impregnation lakes and rivers in which the fish had been destroyed might be restocked; and, as all our readers know, pisciculture is now a widely extended branch of industry both in France and elsewhere.(f)

In his report on the progress of our knowledge regarding the metamorphoses of animals, he refers to the remarkable observations made in 1866 by M. A. Dumeril, Professor of Herpetology at the Paris Museum of Natural History. Having received a number of living axolotls from Mexico, he soon ob-

(b) Professor Bernard remarks (see page 174 of his Report) with regard to this reversed tail, that the fact of its first being insensible, then confusedly sensible, and finally normal in relation to sensibility, shows that its original nerves transmit the sensitive current in the opposite direction from that in which they transmitted it before the tail changed owners.

(c) As might be expected, Professor Bernard gives an excellent *résumé* of his numerous experiments on curare in his Report.

We may mention in reference to this subject that Vulpian is altogether opposed to Bernard's view that the motor nerves are alone affected. He believes that curare no more paralyses the motor nerves than the sensory ones, and that the poison acts either directly on the muscles or on something intermediate between the muscular tissue and the motor branch. On this subject of dispute the reader may consult Vulpian's ninth and tenth lectures and the thirty-second note to Bernard's Report.

(d) See De Quatrefages' *Rambles of a Naturalist*, translated by E. C. Otté, vol. i. pp. 216—233, for a popular account of his singularly interesting observations on the reproduction of Syllis. These volumes and the same writer's *Metamorphoses of Animals* ought to be in the possession of every lover of natural history.

(e) The first idea of artificial fecundation is, however, due to a German naturalist, Jacobi, who nearly a century ago attempted to stock certain streams with trout by this means, but his attempts, although the experiments were published in France in 1773, were quite forgotten when De Quatrefages took up the subject.

(f) Milne-Edwards tells us that a complete history of pisciculture may be found in the recent work of Blanchard "On the Fresh-water Fishes of France," 1866.

served that they laid their eggs, like frogs and salamanders, after the latter had thrown off their branchiæ or gills. He obtained from these eggs a new generation of young axolotls, and was thus enabled to confirm the view which Sir E. Home (or more probably John Hunter) had suggested, that batrachians might exist which were capable of the act of reproduction while they still retained the tadpole form. But, in pursuing his investigations, he was led to a far more remarkable discovery than this. He ascertained that amongst the young axolotls born of parents provided with branchiæ, and resembling tadpoles, there were some which, after having lived for some time under this form, underwent the same metamorphoses as the frog goes through. Their branchiæ withered and disappeared, their general form was much altered, and, in place of their realising the zoological type presented by their parents, they acquired the mode of organisation presented by aquatic salamanders and the air-breathing batrachians generally, when they have arrived at their full development. It is at least equally remarkable that *all* the young axolotls did not undergo these metamorphoses, and most of these produced young which permanently retained their branchiæ, so that in the axolotl we have an animal capable of producing two distinct kinds of young, each of which is capable of multiplying, although their formations are so different that if their common origin were not known they would be considered as belonging not only to two distinct species, but to two different zoological families.(g) The Reporter concludes his remarks on the metamorphoses of animals with a tribute of high praise to M. de Quatrefages for his interesting little book on that subject, an excellent translation of which was published a few years ago by Dr. Lawson.

The methods by which the different constituent parts of animals are formed and increase in size are next considered. The investigations on the formation and growth of bone by Flourens, Brullé and Hugueny, Robin, and Alphonse Milne-Edwards (the son, we believe, of the reporter), are duly considered, as also are those of Guillot and of Robin and Magitot on the formation and evolution of the teeth and jaws, which in some respects differ from the generally accepted views of the late Professor Goodsir, than whom a more patient and accurate observer never existed. During recent times much additional knowledge has been gained regarding the mode of formation of the solid parts of those groups of the lower animals which were till lately confounded together as polypi. Amongst those who have specially distinguished themselves in this department must be mentioned Milne-Edwards himself (*Histoire Naturelle des Coralliares*, vol. i. 1857, and numerous memoirs in the *Annales des Sciences Naturelles*), the late J. Haime, and Lacaze-Duthiers, whose *Histoire Naturelle du Corail* (1864) is one of the most interesting works on natural history that we ever read.

The chapter that we have been considering concludes with a sketch of the recent advances made in the study of teratology, or the doctrine of monstrosities. While the researches of the two St. Hilaires, of M. Serres, and others afforded evidence that deviations from the common law are not the results of chance, but are influenced by and subject to certain rules, the causes which occasioned these deviations and the mechanism by which they were induced remained almost totally unknown. With the view of eliciting further information on these mysterious points, the French Academy in 1859 offered one of their highest prizes for the best essay "on the experimental study of the modifications which may be occasioned in the development of a vertebrated animal by the action of external causes." The prize was equally divided between M. Dareste and M. Lereboullet, the former of the two studying the eggs of the common fowl, and the latter the eggs of the pike, which were selected in consequence of the transparency of their envelope and of the facility with which any number might be obtained by artificial fecundation. The observations of M. Lereboullet seem to have been confined to tracing certain early embryonic changes with the formation of double monsters, such as fish with one body and two heads, two bodies and a single tail, or a single head and two bodies; and, as he does not seem to have employed any external agencies to induce these embryonic changes, he can scarcely be considered as having complied with the demands of the prize question. M. Dareste, on the other hand, conducted his experiments with the main view of artificially producing monstrous chickens and of studying the organic anomalies that may be induced by the influence of different disturbing causes. He constructed a very perfect artificial incubator, which answered all the purposes of sitting, and examined the effects produced by lowering the temperature at different periods of incubation, by applying to the shell solutions which rendered it impermeable to air, by variations of position of the egg, by the unequal heating of different parts of it, and by many other unaccustomary conditions. He found that, when the disturbing force acted at the earliest stage, the number of monstrosities was much increased above the ordinary ratio; but if it was not applied until the development was somewhat advanced, no monstrosities were caused, but death often ensued. To a certain degree he could obtain a special anomaly at will. For example, by unequally heating different parts of the egg, he could produce a malformation of the blastoderma, and of the vascular area which acts as the transitory organ of respiration; and he always obtained dwarfs when the eggs were hatched at a higher temperature than that of normal incubation. He likewise discovered various connexions between certain early embryonic anomalies and anomalies in more advanced life, as that anencephalia may be indirectly occasioned by an anæmic state of the blood, which gives rise to dropsy of the cerebral ventricles, and that inversion of the viscera commences with a modification of the primary state of the heart. It is deserving of record that this *savant* has devoted no less than ten years' continuous study to this subject.

The portion of this report which treats of works and memoirs on the organisation, zoological characters, and distribution of animals, extends over nearly 200 pages, and is full of interest to the naturalist, zoologist, and palæontologist, to whom we most cordially recommend it. The subjects of which it treats scarcely, however, fall within the scope of a Medical journal, and we therefore pass on to the next part, which treats of the recent history of the functions of the animal economy.

(To be continued.)

(g) We see from the brief report of the proceedings of the Zoological Society at their meeting on May 28, given in the *Athenæum* of June 6, 1868, that young axolotls have been hatched in this country, and that Dr. Günther, who exhibited them, "made remarks on the strange facts connected with the development of this animal." We look forward with interest to the publication *in extenso* of his communication.

FOREIGN CORRESPONDENCE.

FRANCE.

(From our Surgical Correspondent)

PARIS, May 14.

THE Paris Faculty of Medicine may congratulate herself upon the appointment of M. Gubler to the chair of Materia Medica and Therapeutics, for since the death of Trousseau, whose teachings gave so much *éclat* to this branch of Medicine, France has no one so able to fill that important position as our present Professor. Well known to the Profession by his many contributions, he has quite recently added to the list another and very able work, in which we find developed a series of original ideas, but always based upon sound physiological principles and rigorous clinical observations. I refer to his "Commentaries."(a) This book, unlike other therapeutical works which have appeared up to this day in France, will readily permit, as science advances, of a further enlargement. Such an addition could scarcely be made to Trousseau and Pidoux's work; this, in order to elevate it to the height of present Medical teachings, would have to undergo some very material changes in many of its chapters.

M. Gubler admits but of one "Médecine"—the one based upon physiological indications! A medicament is simply a modifier of an organ or a function, but is by no means an antagonist of morbid lesions. We have no "anti's," no "therapeutic specifics," and, properly speaking, there exists no therapeutical agent. A medicament does not cure because it neutralises certain acts, as does one chemical agent another; all it can do is to place the system in the most favourable condition possible to permit it to regain its lost equilibrium—the cure effects itself. Gubler reminds us that our future work in Medicine is less to discover new data than to systematise and arrange the old ones alongside of established physiological laws.

I have lately seen occasional articles about accidents which may arise from the application of blisters to the surface of the body, and Martin Damourette even recommends the administration of large doses of bicarbonate of soda (ten grammes per day from the moment the blister is applied), which he pretends will prevent constitutional symptoms; and he tells us in his private

(a) "Commentaires Thérapeutiques du Codex Medicamentarius." Paris. 1868.

lectures that he has never, since adopting this plan of treatment, met with a single accident. But as these facts have only been noted in private practice which may not extend over a large amount of cases, or where a rigorous observation is difficult to pursue, it is well to examine the matter, though the statement comes from high authority.

It is a well-established fact that the cantharidine, dissolved and absorbed from a blister, thence carried into the circulation, may cause the same series of symptoms as if the medicament had been given internally; for as soon as it comes into contact with an acid, such as it encounters in its passage over the lining membrane of the kidneys, the poison is liberated, produces its irritating effects, and blisters, so to speak, the entire urinary apparatus, and produces the well-known symptoms of cantharidism. But as long as the cantharidine is enveloped by the serum of the blood—so to speak, imprisoned in albumen—it is quite harmless. The same thing is true if we can render the urine neutral, or even alkaline, as is the theory of the alkaline treatment in these cases.

M. Gubler, I notice, is at this moment collecting a kind of statistics upon this point—namely, the urine is examined before and after the application of each blister. So far seventy-nine cases have been examined, and out of these, seven have suffered from transitory accidents, such as dysuria and a slight passing of albumen, lasting about twenty-four hours. Of these seven cases, however, one is counted twice, the accidents having occurred twice during the treatment of a pleurisy after the application of two successive blisters. A second case may be counted as doubtful, for though the patient complained of dysuria, there could be found no trace of albumen in the urine; moreover, he had only been compelled to urinate three times, passing but a small quantity each time. The urine of this patient examined this morning, twenty-four hours after blistering, and which does not exceed two ounces in quantity, passed during the night, is again free from albumen, but contains a very remarkable quantity of uric acid. Now M. Gubler, with reason, puts this case as doubtful, for though the patient complained of dysuria, there is reason to believe that this may be due to the great excess of uric acid and the very small proportion of the watery portion of the urine. The patient having taken tartar emetic, causing many stools, we easily find an explanation for the scantiness of the fluid. If we deduct these two cases from our list, there remain five accidents upon seventy-nine cases, or one in sixteen.

I doubt not M. Gubler will continue these examinations, and also commence a series in which the alkaline treatment will be tried, and I shall give you the results as soon as a sufficient number may have been collected to permit a judgment on the matter.

GENERAL CORRESPONDENCE.

ANIMAL VACCINATION CARRIED OUT IN PRACTICE.

LETTER FROM DR. BLANC.

[To the Editor of the Medical Times and Gazette.]

SIR,—The system of vaccination direct from heifers with spontaneous cow-pox inoculated and transmitted to those animals, and from them to man, offers the following advantages:—

1. It supplies a pure vaccine lymph free from all diathetic and contagious principles.

2. It produces a vaccine lymph bred on its own native ground, and therefore more active, more constant, more apt than ordinary human vaccine to create a longer immunity.

3. It gives an abundant supply of good lymph equal to any emergency.

The first point is so simple that no valid objection has ever been raised against it. Not even that most contagious of diseases, syphilis, can possibly be inoculated with animal vaccination, as the cow and her species cannot be infected with that disease. Even if we admit, for the sake of argument, that there is but little foundation in the general belief that diseases can be transmitted with vaccine, the prejudice against vaccination is nevertheless based on that idea, and on these grounds alone—viz., that popular objections everywhere fall in presence of animal vaccination—we find reasons powerful enough to induce us to admit this practice in England now that experience has given it such a high standing on the Continent.

The cow-pox remaining on its own ground will always be cow-pox, the same as small-pox, however frequently transmitted to man, will always be small-pox; moreover, the practice of transmitting the virus through the younger animals has the advantage of depriving it of its first irritability without impairing any of its vital properties. This fact is now beyond doubt; 40,000 vaccinations practised in Paris, 4000 to 5000 in Brussels, all bear this testimony, that at the present day no difference can be found in any of the qualities of cow-pox from those made with the very first inoculations; the vesicles now observed are as fine, their appearance the same, their march identical to those obtained some years ago. Nevertheless, in animal vaccination a precept has been adopted and acted upon—that is, on all possible occasions to renew the cow-pox in use; though hardly needed, the precaution is wise in itself.

With one heifer 500 persons can be vaccinated; from one heifer ten heifers at least can be inoculated; five days are sufficient to have an abundant, nay, unlimited, supply of good lymph. In presence of an epidemic it is easy to imagine of what immense value this facility of obtaining a large supply of good lymph will always be.

I will not in this short note go any more into the subject and discuss the relative value of the two systems—the opening of the vesicles, revaccination, etc.—and cannot better conclude than by giving on this important question the valuable opinion of Dr. E. Ballard. In his book on "Vaccination, its Value and alleged Dangers," Dr. Ballard says:—"I confess that I should be glad to see animal vaccination adopted also in this country as a part of our national arrangements for the prevention of small-pox."

I am now prepared to vaccinate with the lymph obtained from heifers every Monday and Tuesday, from 11 to 1, and would feel obliged if you would inform, through the medium of your valuable paper, both the Profession and the public that on the above-mentioned days any person can be vaccinated free of charge. All—friends as well as adversaries of the system—are invited to come and examine for themselves; there is no mystery; nothing hidden; it is open to all to see and judge honestly of the value or not of the system I have introduced into this country. I am, &c.

9, Bedford-street, Bedford-square, W.C. H. BLANC.

FIRST REPORTS ON DIPHTHERIA IN ENGLAND.

LETTER FROM DR. B. W. RICHARDSON.

[To the Editor of the Medical Times and Gazette.]

SIR,—Permit me to correct, through your columns, an accidental error of dates in my paper read before the Medical Officers of Health on Saturday last. In the reading of the paper it was stated that the first account of cases of diphtheria in England was published by Mr. Haffenden, of Canterbury, in the report on the progress of epidemics in the *Journal of Public Health* for April, 1856. I find, however, on consulting the journal, that Mr. Haffenden's notice was second in order of time, and that information respecting the commencement of diphtheria in this country had been published from direct observation six months previously by Dr. Druitt, the present President of the Association of Medical Officers of Health. Dr. Druitt's paper, noticing the fact of the occurrence of a case of diphtheria in London, will be found in the *Journal of Public Health* for December, 1855. I am, &c.

12, Hinde-street, W., May 19. B. W. RICHARDSON.

CRITIQUE ON SOME PARTS OF DR. BARNES'S LECTURES ON OPERATIVE MIDWIFERY.

LETTER FROM DR. E. W. MURPHY.

[To the Editor of the Medical Times and Gazette.]

SIR,—There is nothing on which obstetric Practitioners and writers differ so much as in operative midwifery. The use of instruments, the propriety of turning the child in certain cases, and the removal of the child by means of the Cæsarian section, have all been discussed with an energy approaching almost to a dispute. Dr. Barnes has had a controversy, not a dispute, with Dr. Radford on the comparative merits of craniotomy and the Cæsarian section. This has been an old subject of discussion. In this country the Cæsarian section had been, so to speak, "tabooed." The operation was not admitted unless the mother was actually dying; and this view of the operation has been well stigmatised as cruel and unmauly by Blundell. On the Continent and in America the operation has been successfully performed, and both mother

and child saved; consequently in England it has received a more careful attention, and certain conditions are laid down to justify the operation. One of these is the space in the contracted pelvis which will authorise the operation. Another is the time of its performance, at what period of labour; and, lastly, the agents which may be necessary to promote a favourable recovery. As to the space in the contracted pelvis which would authorise the Cæsarian section, Dr. Barnes fixes on 1·75″ as the length of the conjugate axis in the ovate pelvis. Dr. Osborn, who performed a successful operation of craniotomy in Elizabeth Sherwood's case, stated that the conjugate axis was an inch and a half. This success gave the opponents of the Cæsarian section great courage; but it was afterwards found that none could succeed in delivering with the perforator and crotchet in so small a space, and therefore it was inferred that either Dr. Osborn must have been wrong in his measurement, or that his case was an exception which proved the rule of the Cæsarian section. To measure the conjugate axis accurately is difficult; several instruments have been contrived for the purpose, but most of them, from Baudelocque's and Coutouly's to the most modern, have been found difficult to apply. Dr. Barnes recommends the hand to be used as the best pelvimeter, and in this he is perfectly correct; the measurement can be ascertained with much less risk of mistake, but it seems to me doubtful that, in this way, the measurement can be made to the tenth of an inch.

With regard to the cordiform pelvis, the result of malacosteon, not merely the brim, but the cavity and outlet, are all contracted; besides, the disease itself presents an obstacle. Some have gradually dilated such a pelvis with the hand, so as even to turn the child, and hence it has been argued that the head may be brought through by the crotchet, the pelvis yielding, although greatly contracted; but it may be completely broken up by the effort, and death be of course the result. Hence, in these extreme cases, the practicability of craniotomy seems to be very questionable. A great effort has been made to decide the question by statistics. In Great Britain it is proved that the Cæsarian section has been almost always fatal, while the proportion of deaths from craniotomy has been much less. But the conditions of these statistics render the argument very doubtful. Here the Cæsarian sections have been performed under the most unfavourable circumstances, after a labour so protracted that the patient was quite exhausted when she was given over, and the effort was made in this way to save the child. No one, then, ever thought of this operation in the commencement of labour, or, as Dr. Barnes suggests, even before labour commences. He says:—"Dr. Braxton Hicks brought on labour a fortnight before term, as a preparation for the Cæsarian section, influenced by the opinion that by so doing the uterus, taken at a period prior to the highest degree of degeneration of its muscular fibres, would heal better." (*Medical Times and Gazette*, December 12, 1868.)

The mortality in consequence of this mistaken delay in the operation is far greater in England than it ought to be. 86 per cent. is an enormous mortality, much greater than that on the Continent, where there is less scruple in the performance of the operation, and less mortality. So also the statistics of craniotomy are almost useless as a comparison, because they are not confined to those cases of extreme deformity where the Cæsarian section might be adopted, but include all cases where the craniotomy instruments are used. Now they are employed very often where there is no necessity for them. It is a very easy operation; the patient perfectly recovers, but the child is—killed. Hence a general return of such cases is very favourable to craniotomy. It is only when the experienced Practitioner has himself to deal with those cases of extreme distortion that he can form a correct opinion. Dr. Osborn had to break up the head, leave it for six hours to become putrid, and even then, although all the bones were broken up and removed, still he found great difficulty in getting the head to advance; nor could he succeed until he got the head edgeways into the pelvis. Dr. Meigs, of Philadelphia, was a whole day occupied in the endeavour to extract the head from a contracted pelvis in a woman who was afterwards delivered successfully twice by Mr. Gibson by the Cæsarian section. Other experienced Practitioners have met with equal difficulty in these attempts to deliver by craniotomy, and therefore it leads them to the conclusion that it were better the attempt had not been made. The only point to be determined is the character of the pelvis, the amount of its contraction, and its cause. If there be the least suspicion, this should be decided before labour begins, so as to act with advantage; and if the Cæsarian section be decided upon it may be performed at once. To avoid these difficulties it is proposed to induce labour at the seventh month. For this purpose several means are proposed, some by means of medicine carried to the spinal marrow by the blood, as ergot of rye, borax, cinnamon, etc.; and these are generally inefficient. Others act upon the peripheral nerves, as rectal injections, vaginal douche, irritation of the breasts, separation of the membranes, rupture of them, and galvanism. Of these means, irritation of the breasts, separation of the membranes, and galvanism are as uncertain as the medicines alluded to. The vaginal and intra-uterine douches are more certain, but the latter especially is dangerous. Dr. Barnes gives instances of sudden death caused in this manner. Artificial dilatation of the os and cervix uteri is also proposed and strongly advocated. In 1820, Brunninghausen used sponge-tents. Since then Osiander, Von Busch, Krause, and others contrived dilators of different kinds. Lately Dr. Barnes, who had always "strongly insisted upon the danger of forcibly dilating the cervix with the hands," contrived an elastic dilator capable of expanding the cervix with safety. This is a fiddle-shaped bag; the constriction in the middle is seized by the cervix, while the two ends expanding serve to prevent the instrument slipping up and down. Dr. Barnes says that "this instrument imitates very closely the natural action of the bag of membranes." He has thus completed the delivery in five, four, three, and even one hour. This dilator, then, must be very efficient. Rupture of the membranes is the old practice, and is generally found to answer the purpose.

Dr. Barnes enters fully into the consideration of craniotomy. He has, on the authority of Dr. Osborn, Dr. Burns, and even Dr. Hull, who was an opponent, decided that when the head is completely broken up, it may be extracted edgeways through one inch and a half space in the conjugate axis, and therefore renders the Cæsarian section unnecessary. He describes several instruments besides the old perforator and crotchet. The craniotomy forceps he has improved so as to be able to use it with much more advantage than the crotchet. He also speaks favourably of the cephalotribe, an instrument which, when first introduced from the Continent, was so large and unwieldy that it could scarcely be used; it has, however, been improved by Dr. Kidd, of Dublin, and Dr. Hicks here, so as to make it available. Dr. Barnes describes the operation which must always follow perforation. Van Huevel, of Brussels, proposes a chain-saw, conducted by a grooved forceps, to saw through the head in different directions. A very excellent description is given of the different modes of turning, illustrated by diagrams. Dr. Barnes mentions the difficult cases and the mode of operating. One of these is when the shoulder is fixed in the brim of the pelvis so as to prevent turning; in such a case he recommends fastening a noose on the leg brought down, holding it by one hand and pushing up the shoulder with the other, but he says "You will find it difficult to draw upon the tape and to push up the shoulder exactly simultaneously. There is so little room that whenever you push there is a tendency to carry up the leg as well. The most effective movement is as follows:—Pull and push alternately. Presently you will find the leg come lower, and the prolapsed arm will rise." Another case described by Dr. Barnes may be called semi-evolution, the child doubled and forced down into the pelvic cavity. In this case, it is possible to complete the evolution, and to bring down the breech and feet; but sometimes it is not so, and then perforation and viscera-tion must be used.

Dr. Barnes observes—"Sometimes perforation and evisceration are insufficient of themselves, and another step will be necessary to complete the delivery." This step is decapitation. Having described the various instruments for the purpose, the operation itself is described. We shall not dwell on the first and second stages, but the third is important—the extraction of the head. For this purpose the crotchet, the forceps, and craniotomy-forceps may be used. Dr. Barnes discards the crotchet as being difficult of application. The forceps is better adapted, but it is not easy to seize the head; he prefers the craniotomy-forceps, as being much the most certain and safe. To apply this, it is necessary first to perforate; but "the free rolling of the head when pressed by the point of the perforator tends to throw it off at a tangent, missing the cranium and endangering the soft parts of the mother." To prevent this, the firm pressure of an assistant on the uterus through the abdomen must be used. I am inclined to think that, with all this aid, it would be found still very difficult to perforate safely, and it therefore renders the craniotomy-forceps almost as useless as the crotchet. These difficulties have occurred to many as objections to the practice of decapitation, rendering the success of the operation very problematical. Dr. Barnes refers to turning in a contracted pelvis, and takes up the question first stated by Baudelocque that "the head will come through the pelvis more easily if drawn through base first than if by crown first."

This is supported by Osiander, Hohl, and Simpson, and opposed by McClintock, of Dublin, and Martin, of Berlin. Dr. Barnes settles the question by personal experience. He had "on several occasions been called to obstructed labour in which the head was resting on the brim contracted in the conjugate diameter. I have tried the long double-curved forceps, trying what a moderate compressive power, aided by considerable and sustained traction, would do to bring the head through, and have failed. I have then turned, and the head, coming base first, was delivered easily. On this point I cannot be mistaken." Then the question—"What is the extreme limit of pelvic contraction justifying the attempt to deliver by turning?"—arises, and Dr. Barnes's opinion is that a standard head can be drawn through a conjugate axis of 3 , but not with much prospect of life, and that the proper range of the operation is from 3·25 to 3·75 , at the latter point coming into competition with the forceps.

The contra-indications of the operation are—

1. A conjugate diameter narrowed to less than 3 .
2. Firm and close contraction of the uterus round the child, compressing it into a globular shape.
3. Impaction, or a very firm setting of the head in the brim of the pelvis.
4. Marked exhaustion or prostration of the mother.
5. Death of the child.

Dr. Barnes has given us a valuable series of lectures on turning the child, and refers to Nature's mode of turning called by Denman "spontaneous evolution," by Dr. Barnes "spontaneous version."

Dr. Barnes also describes the operation with the short forceps. The first blade to pass, according to him, is the sacral blade. "Feeling the pubic ear, you know that the sacral ear is exactly opposite." I am inclined to think that it would be easier and simpler to pass the blade at once over the pubic ear you have felt, and to make the blade thus introduced a guide for the second. Dr. Barnes objects to a single-curved forceps, short or long. One objection is in the introduction. "To introduce the second blade (the pubic), the handle must be much depressed, nearly at right angles to the mother's thigh." But if the pubic blade were introduced first, this would not be the case. Secondly, "In extraction the handles, nearly at the last moment, must be directed more backwards than is necessary with the double-curved forceps;" hence the perineum is wedged and "unavoidably torn." I thought that at the last moment the handles were directed completely forwards against the pubis, corresponding to the advance of the head on the perineum. Thirdly, the posterior blade is apt to bruise one of the edges of the sacral nerve. Fourthly, if the blade is applied as usually taught, . . . an edge is very likely to press upon the portio dura. . . . The result is paralysis of the facial muscles. The child cannot shut the eye, cannot suck. Dr. Barnes has known a child die of starvation from this cause. The third and fourth objections appear to me equally applicable to the double-curved forceps. In awkward hands either instrument can be made to do great injury. I do not, therefore, see the force of these objections to the single-curved forceps. Another error into which the author has fallen is calling Dr. Beatty's forceps a short forceps resembling Smellie's. This error Dr. Beatty has himself well pointed out. It is not a short forceps, but may be used, if necessary, as a long forceps, and I think its being a single curve is no disadvantage. The professed use of the second curve, to correspond to the axis of the brim, sounds very well in theory, but in practice it will be found to fail.

Having made these observations on Dr. Barnes's lectures, I must conclude by stating that they are both valuable and important—valuable because of the instruction they contain, illustrated by an excellent series of engravings, and important because their subject is one upon which Professional opinion has been so much divided, and therefore requires the careful study and discrimination of the student. To assist him in his researches Dr. Barnes's lectures will be a most useful aid. I consider them a very valuable contribution to obstetric literature.

57A, Wimpole-street.

Death in a Turkish Bath.—Albert Samuels, son of the manager of the Turkish baths in Leicester, was found dead in the "sweating-room" on Sunday morning. He was heard to go downstairs in the night, it was thought to put something to dry, and it is supposed that he either fell down in a fit or was overpowered with sleep, and suffocated.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Special Meeting.—Monday, May 17, 1869.

Dr. Burrows, President, F.R.S., in the Chair.

The discussion of the draft proposition as to the union of the Medical societies sent down by the Council to the Fellows of the Royal Medical and Chirurgical Society was resumed on Monday evening. The President, on taking the chair, said that the Council were not anxious to press the proposal if not approved by the Society, but they desired that it should be fairly discussed, and he would therefore take each clause of the proposition in regular order.

The second clause was then read by the Secretary, "That the following sections be formed:—1. Medicine and Surgery; 2. Obstetrics; 3. Psychological Medicine; 4. Clinical Medicine and Surgery; 5. Pathology and Morbid Anatomy; 6. State Medicine, comprising epidemiology, public health, and Medical Jurisprudence; 7. Physiology and Anatomy. Each section will entertain questions of therapeutics, chemistry, and physics, so far as they bear on its special subject."

Mr. Curling asked on what grounds the Council made a distinction between Clinical Medicine and Surgery and Medicine and Surgery. He was aware that a Clinical Society had been formed and well supported, but it was not necessary in a new scheme. A large number of the members of the Clinical Society were Fellows of this Society or of others included in the scheme, and would thereby become members of the new association. Then, again, were a foreigner to come here and see two sections, he would not know which to attend. He moved that the section be excluded.

Mr. Gascoyen replied that the scheme was intended, as far as possible, to include all the existing societies. The one section was intended to represent the Medical and Chirurgical as now existing, the other the Clinical. Clinical discussion had not been customary at this Society—at least, in the sense received by the Clinical Society.

Mr. Solly said there it had another object, as the subjects brought forward in Medicine and Surgery were too weighty for one section except by sitting two nights instead of one.

Dr. Wilson Fox strongly felt the objection of Mr. Curling. Such a separation as that proposed was undesirable and unsatisfactory. The difficulty would be quite as great with regard to pathology. If clinics were kept out of the one, a mere *caput mortuum* would be left. They might have evenings for papers and evenings for cases, and he thought none of the members of the Clinical Society would seek a special section. The discussions at that Society were good, and it was advisable to continue them, but that might be done in the major society. He would rather like to see sections for both Medicine and Surgery. He seconded Mr. Curling's motion.

Mr. Holmes hoped the Fellows would bear in mind that this was only a sketch to be discussed by all the societies, and these might indeed wish to reduce the number of sections. The work of each section would depend a good deal on the subscriptions, and this single section, as now proposed, having so much work to do, would require a great deal of money for its *Transactions*. He thought it best to make two sections, and the question was, which way to do so—by the plan proposed by Dr. W. Fox, or by that of the Council? For his own part, he would not like to see a hard and fast line drawn between Medicine and Surgery, and as two sections were required, he thought the plan proposed was the best.

Dr. Greenhow thought that Clause III. met all objections. The object of the Council and of the Society was amalgamation, and they had better therefore deal with principles than details. He therefore moved Clause II. as a substantive resolution.

Dr. Barnes thought that they must go to the other societies with something definite. These could not throw themselves unreservedly on the hands of the new body. He could not understand the separation of Clinical Medicine and Surgery from the main branches; it would be absurd in obstetrics. Besides, as obstetric Practitioners considered their subject of equal importance with either Medicine or Surgery, it would smooth over difficulties were there made two sections, one of Medicine, the other of Surgery, for they did not like to be classed along with such specialities as Psychological Medicine, and so on.

Mr. Spencer Smith seconded Dr. Greenhow's motion. Union was the thing intended, and they were losing time in discussing the proposition till they had heard from the other societies. Their sole object was to receive the Clinical Society, but that body might be inclined to give up its individuality in the new society.

Mr. Curling said he only wished to expose the fallacy that they were bringing strength by including the Clinical Society. He adhered to his resolution. As matters were now arranged, length would apparently determine where a paper was to go.

Mr. Savory thought the sum of all the arguments was expediency; but the question really involved a principle, for what were Medicine and Surgery if not clinical? Proceeding to deal with other parts of the subject, the President begged of Mr. Savory to postpone his observations till after the division.

Dr. Murchison thought they should remember that the resolution stood that certain sections be formed, not that certain societies be invited to join.

The motion being put, 25 voted for Mr. Curling's amendment, and 25 against. The President then gave his casting vote in favour of retaining the section.

Dr. Stewart suggested that the words "Public Medicine" should be inserted instead of those of State Medicine. This motion was not seconded.

Dr. Graily Hewitt thought there were difficulties as to laying down sections now; he would suggest that the matter be deferred till other societies were consulted. Their *status* in the new society would considerably affect the others. But as perhaps no other opportunity might occur, and silence might be read as agreement, he thought it better to speak now,

Mr. C. Moore pointed out that the former scheme broke down because no plan was sent out to the other societies. They must have a scheme the Society was prepared to stand by. The present plan only included what was absolutely necessary.

Mr. Heath asked what was intended by the section on anatomy and physiology if their intention was only to incorporate existing societies.

The President said they were not excluded from forming new sections especially by Clause III.

Mr. Heath thought that the scheme was either intended to lay down future sections or to incorporate all the existing societies. If they pledged themselves as to anatomy and physiology, surely they did so with regard to the other sections also.

The President said they only threw this out as a scheme; it bound them to nothing, either in this Society or in any of the others.

Dr. Murchison asked how the *Transactions* of this section of anatomy and physiology would be published. They would be very expensive, and it was not likely that many members would join. Even although this section was formed, all the more important papers would go, as now, to the Royal Society. The question was whether this did not fulfil all the purposes of such a section.

The President thought provision was made for assistance in publishing the *Transactions* in Clause XXII.

Dr. O'Connor moved the formation of a section on therapeutics as most essential.

Dr. Meryon said that the tendency of the Council had been to contract rather than to expand the number of sections.

The President here suggested that a letter from Dr. Rumsey should be read. This letter started the notion of a section on materia medica, etc., and on comparative pathology. If such sections could not be formed, perhaps the subjects might be included in others.

Mr. Savory thought there should be an expression of opinion as to sections, that they might thereby guide the committee which was to be formed.

Dr. Wilson Fox thought it easier to alter the plan of a house before it was completed than after it had its roof on. He therefore moved the exclusion of the words "and Surgery" in the first and "Clinical Medicine and" in the third divisions of Clause II., thus substantially proposing the formation of a section of Medicine and a section of Surgery. He thought that, although the subjects were somewhat coterminous, yet that substantially the tendency of the minds of the followers of each was to diverge. And he thought there were sufficient grounds for separation.

Dr. Waring seconded Dr. O'Connor's motion, whilst Mr. Heath thought the present Clinical Society quite took in therapeutics.

Dr. Leared said that the Clinical Society was formed to cultivate therapeutics, and it might avoid difficulties were it to change its name, as the Medico-Chirurgical now did.

The amendment, having been put, was lost by a very large majority.

Mr. Curgenven seconded Dr. W. Fox's motion. Medical papers had been badly received in this Society, and he thought it better to have two sections.

Mr. Curling would regret the separation of Medicine and Surgery; he was often glad to attend and hear a Medical paper.

Mr. Solly expressed a similar opinion.

Dr. Hare also thought it undesirable to separate the two, but the Council had to please societies as well as form sections. Therapeutics, he thought, might be added to the clinical section.

Dr. Barnes was surprised to hear Messrs. Curling and Solly speak as they had done. If they could not separate Medicine and Surgery, then surely the others were divorced. This, he felt assured, would be felt as a slight on the Obstetrical Society. There was quite work enough for two sections, and he would appeal to their recollection if Surgeons attended to hear Medical papers read, or *vice versâ*. Of course the one subject dovetailed into the other, but that was not the question.

Mr. Carter suggested that Dr. W. Fox's amendment would involve them in a difficulty, owing to the two meanings implied by the word "Medicine," which was used in its widest sense in the proposed title of the Society, and in a more contracted one as applied to the section. Many subjects would also be excluded by this narrowing.

Mr. Gant thought that the section of obstetrics might be called the section of Obstetric Medicine and Surgery.

The President said the question before them was momentous. It was whether they were to disconnect Medicine and Surgery, which of late years had really been drawing closer together. He could not help expressing regret should they be more separated.

The amendment, being put, was lost by an overwhelming majority.

Dr. Wynn Williams asked a question as to compounding fees for sections.

Mr. Holmes said that was answered by Section XV.; but the whole subject would be considered by the committee formed of all the societies to deal with such questions.

Mr. Heath moved that the several societies named in the scheme be invited to co-operate with the Royal Medical and Chirurgical Society in forming a new one.

Dr. Graily Hewitt seconded the proposition.

Mr. Holmes pointed out that this was only taking out of its order a matter reserved till the end of the scheme. It was undesirable to waste time in hopping from one part of the paper to another.

The President suggested that the business be taken in regular order.

Mr. Spencer Smith said that they broke down in that way before. They must have a scheme to offer to the other societies.

Dr. G. Hewitt said it really broke down on the former occasion because no further steps were taken.

Dr. Fuller said that if he understood the temper of the Society aright, it was determined to go on with the scheme, whether the other societies joined in it or not.

Mr. Heath hereupon withdrew his motion.

Mr. Savory then proceeded to move that the section of Clinical Medicine and Surgery be omitted, and the words "Clinical Medicine and Clinical Surgery" be added to those of Medicine and Surgery.

Mr. Holmes asked if this was not going over the very same ground again, and dealing with matters which had been fully discussed and finally voted on.

Mr. Carter thought the new name would be too long.

Mr. Curling was prepared to vote with Mr. Savory. They did not thereby swamp any society.

The President ruled that this amendment was not identical with the former one, and put it to the vote, when 23 voted for, and 33 against, the motion.

Mr. Morrant Baker suggested and proposed that they should alter the title of Section 4 to that of Therapeutics.

Dr. Hilton Fagge seconded. The name of the Clinical Society even now stood in its way. Its work was really therapentical.

Dr. Hare admitted the force of what was said, but suggested that it might be better to add therapentics to Section 4, as now proposed.

This amendment was also lost by a great majority.

Dr. Hare then proposed to add the word "Therapeutics" to the title proposed for Section 4—viz., Clinical Medicine and Surgery.

This was seconded by Dr. Waring.

Mr. Savory called attention to the note appended to this clause of the scheme.

The President said the matter had been discussed in Council, and they concluded that therapeutics could not be divorced from any one section.

This amendment was also lost.

Dr. Leared asked what provision was made for the affiliation of these societies or the formation of new ones.

Referred to Clause XII.

The original motion was now put, and carried by a majority of 46 to 3.

Mr. Holmes next moved Clause III.—"That, in the formation of the new Society, power be taken which shall enable the Academy to modify the existing sections or to add new ones"—as a substantive resolution, and asked if they were doing any good by discussing these resolutions now. Would it not be better to send the whole scheme as it now stood to the other societies? Neither the name nor the number of sections was of any great importance. The whole scheme would have to be settled by the great committee to be appointed. When the Fellows had made up their minds that the offer was a fair and reasonable one, that was quite enough. A medium course should be adopted; their scheme should be neither too minute nor too vague. Two evenings had been spent, and the only thing done had been to alter the name of the proposed Society, and that might be in its turn reversed. The main features now to be discussed were the number of societies to be invited to join and the financial question.

Dr. Meryon seconded, and said that everything spoken of to-night had already been considered by the Council.

Mr. Curling said they had been invited to discuss the scheme, and the matter for discussion had been of importance. He asked if the power of modification to be granted to the Society implied the power of suppressing sections. He was informed that it did.

The President said that all this and much else must go before the general committee. It was only necessary for this Society to lay down what they were willing to grant.

This motion was carried.

Dr. Stewart then moved Clauses IV. to IX. together as quite fair to all:—"IV. That the general management of the Royal Academy of Medicine be under the control of a general council, consisting of a president, two treasurers, two librarians, two secretaries, the presidents of the various sections, and additional members to be nominated one by each section. V. That the presidents of the several sections be *ex officio* vice-presidents of the Academy. VI. That the president, treasurers, librarians, and secretaries of the Academy be nominated by the general council. VII. That all the members of the general council, with the exception of the vice-presidents who are *ex officio* members, be elected annually by the Academy at a general meeting. VIII. That the president of the Academy be chosen annually from amongst the past or present presidents of sections, and be ineligible for re-election; and that the president of the Academy cease, on his election, to be a president of a section. IX. That the treasurers, librarians, and secretaries be elected annually from the general body of the Fellows; and that they be not allowed to hold other offices in the Academy, or in any of the sections."

Dr. Wynn Williams seconded.

Mr. Curling asked what the President and Council were to do.

Mr. Holmes replied that the position of President would in the first instance be one rather of dignity than of labour, but in all probability he will have had his turn of work in the various societies. As time went on the business would increase, and would be something more than merely presiding over the Council and the annual meeting. It was to be hoped that they would do the Government consultation work.

This motion was carried.

Dr. Meryon moved Clause X.:—"That the moneys, books, premises, and other properties, belonging to any of the societies which shall join in the proposed amalgamation, become the property of the Royal Academy of Medicine; and that the entire management of the funds of the Academy be in the hands of the General Council."

Mr. Brodhurst seconded.

Mr. Myers asked if legal advice as to the practicability of forming the new society had been taken.

The President said they could only ask for a new charter; they could not do anything under the present one.

Dr. O'Connor said that the words "life Fellow" did not occur in the charter. By the by-laws Fellows might compound for their subscriptions—that was all. The whole management was to be under the Council and the general body of Fellows. No money could be divided among any Fellows.

Dr. Barker said he was treasurer when the last scheme was brought forward. It was found to be quite impossible to admit any Fellows but in accordance with the rules of the Society. They would have to give up their present charter.

Mr. Holmes said that this part of the question had been discussed at the last meeting. The Crown would see what was to be done. They wanted to form a new society.

Dr. Barker said that if all these resolutions were passed they would not affect the Society in the slightest degree.

This motion was carried *nem. con.*

Mr. Solly moved, and Mr. Forbes seconded, Clause XI. as a resolution:—"That there be at least three trustees, in whom the property of the Academy shall be vested; that they be nominated by the General Council, and elected by the Academy at a general meeting; and that their appointments be permanent."

Mr. Weeden Cooke objected to permanent trustees, as things might occur which would render it desirable to change them.

Mr. Curgenven cited an instance where a trustee became insane, and the whole concern had to be put in Chancery.

Mr. Holmes suggested that they might hold office during the pleasure of the Society. This Mr. W. Cooke proposed, and Mr. Solly withdrew his motion.

Dr. Barker thought it better that a larger number should be appointed.

Dr. Pollock thought that a term of years during which the trustees might hold office would be necessary for legal purposes.

Mr. Carter thought it was a question for the General Committee.

Dr. Wynn Williams suggested that five trustees be appointed, three to form a quorum.

Mr. Gant moved, and Dr. Meryon seconded, the adoption of Clause XII.:—"That all Fellows or Members of the following societies—viz., the Royal Medical and Chirurgical, the Pathological, the Epidemiological, the Obstetrical, the Clinical, and the Medico-Psychological Association—be original Fellows of the Royal Academy of Medicine without further nomination or election, provided they make the payments hereafter to be arranged."

Mr. Holmes moved, and Mr. Moore seconded, Clause XIII.:—"That power be taken by the charter to incorporate additional Medical societies after the proposed Academy shall have been formed."

Both passed, whereupon, on the motion of Mr. Holmes and Dr. Greenhow, the Society adjourned till Thursday next.

Tuesday, April 13, 1869.

Dr. Burrows, F.R.S., President, in the Chair.

A paper, by Dr. Robert Barnes, was read

ON THE OPERATIONS FOR THE RELIEF OF CHRONIC INVERSION OF THE UTERUS, WITH THE ACCOUNT OF A CASE SUCCESSFULLY TREATED BY A NEW METHOD.

The author discusses the merits of the various operations hitherto employed for the relief of chronic inversion of the uterus, tabulates the cases in which operations have been resorted to and which are not recorded in Mr. Gregory Forbes's memoir in the *Medico-Chirurgical Transactions*, adds these cases to Mr. Forbes's tables, and compares the results of the different methods. Of cases treated by ligature only, 26 were successful, 10 unsuccessful, and of the latter 8 died; of cases treated by ligature and excision, 9 were successful, and 3 ended fatally; of cases treated by excision only, 3 were successful, and 2 died; of cases treated on Tyler Smith's plan, by sustained elastic pressure, 6 successful cases had been published; and of cases treated by forcible taxis, some had proved successful, but 3 had died. The ligature and excision were open to the double objection that, besides being very hazardous to life, success was only achieved at the expense of mutilating the patient. Forcible taxis was a violent and often fatal proceeding. Sustained elastic pressure had given remarkable results, but cases would occur where the constricted cervix uteri would resist simple pressure. The author related a case of inversion of six months' standing which resisted elastic pressure kept up during five days, and in which he resorted to a plan, thus practised he believed for the first time, of making three longitudinal incisions into the os uteri, so as to relax the circular fibres; taxis then applied quickly succeeded. The woman made an excellent recovery. The author proposes, as the best proceeding

where simple sustained elastic pressure fails, to make an incision on either side of the os uteri, and then to reapply the elastic pressure, as being safer from the risk of laceration than the taxis. He concludes with some propositions relating to the diagnosis of chronic inversion from polypus.

Dr. Protheroe Smith said that Dr. Barnes had just given a positive proof of the cause of the difficulty in reduction. He had himself operated successfully on a case of sixteen months' duration, and was of opinion that he could suggest a means of overcoming the resistance without resorting to the knife. In the case referred to the inversion was complete when the patient entered the Hospital; but manual pressure effected sufficient reduction to restore a margin of cervix. He contrived an instrument, having two steel blades, made to pass between the inverted uterus and the cervix, and to open by a screw. This was applied at 10.55 a.m., and the dilating action kept up until 4 p.m. He then reduced the inversion by pressing on the inverted fundus with a stick having a padded knob at its extremity. The case did perfectly well, and the patient has since given birth to two children.

Mr. C. Brooke suggested that Dr. Smith's dilator might be improved by giving to the blades a form that would render them less liable to slip.

The President said that it had just come to his knowledge that a distinguished visitor was present, who would, he hoped, communicate the results of his experience. The Society held the "Northern lights" in high estimation.

Sir J. Y. Simpson acknowledged the complimentary invitation of the President. He greatly admired Dr. Barnes's paper, which was by the hand of a master. He had seen only a few cases of inversion. Two of the patients had died after excision of the inverted uterus, and this operation should, he thought, be abandoned. In two cases he had replaced the uterus by forcible pressure, and in one of these he found that the cervix had split before the reduction was effected, so that, in a rougher way, he had performed Dr. Barnes's operation. In consultation he had suggested various methods of dilating the cervix; and it had occurred to him that the inverted uterus might be perforated by a trocar, and the cervix dilated or incised by instruments passed through the perforation.

Dr. Barnes thanked the Society for the manner in which his paper had been received. He thought Dr. Smith's method of dilatation involved some risk of laceration of the upper part of the vagina, and that the stick for pushing up the uterus was highly dangerous. Such an instrument had been used in France, under the name of *repoussoir*, and laceration had been a common result of its employment. The operator could not feel where it was going, or what it was doing, and the hand was the only proper instrument. M. Courti had reduced a very chronic case of inversion by passing two fingers of one hand into the rectum, and hooking them over the upper margin of the displaced uterus, while the other hand made pressure in the vagina.

Dr. Protheroe Smith explained that the use of his stick was free from danger. The left hand in the vagina held and guided the instrument, while pressure was made by the right.

Dr. George Johnson communicated a paper by Dr. Chas. Kelly on

THE SPONTANEOUS CURE OF HYDATID CYSTS.

The paper began with an account of those hydatid cysts which were found after death in a putty-like condition; and arguments were brought forward against the theory, generally received, that this condition was brought about by the absorption of the fluid contents and consequent contraction of the cysts. It was shown (1) that there was no vascular connexion between the outer fibrous sac and the endocyst by which such a process could occur; (2) that there were no signs of puckering or contraction, in the cases recorded, of the surrounding tissues, as should be the case if absorption had occurred; (3) that some small tumours had been found in this condition in the substance of the liver, while the tissue around was merely condensed; (4) that the outer sac was generally globular and tense; (5) that although drugs had been given in some cases with the apparent effect of causing absorption, yet none were verified by post-mortem examination. The author then maintained that the explanation of the phenomena that occurred was—that the hydatid, becoming embedded in some organ, soon had a fibrous sac formed around it; that as the hydatid grew this sac expanded in proportion, if the walls were not too resisting, and if they were properly nourished; as a consequence, the laminated membrane merely lined the sac, and the fluid contents were derived from the pabulum, which, having passed through the fibrous tissue, moistened the outer surface of the endocyst, which then secreted the hydatid fluid. If, on the other hand, the outer sac was too resisting, the expansion ceased, and, in consequence of the relative disproportion of growth, the endocyst became folded upon itself, as was found nearly constantly in post-mortem examinations. That for a while nutritive changes went on till, after a time, the supply of pabulum was not enough to nourish the hydatid, and it died; or, in other cases, the outer sac became atheromatous and calcified, and death ensued from the nutritive fluid being cut off. The cure, then, was the result, not of absorption of the fluid contents, but of the death of the hydatid from not receiving enough pabulum on which it could live. Thus the involutions of the endocyst were not produced by the contraction of a larger cyst, but were a natural consequence of an impeded growth; and thus the globular shape of the sac was accounted for, and the absence of any cicatrisation of the tissues. In nearly all the cases recorded, the cysts were of small size, and seldom recognised during life. The diagnosis of some would most probably have been made if they had once been larger, as the endocyst has been met with four times the superficial area of the outer sac, and in most two or three times the size. Now, if the endocyst had merely lined the outer sac, as is the case where they contain much fluid, the cyst must have once been of such a size as to give rise to symptoms, and to be made out during the life-time of the patient. The conditions favourable for spontaneous cure are:—1. A dense, unyielding fibrous sac. 2. Atheromatous, calcareous, or cartilaginous changes in the outer sac. 3. A situation in some organ or tissue where expansion cannot take place readily. 4. Relative disproportion in growth between the endocyst and outer sac. All these changes concur in preventing a due amount of pabulum from entering the sac, and so causing the death of the hydatid. An opposite condition of the tissues led to the formation of a large cyst, with very fluid contents. In all cases the hydatid would begin in the same manner, but during its early development the above conditions would lead to spontaneous cure, or, if absent, would cause a large cyst to be formed. The practical conclusion drawn was, that drugs were of no use in treating hydatid cysts; that in cases were fluctuation could be made out, no spontaneous cure could be effected, and that where this took place it was dependent upon the condition of the parts in their early development. A table was appended with a short account of forty cases, in which this natural process of cure took place: nearly all were found in the liver; none in any tissue where compression could not have been exerted.

Dr. Drysdale wished to ask one or two questions. He understood the author to mean that it was proper to operate as soon as a hydatid cyst containing fluid was detected. He thought this unnecessary. A man had been under his care at the Metropolitan Free Hospital with a fluctuating tumour of the epigastrium, presenting *fremissement*, and being apparently a hydatid cyst of the liver. No treatment was employed; and when he saw the man again, two or three months later, the tumour had disappeared.

Dr. W. Ogle observed that many preparations in the museum of St. George's Hospital seemed to confirm the view taken by the author. In these there was no puckering of the tissues external to the cyst; and the endocyst, much larger than the ectocyst, was folded within it. He thought, however, that cases of spontaneous cure occurred also in another way—namely, by suppuration within the cyst, and subsequent drying up of the contents. He believed that the yellow matter was dried pus, and instanced the cases of two soldiers who died in St. George's Hospital from different causes, but both of whom had previously had dysentery, and in both of whom a cavity containing dried pus was found in the liver. He might mention that hydatid cysts were very rare. They had been found in the post-mortem room at St. George's in only 18 out of nearly 3000 cases; and in only 6 of the 18 had they been the cause of death.

Dr. Hill mentioned the case of a girl, 10 years of age, who suffered from retention of urine, and in whom a hydatid cyst was discharged through an ulcer in the vagina.

Dr. Kelly replied to Dr. Drysdale by saying that he had been careful not to enter upon the question of treatment; and that he thought in the case described the evidence was hardly sufficient to exclude the possibility of error. In reply to Dr. Ogle, he did not believe that the yellow, putty-like matter was real pus. Under the microscope it appeared to consist chiefly of fat, intermixed with hooklets, phosphates, and granular *débris*.

NEW INVENTIONS.

THE HORSFORD-LIEBIG BAKING-POWDER.

For thousands of years mankind has recognised the necessity of having wheaten bread of a vesicular or spongy consistence. The ancient and universal method of accomplishing this has been by means of some leaven or ferment which shall act on the starchy elements of the flour, and convert a portion of them into alcohol and carbonic acid, the evolution of which latter gas in bubbles produces the desired effect in the texture of the loaf.

Fermentation, however, has its inconveniences, the chief of which is that it may be pushed too far, and so render the bread acetous, that some kinds of leaven communicate an unpleasant flavour, and that some stomachs of intense acidifying energy will not tolerate the bread. There is a microscopical objection in the waste of that portion of starch which is converted into carbonic acid, but this is disregarded by practical men. There are many occasions, too, on which the delay attendant on the use of leaven would be highly inconvenient, as in the preparation of many cakes and puddings and impromptu dishes; and there are many in which leaven perhaps cannot be obtained at all, as on board ship or at shooting boxes in the Highlands.

Hence, on the part of the dyspeptic, of the speculative quasi-scientific dietetic reformer, and of the busy practical man of the world, there have been many efforts made to substitute some other mode of raising bread for leaven.

One of the earliest and commonest was the use of bicarbonate of soda, which parts with some of its carbonic acid at a high temperature. It is largely in use in America, where the consumption of hot bread and cakes prepared *impromptu* prevails to an immense extent, and where stale bread is unknown. *Saleratus*, as it is called (or *sal aëratus*), is advertised in every newspaper. A mixture of dried bicarbonate of soda with tartaric acid, such as is largely manufactured by Messrs. Borwick, forms a still more effective kind of baking powder, and there are now few kitchens without it, for the purpose of lightening heavy cakes and puddings, such as dumplings and crust made with suet or dripping, pie-crust, batter puddings, etc. As batter puddings ought to owe their lightness to the involution of atmospheric air, stirred in by the brisk whipping of a batter made rich with eggs, so unfortunately the substitution of baking powder for whipping has led to the further substitution of yellow-colouring matter for yolk of egg, and a yellow-coloured effervescent powder is sold under the name of *egg powder*. Other modes of attaining the same end without yeast are shown in the well-known unfermented bread of Dodson, in which the common salt which is added to all other bread is made by the admixture of bicarbonate and hydrochloric acid in chemical proportion, and the aërated bread of Dr. Dauglish, in which the carbonic acid with water is added to the dough in closed vessels.

We need not now go into the relative merits and defects of these various methods; each of them is valuable in its way, and various kinds of unfermented bread are necessary in various departments of life, although none of them will probably ever supersede fermentation. We now propose to describe the latest addition to the series.

About the year 1854 cream of tartar was exceedingly dear and very much adulterated in the United States, and tartaric acid also of course. Hence difficulties in the manufacture of baking-powder. These led Professor Horsford, of Cambridge, Massachusetts, to an entirely new source. His preparation has been improved and sanctioned by Baron Liebig, and is now before us under the denomination of "*Horsford-Liebig's Back-pulver*," prepared, under the special superintendence and control of Baron Liebig, by Carl Zimmer, of Mannheim, and Dr. Marquart, of Bonn, whose pharmaceutic skill is well known to our readers. The English wholesale agent is Mr. Van Abbott, of Princes-street, W., and bread is made with the powder by Messrs. Spiking, of Dover-street and Brompton.

The baking powder consists of two distinct powders, acid and alkaline. The acid is the special characteristic, and consists of an acid phosphate of lime, prepared from bones; the alkali is bicarbonate of soda. This combination offers all the advantages of other baking powders, and some peculiar to itself. It is cheap, and will keep any time if dry. When used, it needs but to be mixed thoroughly with the flour, and at once produces gas when wetted; hence the tedious process of fermentation is shortened, labour is saved, and bread can be made in very little more time than is necessary for the baking. Each powder is diluted with a certain quantity of flour, to such a standard that for every 100 parts of flour 2½ of each powder is required: hence the process of weighing is simplified beyond reach of mistake. The complaint against white bread, especially in the case of persons who eat little else, is, that it is deprived of the phosphates which the bran contains. This baking powder supplies the bone phosphates in the very proportions of Nature herself, and may be prescribed in bread as a mode of administering these salts so essential to life. One quite unexpected property which it has is that of enabling a white and lustrous-looking bread to be made of dark flour; hence, with its aid, the darker and cheaper flours may be used more freely than at present. It is good not only for fine bread, but it counteracts the clamminess of brown and farmhouse bread, and renders them more digestible. Lastly it makes admirable cakes, destitute of that peculiar soapy flavour which is so disagreeable in Madeira cakes and other cheap confectionery. Of course it may take the place of the ordinary baking powder in all kitchen operations. The loaves prepared with it by Messrs. Spiking of fine and seconds flour, as well as the brown bread and cake, fully bear out what is asserted of this baking powder.

From such a cursory examination as we have had time to make, we may say that the acid powder is strongly acid to the taste, and contains phosphoric acid, with lime, some soluble sulphate, and abundance of flour. The alkaline powder contains bicarbonate of soda, with a little flour and a good deal of common salt. It also contains a trace of phosphoric acid. When the solutions of each are mixed, an insoluble phosphate is immediately formed, which detains the carbonic acid as it is evolved, and so enables it to do its work gently and thoroughly, and not pass off too hastily.

NEW BOOKS, WITH SHORT CRITIQUES.

A Handbook of Therapeutics. By Sidney Ringer, M.D., Professor of Therapeutics in University College, Physician to University College Hospital. London: Lewis. Pp. 486.

*** We can congratulate Dr. Ringer on turning out a book for which we predict almost certain success. Professedly founded on the admirable treatise of Buchheim, it is the embodiment of the best and most recent views on therapeutics. Dr. Ringer wisely avoids collecting into an *omnium gatherum* everything that has been said as to the action of certain remedies. Such a *mélange* is precisely what is not wanted. Quality, not quantity, is the modern requisite in therapeutics, and Dr. Ringer has done much to eliminate the certain from the uncertain. The classification is the classification of Buchheim—the most scientific now in use—and Dr. Ringer has also borrowed from the valuable, if diffuse, treatise of Clarus. The works of Parkes and Stillé have also been consulted. The remedies are grouped as far as possible in accordance with the effects of some substance common to or similar in all. A table of doses is added, and—a somewhat novel feature in a Medical work—there is a dietary for invalids. Altogether, within the small space available, a great deal of sound matter, most of it tested by careful clinical experience, has been collected.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 18th inst.:—

Cotterill, Alfred, L.S.A., Brigg, Lincolnshire, of King's College.
Elmes, William Henry, Licentiate King and Queen's College of Physicians, Ireland, Limerick.
Evans, William Henry, Kensington, of St. Bartholomew's Hospital.
Fiske, John Frederic, Lavenham, Suffolk, of King's College.
Harle, Ezra, Highbury, of St. Bartholomew's Hospital.
Kidger, Alfred Armitage, L.S.A., Ashby-de-la-Zouch, Leicestershire, of King's College.
Lloyd, William Howell, L.S.A., Llangathen, Carmarthenshire, of Guy's Hospital.
McBrien, William Frederick, M.D. Victoria College, Toronto, of Toronto and St. Thomas's Hospital.
Peacan, Luke, Dublin, of the Dublin School.
Rigby-Hughes, John, Runcorn, Lancashire, of Guy's Hospital.
Terry, William Frederick, M.D. New York, Exeter, of New York.
Trezise, William Richards, St. Just, Cornwall, of King's College.
Willis, Julian, Kilburn, of King's College.

It is stated that of the twenty-four candidates examined four failed to acquit themselves to the satisfaction of the Court of Examiners, and were referred to their Hospital studies for a period of six months.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, May 13, 1869:—

Barringer, Thos. Stevens Wright, St. John-street, E.C.
Brooks, Samuel Brewer, Tillingham, Essex.
Jukes, Andrew, Tiverton, Devon.

Langford, Phineas Pitts, St. Mark's-square, W.
Nelham, Ambrose, Chrisp-street, Poplar.

As Assistants in compounding and dispensing medicines:—

Kite, John Cazeneuve, Bedford.
Whitby, John, Stratford-on-Avon.

The following gentlemen also, on the same day, passed their First Examination:—

Kelsey, William, London Hospital.
Kite, Alfred John, University College.
Mills, Daniel Ernest, Birmingham.
Williams, Henry, St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Broadbent, W. H., M.D.—Physician to the London Fever Hospital, in succession to Dr. Buchanan, resigned.

NAVAL AND MILITARY APPOINTMENTS.

Admiralty.—The following appointments have been made:—Jas. Bradley, Assistant-Surgeon to the *Liverpool*; Dr. William Fasken, Staff-Surgeon, to the *Monarch*; Arthur B. Johnson, Assistant-Surgeon, to the *Monarch*; Dr. William Galloway, Acting Assistant-Surgeon, to the *Monarch*.

15th Hussars.—Surgeon-Major Neil Henry Stewart, M.D., from the 3rd Dragoon Guards, to be Surgeon, *vice* Surgeon-Major William Godfrey Wyatt, who exchanges.

70th Foot.—Staff Assistant-Surgeon Maurice Knox, to be Assistant-Surgeon, *vice* Thomas Hession, who exchanges.

48th Foot.—The transfer of Surgeon W. R. Burkitt from the Staff bears date May 12, and not April 12, 1869, as stated in the *Gazette* of May 11.

Medical Department.—Assistant-Surgeon Thomas Hession, from the 70th Foot, to be Staff Assistant-Surgeon, *vice* Maurice Knox, who exchanges.

18th Bedfordshire Light Infantry Militia.—Rowland H. Coombs, L.R.C.P. Lond., to be Assistant-Surgeon, *vice* Rawlings, deceased.

War Office.—The Secretary of State for War has appointed James Beresford Ryley, Esq., M.R.C.S., to be Assistant to the Visiting-Surgeon at Woolwich; and Arthur Nankivill, Esq., M.R.C.S., to be Assistant to the Visiting-Surgeon at Chatham, under the Contagious Diseases Act. 3rd Regiment Dragoon Guards: Surgeon-Major William Godfrey Watt, from the 15th Hussars, to be Surgeon, *vice* Surgeon-Major Neil Henry Stewart, M.D., who exchanges.

BIRTHS.

Arnott.—On May 15, at 6, Nottingham-place, W., the wife of Henry Arnott, M.R.C.S., of a daughter.

Forsyth.—On May 14, at 10, Park-terrace, Greenwich, the wife of Alexander Forsyth, M.D., of a daughter.

Fraser.—On May 13, at 1, Orme-square, Kensington-gardens, the wife of D. A. Campbell Fraser, M.D., Surgeon, 103rd Fusiliers, of a son.

MARRIAGES.

Johnson—Churchill.—On May 12, at Christ Church, Claughton, Richard, eldest son of John Johnson, Esq., M.R.C.S., Liverpool, to Frances Alice, daughter of Walter Churchill, Esq., Claughton, Birkenhead. No cards.

Little—Marchant.—On April 29, at the Church of Holy Trinity, Brooklyn, New York, Robert William Little, of Shanghai, China, son of W. J. Little, M.D., of London, to Mary, daughter of the late Henry Marchant, of New York. No cards.

Pratt—Brown.—On May 12, at Handsworth Church, near Sheffield, John Stevens Pratt, Surgeon, Sheffield, to Edith Maria, only daughter of John Bower Brown, Esq., J.P., of Woodthorpe Hall, in the parish of Handsworth.

DEATHS.

Fidler, John Dixon, M.D., Assistant-Surgeon Royal Cumberland Militia, at Whitehaven, lately, of fever (aggravated by exposure) caught in the performance of his military duties.

Graham, Buchanan, second surviving son of the late Robert Graham, M.D., Professor of Botany in the University of Edinburgh, at Callao, Peru, on March 29.

Keates, Dr. Wm., Deputy Inspector-General of Hospitals, Dacca, at the house of Dr. Fayrer, 33, Chowringhee, Calcutta, on April 19.

Knott, George Austice, M.D. (formerly of Coventry), at Brighton, on May 16, in his 49th year.

Luard, Philip Edward, Commander R.N., youngest son of the late Peter Francis Luard, Esq., M.D., at Bath, on May 13, aged 37.

Nicholls, George John, F.R.C.S.E., at Bourne, Lincolnshire, on May 13 (his birthday), aged 76.

Parratt, Mary Bonham, the beloved wife of James Parratt, M.D., late of Mount-street, Grosvenor-square, at Tottenham, on May 12.

Stovell, Matthew, M.D., C.S.I., late Principal Inspector-General Bombay Medical Department, at his brother's residence, 66, Belsize-park, Hampstead, on May 8.

Wray, Septimus, Esq., M.D., M.R.C.P., at Tudor Lodge, Brixton, on May 12, aged 77.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Dental Hospital of London, 32, Soho-square.—Dental Surgeon; must be a Licentiate in Dental Surgery of the Royal College of Surgeons of England. Applications and testimonials to the Hon. Secretary on or before June 8.

Farringdon General Dispensary and Lying-in Charity, 17, Bartlett's-buildings, Holborn.—Honorary Surgeon. Applications and testimonials to Mr. S. Green, St. Michael's House, St. Michael's-alley, Cornhill, on or before the 24th inst. Election on June 1.

Lancaster Infirmary.—House-Surgeon; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to the President, at the Institution, on or before June 1. Election on June 8.

Leamington Provident Dispensary.—Dispenser; a married man without family preferred. Applications and testimonials to the Honorary Secretary, 15, Charlotte-street, Leamington.

Lunedale Union.—Medical Officers required for three districts of this Union. Candidates must be legally qualified. Applications and testimonials to John Hoggarth, Esq., Clerk, Ullswater-road, Lancaster, on or before May 29, from whom further information can be obtained.

Middlesex Hospital.—Physician's Assistant; must hold some qualification, and be prepared to become a Medical pupil of the Hospital. Applications and testimonials to the Secretary, on or before the 28th inst. Candidates to attend the Medical Committee for examination on the 29th inst. at 2 o'clock p.m.

Mullingar Union.—Medical Officer for the Ballinacargy Dispensary District. Candidates must be legally qualified. Applications and testimonials to James J. Eivers, Esq., Tristernagh Abbey, Ballinacargy, on or before the 22nd inst. Election on the same day.

Newcastle-upon-Tyne Infirmary.—Senior House-Surgeon and Junior House-Surgeon. The Senior House-Surgeon must have both Medical and Surgical qualifications. The Junior House-Surgeon must be duly registered and have one qualification. Applications and testimonials to the Secretary on or before June 22. Election on July 1.

New North Staffordshire Infirmary.—Resident Medical Officer; must have both Medical and Surgical qualifications and be registered. Applications and testimonials to the Secretary at the Infirmary, Etruria, Stoke-on-Trent, on or before the 26th inst. Election on June 3.

North Riding Infirmary, Middlesbrough-on-Tees.—House-Surgeon; must be unmarried, and be F. or M.R.C.S., and possess a Medical qualification recognised by the Medical Council. Applications and testimonials to the Secretary on or before June 1. Election on July 1.

Preston Infirmary.—House-Surgeon; must be legally qualified. Applications and testimonials to W. Howitt, F.R.C.S., Fishergate, Preston.

Reading Medical Dispensary.—Resident Surgeon; must be duly qualified. Applications and testimonials to the President, at the Institution, on or before May 27.

St. Pancras and Northern Dispensary.—Honorary Physician; must be M.R.C.P.L., and a Graduate in Medicine of one of the Universities of Great Britain or Ireland, not practising pharmacy. Further particulars on application to the Hon. Secretary, S. S. Higg, Esq., 33, Gordon-street, Gordon-square, W.C.

Sheffield General Infirmary.—House-Surgeon; must be M.R.C.S., or a Licentiate of the Faculty of Physicians and Surgeons of Glasgow, and L.R.C.P.L. Applications and testimonials to J. Kirk, Secretary, on or before May 22. Election on June 2.

Sheffield Public Hospital and Dispensary.—Honorary Physician; must be a graduate in Medicine of a University, or F. or M.R.C.P., not practising Midwifery or Surgery. Applications and testimonials to the Honorary Secretary. Election on May 26.

Westminster General Dispensary, Gerrard-street, Soho.—Honorary Physician; must be M.D. or M.B. Applications and testimonials to the Secretary on or before May 22.

West Sussex, East Hants, and Chichester Infirmary and Dispensary.—House-Surgeon and Secretary; must be M.R.C.S.E. and L.S.A., or L.R.C.P.L., and be registered. Applications and testimonials to the House-Surgeon and Secretary on or before June 1. Election on the 17th.

Worcester General Infirmary.—Resident House-Surgeon's Assistant and Dispenser; must be legally qualified. Applications and testimonials to the Secretary on or before June 5.

York Dispensary.—Resident Medical Officer; must have both Medical and Surgical qualifications and be unmarried. Applications and testimonials to the Secretary, Dispensary, York, on or before May 25.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Altrincham Union.—The Altrincham District is vacant; area 12,435; population 13,096; salary £90 per annum.

Brentford Union.—Mr. J. J. Mackinlay has resigned the Sixth District; area 3120; population 5531; salary £54 per annum.

East Ashford Union.—Mr. Henry Whitfeld has resigned the Second District; area 1380; population 567; salary £5 per annum.

APPOINTMENTS.

Epping Union.—James C. Pritchard, M.R.C.P. Edin., M.R.C.S.E., L.S.A., to the Buckhurst Hill District.

Great Yarmouth Parish.—Thomas Lettis, M.R.C.S.E., L.S.A., to the South District.

Luton Union.—George Henry Torrance, L.R.C.S. Ire., L.K. and Q.C.P. Ire., to the Markyate District.

Mile-end Old Town Hamlet.—Arthur Cæsar, L.F.P. and S. Glas., L.S.A., to the Workhouse, Schools, and North Ward District.

Peterborough Union.—William Thompson, M.B. Glas., M.C. Glas., L.S.A., to the Farcet District.

Sevenoaks Union.—Nathaniel E. Cresswell, M.R.C.S.E., L.S.A., M.D. St. And., to the Fifth District.

University Intelligence.—Oxford, May 15.—In a Convocation holden this morning the following degree was conferred:—Doctor in Medicine: Charles Theodore Williams, Pembroke.

The Marquis of Bute is about to establish and endow a Hospital for Lepers at Jerusalem.

THE FELLOWSHIP.—It is stated that the extraordinary number of forty-nine candidates have entered their names for the forthcoming Fellowship examination at the Royal College of Surgeons.

THE President and Fellows of the Royal College of Physicians have issued cards of invitation to a *conversazione* to take place on June 9.

REPORTED CASE OF SATURNINE POISONING.—At Poplar a week ago, Mrs. Elizabeth Christopher, who kept a beershop in the Commercial-road, was seized with convulsions, and died after two days' illness. It is stated that her death resulted from drinking beer drawn from the new leaden pipes in the bar of her shop.

THE ULVERSTON STORY.—The fasting girl at Ulverston, who, it is said, has abstained from food since last October, has now commenced to both eat and talk. Her parents acknowledge that she has received £50 during her exhibition.

A COLLECTION of about 700 German naturalists' and Physicians' autographs and photographs will be exhibited for sale at the bazaar, to be held for the benefit of the German Hospital in London, at the Hanover-square Rooms in the first week of June.

THE *Worcester* training ship has been removed from Erith to Gravesend, and is to be finally moored near the pier at Southend, in consequence of the outfalls of the metropolitan sewers being detrimental to health.

EDINBURGH UNIVERSITY CLUB.—The quarterly dinner of this Club was held on the 14th inst. at St. James's Hall. Dr. Basham occupied the chair, and was supported by Sir Henry Holland, the Rev. the Principal of King's College, and Mr. Winter Jones as guests of the Club. At a meeting of the Council held before the dinner, Dr. Lyon Playfair, M.P. for the University, Dr. Conyers, of the 8th King's Regiment, and Dr. John Murray, were elected members of the Club. Dr. Playfair, whose name was coupled with the toast of *Alma Mater*, made an eloquent speech upon the present position of the Scottish Universities in relation to preliminary education in Scotland.

THE MIDDLESEX HOSPITAL DINNER AND HOME FOR NURSING.—The 124th anniversary of the Middlesex Hospital was celebrated by the usual dinner at Willis's Rooms, on Thursday, the 13th, Viscount Enfield, M.P., in the chair. About 200 friends and supporters of the Hospital attended. The noble chairman, in the toast of the evening, referred to the ceremony of opening the home for nursing by her Royal Highness the Princess Teck in the afternoon. He believed the home was the precursor of many similar institutions in the metropolis and the provinces. He related shortly the chief features in the history of the Hospital, and specially referred to the munificence of Mr. Whitbread and others in founding the ward for cancer, and to the fact that one wing of the Hospital had been set apart for the reception of a large body of sick French refugees, clergy and lay emigrants, who for several years had enjoyed freedom from persecution in this country. Nearly £7000 were intimated during the evening towards the general funds of the Hospital and the Home for Nursing.

POOR-LAW MEDICAL SERVICE.—*St. Marylebone.*—The guardians have decided to appoint a vaccination clerk on finding by the Registrar-General's returns that there were some 1300 cases of default of vaccination in eight months. They still persist that one of the six relieving officers would have been a suitable person, but feel obliged to bow to the Poor-law Board, which refuses to sanction such an appointment. *St. Pancras.*—Dr. Hardy was appointed Medical officer of the Infirmary during the absence of Dr. Gibson. Dr. Saul having declined to act longer than the fortnight for which he was engaged. *West London Union.*—The Poor-law Board sanction the appointment of Dr. Wilson as the Medical officer of the local workhouse. *Southwark.*—In a case of neglect of vaccination prosecuted by the guardians, Mr. Burcham decided that to show that a child was in a weak state nine months after birth was no proof that the child was not in a fit state during the three months after birth. He fined defendant 20s. and costs.

ON the evening of Tuesday the Pharmaceutical Society gave a *conversazione* in their rooms in Bloomsbury-square. Many eminent members of our Profession were present, and the Society had done its best towards providing a due supply of all the most interesting scientific novelties. On Wednesday a meeting of members of the Society was held in the same place for the purpose of presenting the President, Mr. Sandford, with a testimonial for his efforts in procuring the passing of the Pharmacy Act. More than £300 had been collected for this purpose, and members from all parts of the kingdom were present on the occasion of the presentation. The testimonial took the form of several valuable pieces of silver plate, and a portion of the money was devoted to a portrait of Mr. Sandford. In the evening a great many of those present dined at the Freemasons' Tavern.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Correspondents are requested to authenticate their communications by enclosing their cards in confidence.

R. N. should apply to Mr. Moore, of Tower-hill.

H. H.—Yes; if he were in practice previous to August, 1815.

Cambria.—The Act extends to the Principality.

J. P. C. cannot escape the examination.

Nemo.—At any of the London Hospitals.

Beta.—Not necessarily. The Poor-law Board may refuse to sanction the appointment.

THEFT FROM MEDICAL MEN.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I wish to warn my Medical brethren against a rogue who was shown into my consulting-room about 4 p.m. to-day, and in less than a minute selected and concealed a valuable pocket case, with which he got off. He was about 5 feet 4 inches in height, not stout, with complexion and hair darkish, slight whiskers and beard, no moustache; expression rather open and bright, and manner confident but respectful. He wore a high hat, brown morning coat, dark waistcoat and trousers, and pretended to inquire for an account requested by a patient unknown. Much to blame for leaving cases of instruments on the mantelpiece, which he so quickly examined and rearranged,

I am, &c. W. G. TILEY.

4, Tavistock-road-villas, Westbourne-park, W., May 8.

Mr. J. H. Salter's case of complete Disarticulation of the Upper Maxillary Bone has been received, and is in the printer's hands.

Students.—Brookes's Theatre of Anatomy was in Blenheim-street, Oxford-street. It is now a lead warehouse.

Anti-quack should apply to a magistrate. The offender may be proceeded against for obtaining money by false pretences.

AN UNQUALIFIED ASSISTANT.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In a late number of your journal, you very justly reprobated the employment of unqualified assistants, and attributed thereto much of the counter-practice now so prevalent. Another evil of a worse character—even the death of the patient—does sometimes arise. An instance of this I wish to record, although I hope it is an occurrence specially rare. When attending a poor woman not long ago, I found that she had a great objection to take her newly-born infant to her bosom; and, on inquiring why she should hesitate, I learnt that, at a previous confinement, the child was thus placed, and, when looked at after the lapse of a short time, was found to be dead—and its death was positively due to unrestrained bleeding from the navel. The cord had certainly been tied, but the division had been made between the ligature and the abdomen.

I am, &c. INQUISITOR.

*** Few assistants of either sex could be so unqualified as this.

Alpha.—The *Medical Repository* was edited by Dr. Copland.

Juvenis can recover his charges by proceeding in the County Court.

Spes.—The periodical alluded to was discontinued many years since. We believe that the volumes are to be found in the Library of the Royal College of Surgeons.

PHARMACY ACT AMENDMENT BILL.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Having read your account of this Bill in your last issue, though of another profession, I request permission to say a few words on the subject. I take an interest in it from having had to advise a licentiate of the College of Physicians upon the Pharmacy Act a few months ago.

It is strange that the Lord Advocate of Scotland, acting for his countrymen who are aggrieved by it, should have overlooked that the 17th section is the great grievance of the Act to all general Practitioners who are not legally qualified apothecaries. Dr. Brewer's amendment, if something to the purpose, does not go far enough. It hardly applies to the case of general Practitioners in the country, or even to those in towns who are accustomed to dispense their own medicines. By the 17th section apothecaries are expressly exempted from the extremely inconvenient restrictions of that section, so far as regards medicines supplied by them to their patients; but, assuming your account of the Bill, as it has passed the Commons, to be correct, it leaves all other general Practitioners still subject to those restrictions as to medicines supplied by them to their patients. Such a difference between these two classes of Medical men is so very unjust that it cannot be intended. Possibly a general Practitioner who is not an apothecary might bring himself within Dr. Brewer's amendment by writing a formal prescription and making it up himself, but that would often be very inconvenient in practice; and it is neither reasonable nor fair that an apothecary should, by a mere accident, be placed in a better position under the Act than all other general Practitioners who are legally qualified. I hope the House of Lords will put an end to this injustice.

The penalties of the 17th section are very heavy, and any person may prosecute; add to which, the restrictions are hardly compatible with Medical practice, as is evident at a glance. The penalty under the 15th section could be sued for only by the Registrar of the Pharmaceutical Society, and within six months after the offence.

Temple, May 15. I am, &c. A BARRISTER.

A Patient.—Each recommendation to the Southport Sea-bathing Infirmary costs twenty-seven shillings, but the stay of patients in the Hospital may be prolonged at the rate of nine shillings for each additional week.

Medicus.—1. Consult the annual reports of the Commissioners of Lunacy. 2. There is no abstract of the paper. Dr. Edward Smith's paper is noticed. See *Medical Times and Gazette*, October 11, 1862, p. 390.—3. The gentleman named is Assistant-Surgeon to the Hospital.

MEDICAL SELF-PRESERVATION.

A Doctor of the Dutch army writes, *mutatis mutandis*, in the *Journal of the Hague* as follows :—

"Some time ago a young fellow begged my advice for a slight disease, which a melancholic state of mind caused him strongly to exaggerate. The patient, instead of at once addressing himself to a Doctor of his own country, had been seduced by the pompous journal *annonces* of a certain advertising Doctor. He wrote to this gentleman, and obtained in return a series of letters full of kind interest, promises of immediate and radical cure, and the rest. Some of those letters are in my possession. In one of them, written on February 10, 1868, I read that, 'on condition of sending £4, the patient will receive a second dose of physic.' 'It cannot fail,' so added the generous Quack, 'that the best results will be obtained. After this second ration the recovery will be perfect, and relapse will be impossible.'(a)

"However, the recovery failed to appear. On April 29 Mr. Quack had heard with pity that his tentatives had not led to a satisfactory result. Notwithstanding, he hoped with further aid to deliver the patient from his evil. If the patient would have the kindness to send £5, he would obtain an infallible receipt.

"The treatment was continued until March 15, 1868. At this moment, the 'Doctor,' *au bout de son latin*, or perhaps seeing the pounds not rushing fast enough, put a stop to the treatment, and advised the patient 'a change of air.'

"For £9 the patient had been blessed with two little boxes of pills, which were of no use at all. It was then that the patient came to me. After having spoken a long time to him, I convinced myself that his disease was purely imaginary, and, after a few visits, I succeeded in convincing him also.

"Such is the self-preservation of Dr. (?) Quack! It is not so bad as pocket-picking perhaps."

A Gentleman, Liverpool.—We cannot copy the letter of Dr. Hitchman to the editors of the *Liverpool Mercury*. The paragraph alluded to is certainly of an offensive character. Personalities only serve to damage a cause, however righteous it may be.

An Unbeliever.—It almost seems incredible to sensible persons that proceedings such as those reported to have lately taken place at the London Dialectic Society could really have occurred. It is of no use arguing with such persons; they will go the full length of the tether.

COMMUNICATIONS have been received from—

Mr. P. Headridge; Mr. J. Hoggarth; Mr. W. G. Tiley; Mr. J. C. Morrell; Mr. J. B. Thomson; Dr. Sturges; Mr. G. Gaskoin; A Barrister; Dr. Fayrer; Dr. Homaerger; Dr. Broadbent; Dr. Lorent; Medicus; Dr. Duckworth; Inquisitor; Mr. T. D. Wheatley; Mr. A. E. Davies; Dr. J. Macdonald; Dr. Lionel Beale; Mr. J. Chatto; Dr. Gervis; Dr. Bateman; Dr. B. W. Richardson; Mr. Clarke; Mr. T. M. Stone.

BOOKS RECEIVED—

Robinson on the Parks, Promenades, and Gardens of Paris—Macpherson's Baths and Wells of Europe—Journal of Anatomy and Physiology, May—Argyll District Asylum Report—California Medical Gazette, April—Odling on Carbon—Report of the Lunatic Asylum for the Counties of Salop and Montgomery—Report of the Dispensary for Skin Diseases, John-street, Glasgow—Lister on Ligature of Arteries.

NEWSPAPERS RECEIVED—

New York Medical Gazette—Brighton Gazette—Le Nouveau Monde—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 15, 1869.

BIRTHS.

Births of Boys, 1024; Girls, 988; Total, 2012.
Average of 10 corresponding weeks, 1858-67, 1979·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	679	600	1279
Average of the ten years 1858-67 . . .	649·1	631·4	1280·5
Average corrected to increased population .	...	...	1409
Deaths of people above 90	...	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West .	463388	...	4	3	2	5	4	3	...
North .	618210	3	4	7	...	21	16	3	...
Central	378058	...	4	4	2	11	3	1	...
East .	571158	1	6	29	1	24	7	1	...
South .	773175	...	6	13	1	26	12	2	...
Total .	2803989	4	24	56	6	87	42	10	...

(a) I translate from the Dutch article itself.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 15, 1869, in the following large Towns :—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending May 15.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending May 15.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3170754	40·7	2012	1462	1279	68·3	37·3	51·2	0·35	35
Bristol (City) . .	169423	36·1	132	76	*75	67·0	36·4	50·3	1·18	119
Birmingham (Boro')	360846	46·1	298	175	142	63·7	36·0	48·4	1·47	148
Liverpool (Boro') .	509052	99·7	386	295	294	58·5	39·6	47·3	0·37	37
Manchester (City) .	370892	82·7	257	210	*179	62·0	33·0	49·1	0·34	34
Salford (Borough) .	119350	23·1	107	60	49	61·8	32·1	46·9	0·41	41
Sheffield (Borough) .	239752	10·5	168	126	119	65·0	36·5	48·6	0·42	42
Bradford (Borough)	138522	21·0	80	71	80	61·7	37·1	47·1	0·44	44
Leeds (Borough) .	253110	11·7	227	129	111	63·0	37·0	46·7	0·34	34
Hull (Borough) .	126682	35·6	75	59	61	66·0	34·0	46·4	0·41	41
Newsti-on-Tyne, do.	130503	24·5	150	69	70	54·0	35·0	43·9	0·08	8
Edinburgh (City) .	178002	40·2	120	86	106	60·7	31·0	45·0	0·20	20
Glasgow (City) .	458937	90·6	369	268	334	60·4	30·5	45·1	0·07	7
Dublin (City and some suburbs) .	320762	32·9	171	158	120	56·6	29·6	46·7	0·18	18
Total of 14 large Towns . . .	6546587	35·5	4552	3244	3010	68·3	29·6	47·3	0·45	45
					Week ending May 8.	Week ending May 8.				
Vienna (City) . .	(1863) 560000	...	...	...	396	...	...	57·0	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·743 in. The barometrical reading increased from 29·35 in. on Monday, May 10, to 30·08 in. on Thursday, May 13.

The general direction of the wind was E.N.E. and N.N.E.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

May 22. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Royal Institution, 3 p.m. Prof. Seeley, "On Roman History."

24. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

25. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Ethnological Society, 4 p.m. Anniversary Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Mr. G. G. Gascoyen, "On a Case of Iritis occurring in Syphilis treated without Mercury."

Royal Institution, 3 p.m. Prof. Grant, "On Stellar Astronomy."

26. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Gresham College, Basinghall-street, E.C., 7 p.m. Lecture by Dr. E. Symes Thompson, F.R.C.P., "On the Ear."

27. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Gresham College, Basinghall-street, E.C., 7 p.m. Lecture by Dr. E. Symes Thompson, F.R.C.P., "On the Ear."

Royal Institution, 3 p.m. Prof. Tyndall, "On Light."

28. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Clinical Society, 8½ p.m. Report from Committee on the Use of Carbolic Acid. Dr. Murchison, "Case of Cholera treated with Saline Injection into the Veins at a lower Temperature than that of Blood;" and "Case of Gastro-Enteritis." Mr. Holmes Coote, "On the Treatment of Syphilis." And other Papers.

Royal Institution, 8 p.m. Mr. Norman Lockyer, "On Recent Discoveries in Solar Physics made by the Spectroscope."

CLINICAL SURGERY.—No. II.

ON THE

TREATMENT OF SUPPURATING JOINTS BY FREE INCISIONS.

By THOMAS BRYANT, F.R.C.S.,
Assistant-Surgeon to Guy's Hospital.

(*Concluded from page 516.*)

Case 6.—Disease of the Knee-joint, ending in Suppuration—Treated by Free Incision—Recovery with Movable Joint.

William S., aged 13, came under my care in February, 1865, for severe disease of the right knee-joint. It had existed for three years, and had appeared with pain of a dull aching character in the part for at least six months before any visible enlargement of the joint had appeared. The swelling gradually increased after that time, and the pain continued. He had been under care for some months at a metropolitan Hospital. When I saw the boy the knee was much enlarged from a thickening of the synovial membrane over expanded epiphyses. There was increased heat in the joint, and pain on pressure. There was little movement in the articulation, but what existed was smooth. An abscess was clearly forming over the inner condyle of the femur. A splint was applied to fix the joint, fomentations ordered to the abscess, and tonics given. On March 1 the abscess was opened freely, several ounces of unhealthy pus and synovial fluid making their escape. The wound healed kindly, and the swelling of the soft parts over the bone gradually subsided, and on December 15 it was noticed that all evidence of disease of the synovial membrane had disappeared. The splint was, however, kept on, as it was thought unlikely that any other result than a stiff joint could possibly result. On September 3, 1866, the splint was removed, and, to the satisfaction of all, the joint was found to have recovered and to be partially movable. By December 17 the mobility of the joint had much increased, and by January 3, 1867, he was pronounced perfectly cured. He was seen again on March 24, 1868, with the parts quite well, the expanded epiphyses having greatly contracted. On May 2 he hurt the joint by a blow, and some slight indications of mischief reappeared, but these subsided in a few days under rest and fomentations, and in three weeks he was again well. In August, 1868, the joint was still sound.

Case 7.—Disorganisation of Elbow-joint after an Injury—Recovery with Movement—Treated by Free Incisions.

Walter L., aged 9, came under my care at Guy's Hospital on May 13, 1867, for great enlargement of his right elbow-joint, following an injury received three months previously. Swelling, with constitutional symptoms of a severe nature, followed the accident, and since then the enlargement has been gradually increasing. When I saw the boy, the elbow-joint formed one large abscess. His appearance was one indicative of suffering. He refused to come into the Hospital. Two free incisions were consequently made into the joint, one on either side, and an anterior angular splint applied. Pus freely escaped, and free crepitation was felt on moving the joint. Tonics were prescribed, with good living, the boy being in tolerably comfortable circumstances. In one week the condition of the part had much improved, the swelling had subsided, and the sinuses still discharged. He then consented to be admitted into Guy's. All the symptoms, however, rapidly improved, the swelling gradually disappeared, and the wounds healed. By October 10, there was only one sinus open on the inner side, and all pain and swelling had vanished. On examination there was found to be some movement in the joint, and three months subsequently this had much increased.

Case 8.—Disease of Shoulder-joint—Suppuration—Treatment by Free Incisions—Recovery with a Movable Joint.

Henry F., aged 16 months, was brought to me at Guy's Hospital on October 12, 1863, for acute suppuration of the right shoulder-joint of five weeks' standing. It had appeared without any known cause, with swelling, severe local pain, and constitutional disturbance. Suppuration made its appearance the day before he came under my notice, and a large abscess was freely opened in front of the joint below the insertion of the pectoral muscle. A probe readily passed through the wound into the joint. The joint was much thickened, and any attempt to move it caused pain. The child's face clearly indicated the severity of the symptoms. Fomentations were ordered with tonic medicine, and by November 2, or in three weeks, the abscess had almost ceased to discharge. By November 9 the wound had closed, and the shoulder was clearly becoming much smaller. On November 16 some movement in the joint was detected, and in six months a perfect recovery was noted. The movement was good, although some amount of crepitation existed.

Case 9.—Enormous Abscess involving the Shoulder-joint—Free Incision—Recovery with Movable Articulation.

Eliza W., aged 5, was brought to me at Guy's Hospital on December 18, 1862, for an enormous abscess completely surrounding the left shoulder-joint. It had been coming on for one month after an injury, and had been attended with severe constitutional disturbance. A free incision was made into the abscess in front of the joint, and a quantity of pus let out; immediate and permanent relief followed. For three months the sinus discharged pus, and the joint appeared to be diseased, for any movement of the articulation caused pain, and was attended with crepitation as of bare bone. In another three months, however, all these symptoms had disappeared, and the child appeared before me with a good arm and a movable joint.

In this case the suppuration clearly came from beneath the deltoid muscle, and was apparently within the joint. The result of the case, however, throws some doubt upon this point, for I never saw so complete a recovery of a shoulder-joint articulation after suppuration as existed in this instance.

The nine cases I have just quoted were all examples of suppuration of a joint from synovial disease. In all incisions were freely made as soon as good evidence existed of suppuration, and in all a good result followed, the disease not only being arrested in every case, but a movable joint being saved to the patient.

The disease, however, in each occurred in children, and it is in such subjects that we meet with the most perfect illustrations of the cure of disease by natural processes. Nevertheless they serve well to illustrate the practice I am here inculcating.

In the next series of cases the same treatment was applied, although with a different result, anchylosis of the joint following in all.

Case 10.—Disease of the Hip-joint—Suppuration and Anchylosis—Treated by Free Incision.

Dennis M., aged 4, was brought to me at Guy's Hospital on March 19, 1866, for limping with his right leg. It had been observed for three weeks, and had come on without any history of a fall or injury. The child had complained also of pain in the part. On examination the pelvis was tilted to the left side, giving the appearance of elongation to the affected limb of about an inch. There was no enlargement or thickening about the joint, no increase of heat, or pain on gentle manipulation. The glands in the groin were healthy. Firm pressure, however, upon the trochanter gave pain, and any attempt to move the limb excited spasm of the muscles. The parents were directed to keep the child off its legs, to bathe the part with warm water, and to give tonics. By April 9 the symptoms had improved; there was less pain and less spasm of the muscles. By the 16th they were still better. The child then disappeared from view, the parents thinking he would soon be well. He soon began to use the limb. On October 15 he reappeared, with evident thickening about the joint, particularly about the neck of the bone. It was more painful on pressure. The symptoms had been worse for three weeks. On December 3 a large abscess showed itself behind the trochanter, which was freely opened, the finger passing through the abscess down to the joint. A splint was applied. On January 6 the abscess was discharging, but the child seemed well in his general health. By May 3 the sinus had closed, and the joint was clearly becoming anchylosed. By October 20 it was firmly fixed. On December 10 my report states that the joint was quite stiff and immovable, and free from all pain. The child subsequently went about freely with a stiff joint.

Case 11.—Suppuration of the Knee-joint after Miscarriage—Free Incisions into the Joint—Recovery with a Stiff Limb.

Eliza K., aged 35, a married woman, came under my care on October 7, 1864, with a suppurating knee-joint. It had been

coming on for six weeks, and had followed, in three days, upon a miscarriage at the second month. The symptoms of inflammation of the joint had been very acute, and the constitutional disturbance severe. When I saw the patient the joint was much swollen, hot, and painful, any attempt at movement caused great distress, and severe constitutional disturbance existed. The patient's powers were very feeble. On October 8 a splint was applied, and free incisions made into the joint, one on either side of the patella. Pus and broken-up tissue escaped. Water dressing was applied. From this moment things began to mend; fever and other symptoms disappeared. The woman took food freely, and pain gradually subsided. Anchylosis also went on rapidly. On December 9, on removing splint, the joint appeared to be fixed. The wounds had healed, and all constitutional symptoms had disappeared. On January 10 the woman walked out of the Hospital, wearing a good leathern splint, with a firmly anchylosed joint. In January, 1868, she was still well, wearing the splint. She could walk about freely without pain or inconvenience.

Case 12.—*Acute Suppuration of the Knee-joint, following a Puncture into the Articulation—The Subject of the Pulpy Disease of the Synovial Membranes—Free Incisions into the Joint—Anchylosis.*

(Reported by Dr. P. H. Pye-Smith.)

Ellen C., aged 6, a fair but healthy-looking child, was admitted into Guy's Hospital, under Mr. Bryant's care, on December 10, 1861, for some disease of her right knee. It appeared that the disease had commenced about twelve months previously by swelling of the joint, this swelling being accompanied with pain and heat in the part; it steadily progressed for nine months, when she applied (some three months before admission) to a Hospital, where an opening was made into the joint on its inner side to let out what was believed to be fluid, but nothing escaped, and as a result acute inflammation of the joint followed with suppuration. The child's parents, not wishing the child to remain longer in that institution, removed her and brought her to Guy's. When admitted the joint was much enlarged and was suppurating profusely; the slightest movement caused intense pain. The child looked anxious and worn, and had little power. Mr. Bryant ordered a back splint to be applied, and water dressing to the knee, quinine and wine being given internally. In a week's time, as the opening into the joint was small and suppuration profuse, Mr. Bryant made a free incision into the joint on the outside of the patella, giving exit to pus and broken-up tissue, and from this time everything went on favourably; the discharge gradually diminished, surgical fever disappeared, and the powers of the patient improved. On April 12, 1862, or four months after admission, the joint was firmly anchylosed in a straight position, all suppuration had ceased, and the child's health was re-established. A splint was kept on the back of the knee for some months subsequently as a precautionary measure, and a good leg was secured. The child left the Hospital on August 10 with a useful limb and in good health. She was heard of one year subsequently, and had free use of her limb.

Case 13.—*Abscess in Shoulder-joint—Recovery with Anchylosis.*

Walter D., aged 4, came under my care at Guy's Hospital on January 28, 1866, for what appeared to be an abscess around the left shoulder-joint. It had been coming gradually without any assignable cause, with pain and swelling, the former at times having been very severe. When he came under my care a large abscess existed, surrounding the whole shoulder. No movement of the limb could be allowed, and any attempt gave severe pain. It was opened freely in front where it was pointing below the tendon of the pectoral muscle, and many ounces of pus let out. In a few days another opening was naturally made behind the joint. The bone about the upper third of the arm and about the joint was felt to be greatly thickened. On March 21 things had much improved. There was still some discharge from the sinuses about the joint, but much of the thickening had gone down. It was clear also that the head of the bone was becoming rapidly fixed to the scapula. On June 5 all the sinuses had healed, and in August the head of the bone had become completely anchylosed to the glenoid cavity.

Case 14.—*Suppuration of Elbow-joint after Injury—Excision contemplated—Anchylosis.*

Alfred T., aged 9, came to me at Guy's Hospital on May 19, 1862, with suppuration of the right elbow-joint. The disease had been set up in the joint some months previously by a blow; an abscess rapidly formed in the part, accompanied with great pain and severe constitutional disturbance. When I saw the lad the joint was much swollen, and several sinuses existed discharging freely. Any attempt at movement caused pain. The sinuses passed directly into the joint. A splint was applied, and tonics, as quinine, given. On June 1 the suppuration was profuse, and on July 10 the same report was recorded. The boy was ordered to come into Guy's to have excision performed, but this was refused; consequently a free incision was made into the joint. In another month all the symptoms began to improve; the swelling of the joint began to subside, and the discharge to lessen. By October 20 the report states that the boy was convalescing, and in January, 1863, the arm had become stiff, and good anchylosis had taken place. The joint was fixed at a right angle.

I might quote other cases to illustrate the value of the practice I am now advocating, particularly of suppuration of the smaller joints; but I think I have done enough to prove that it is of use in a large number of examples of disease of the joint ending in suppuration, more particularly of the synovial membrane, and that, by the adoption of such a practice, a mobile joint may be hoped for with some confidence even after suppuration. I trust I have also done something to show the value of a correct diagnosis as to the seat of the disease—a point which is to be made out only by a careful consideration of the clinical history of the case—before a plan of treatment is adopted; and that I have strengthened somewhat the hands of the Surgeon in aiding natural processes in the cure of disease. In doing this I feel I am only building upon the suggestions made by Mr. Gay in the *Medical Times and Gazette*, vol. xxiv. p. 546 (Lond. Med. Soc., November 22, 1851); and if I have added to the value of his suggestions anything of my own, it has been from the experience I have acquired as to the great importance of the plan of treatment he there inculcated.

ORIGINAL COMMUNICATIONS.

STRANGULATED HERNIA IN BENGAL.

By J. FAYRER, M.D., C.S.I.,

Surgeon to the Medical College Hospital, Calcutta.

In a former communication I have recorded my views on this disease as seen in the natives of Bengal, particularly with reference to the necessity for early operation when the symptoms of strangulation have become marked. I gave a brief history of certain cases in which I found it necessary to operate, and which tend to confirm the opinion I have expressed. I now resume the subject by recording the history of other cases of strangulated hernia, some of which still further confirm the conclusions I have come to on this subject.

Case 1.—R. S., a Hindoo, aged 56 years, shopkeeper, was admitted on July 29, 1864, with symptoms of strangulated hernia. He had been the subject of scrotal hernia for six years, and the symptoms of strangulation, which had made their appearance twenty-four hours prior to admission, had come on shortly after the last descent of the hernia. He was admitted at 8 a.m. with all the symptoms of strangulation of the hernia, such as vomiting, constipation, pain in the tumour and umbilical region, restlessness, rapid and feeble pulse. The taxis was tried under chloroform without success. As no time was to be lost, the operation was performed at once. The stricture was found to be at the external ring, and was divided; the sac was not opened. The hernia was not, however, reduced within the abdomen, as it resisted the attempts that were made to reduce it. The symptoms abated considerably immediately after the operation, but rapidly returned, and it became evident that there was still mischief progressing in the sac, which was accordingly opened. The hernia was found to consist of omentum and small intestine, which was gangrenous. The patient sank and died the same evening from exhaustion. In this case the operation was performed too late to save life. The gangrene had supervened in the strangulation very insidiously, and without any very marked indication of its approach. The hernia was rather a large one, and the stricture was at the external abdominal ring; the sac was therefore not opened at first, as it was hoped that by this division of the stricture at the ring the symptoms would be relieved, and that the contents of the hernial sac, if not adherent, would spontaneously return within the abdomen when the congestion caused by the stricture was removed. As, in old and large inguinal herniæ, the difficulty generally is found external to the peritoneum, the sac was not opened in this case until the symptoms indicated

the necessity of doing so. On being opened the condition I have described was revealed, and death rapidly followed. The gangrene, no doubt, had commenced before the first operation was performed. The hernial protrusion was found to have contracted recent adhesions within the sac, which itself was irreducible; hence the non-return of the tumour within the abdomen when the stricture was divided. Had the stricture at the inguinal ring been divided earlier, the patient would probably have recovered. The twenty-four hours' delay in bringing him to the Hospital proved fatal.

Case 2.—I. D., a Hindoo shopkeeper, aged 44 years, was admitted, on December 18, 1864, with symptoms of strangulated inguinal hernia of the right side. The hernia was of ten years' duration. The symptoms of strangulation made their appearance only two hours before admission. The time of the last descent of the hernia is not clearly made out. Taxis having failed under chloroform, the operation was performed, and the stricture being divided at the external ring, the tumour was reduced without opening the sac. He recovered rapidly, and on January 9, 1865, the herniotomy wound having healed, I performed the operation with the needle ligatures and plug for the radical cure. The plug was removed on the fourth day, and he rapidly recovered from the second operation; but this did not prove a complete success, for the hernia again protruded, though as a much smaller tumour than before strangulation. He was discharged wearing a truss, which completely controlled the hernia, on February 8, 1865.

Case 3.—C. A., an East Indian clerk, aged 60 years, was admitted September 25, 1865, at 7 p.m., with symptoms of strangulated hernia. The tumour was small, and the constitutional symptoms not very marked. He had been the subject of inguinal hernia of the right side for nine years. The symptoms of strangulation had set in about two hours before admission. The patient was closely watched, and the usual attempts were made by the application of ice, and the taxis under chloroform, to reduce the hernia, but without success. The symptoms becoming aggravated, the operation was performed, and the stricture was found and divided at the external ring. The hernia was then reduced without difficulty, the sac not being opened. He recovered rapidly without any unfavourable symptom, and was discharged cured on October 22, 1865.

Case 4.—M. J., a Mahomedan servant, aged 40 years, was admitted on February 9, 1866, at 5.30 p.m., with urgent symptoms of strangulated hernia of the left side. He appears to have suffered from hernia since infancy. The symptoms of strangulation set in at 7 a.m. of the 9th. The operation was performed soon after admission, and the sac was opened. The hernia, however, still proved irreducible. The intestine was drawn out and exposed, and also a portion of the omentum, which formed the tumour; and on examination it was found that a considerable portion of the intestine was already gangrenous. This portion was not returned within the abdomen. The patient sank and died at 11 p.m. of the same day.

In this case the hernia was large, and the ring much stretched, yet symptoms of strangulation set in very early, and proved rapidly fatal. The mischief was said to have commenced at 7 a.m. He was brought to Hospital at 5.30 p.m. of the same day, and the operation was performed as soon as I reached the Hospital, which was before 9 p.m. The stricture in this case was not only at the external ring, but in the neck of the sac. On dividing these, a large mass of congested small intestine and omentum was found, a considerable portion of the gut having already passed into a state of gangrene. As might be expected, death resulted very shortly.

In this case, had the man been brought to Hospital in the morning and the operation performed without delay, life might have been saved. The fatal condition of gangrene supervened almost before his friends became aware that he was in danger.

Case 5.—S. D., a Hindoo shopkeeper, aged 50 years, admitted February 25, 1866, at 11 p.m., with symptoms of strangulated hernia of the left side. He had suffered from hernia for many years. Strangulation commenced at about 6 p.m. The usual attempts at reduction having failed, the operation was performed immediately—that is, very shortly after admission. The stricture was found and divided at the external ring, and the tumour reduced without difficulty and without opening the sac. The patient gradually sank and died four hours after the operation. On examination, it was found that a portion of the scrotum, and also of the small intestine, was in an incipient state of gangrene.

This is also an example of rapid supervention of gangrene in a large hernia. The symptoms of strangulation came on only five hours before admission, and then there was no indication of gangrene setting in. On finding the ordinary measures for reduction unavailing, no time was lost in performing the operation, but it was too late to save life. The patient sank within four hours after the operation.

Case 6.—B. M., a Hindoo sircar, aged 28 years, admitted June 17th, 1866, at 4 p.m., with symptoms of strangulation of an inguinal hernia in the right side. The hernia was of four years' duration. The usual measures for reduction having failed, the operation was performed at 10 p.m. The stricture was at the external ring, and, being divided, the hernia was easily returned without opening the sac. He did well, and on July 2, the wound having healed, I performed the operation for the "radical cure" with the plug and ligatures. The plug was removed on the fourth day, and the patient rapidly recovered, and was discharged apparently cured on July 19.

In this case, as in the second, the result was very satisfactory. The strangulation was removed and the hernia subsequently radically cured by a second operation.

Case 7.—J. R., a Hindoo typefounder, aged 34 years, admitted September 17, 1866, at 6 p.m., with strangulated inguinal hernia of the right side, the hernia of four years' standing. Symptoms of strangulation had commenced at 3 p.m. of the same day. He was vomiting, was restless, and had a barely perceptible pulse, with great pain in the tumour and umbilical region. Stimulants were given, and when he had somewhat rallied the operation was at once performed, delay being evidently dangerous. The stricture was divided at the external ring, and the hernia then reduced without difficulty. It evidently consisted chiefly of omentum. He recovered rapidly without a bad symptom, and was discharged cured on November 18, 1866.

This was a good example of the advantage of early operation. He was apparently sinking within three hours after strangulation commenced. Although the hernia was of considerable size, the symptoms were relieved immediately by the operation, and he recovered rapidly.

(*To be continued.*)

ON DR. MURPHY'S CRITICISM OF DR. BARNES'S LECTURES ON OBSTETRIC OPERATIONS.

By ROBERT BARNES, M.D.

I HAVE to offer my thanks to Dr. Murphy for his valuable criticism of my lectures on obstetric operations. I do not see that he urges any decided objections to the rules of practice or the methods of operating advanced in those lectures. But I trust to be excused if I make a few brief remarks upon certain questions discussed by him.

1. As to the *Forceps*. I am entirely unconvinced by Dr. Murphy's plea that Dr. Beatty's forceps, although long as compared with other single-curved instruments, can be adopted in all cases suitable for the forceps. Still less can I admit that the second, or pelvic, curve is of use "in theory" only. All over the Continent, in Edinburgh, and amongst those obstetricians in London and Manchester who have had to contend with the greatest share of difficult cases, the double-curved forceps has superseded the single-curved forceps on account of its greater practical power, and its application to numerous cases which are beyond the range of the feeble instrument Dr. Murphy extols. I repeat deliberately, basing my affirmation not upon theory, but upon the experience of more than two hundred forceps cases, that but for the long double-curved instrument many children must inevitably be destroyed, and many mothers must run the hazards of protracted labour. I have repeatedly delivered by my instrument living children, where others besides myself had failed with the old models.

As to the mode of introducing the blades, I would recommend those who still adhere to the plan of passing the pubic blade first to study a beautiful plate in the late Dr. D. Davis's "Operative Midwifery." The convenience of passing the lower or posterior blade first is very great; it makes you quite independent of a "third hand" to hold the blade first introduced.

2. As to *Craniotomy and the Cæsarian Section*. I think it may be stated that there is no real difference amongst obstetric Practitioners as to the *principle* of selection between the two operations. All, it is to be presumed, agree in resorting to embryotomy where this operation can with reasonable certainty be carried out so as to save the mother. The difference of

opinion lies in determining the limit of pelvic contraction within which this reasonable certainty exists. I am glad to see that Dr. Murphy repudiates the appeal to statistics. The reference of such a question to statistics is simply an abject surrender of reason and of clinical observation. Am I, for example, to fly to the Cæsarian section—the mother's forlorn hope—because certain writers draw from statistics the conclusion that embryotomy cannot be safely carried out with a pelvis measuring 2″ or less in the conjugate diameter? Must I reject the repeated experience of others, as well as my own, that embryotomy can be safely carried out with a pelvis less than 2 in conjugate diameter? Are we to be for ever content with the practice and precepts of Osborn and Denman? Are there no mechanical contrivances better than the old perforator and crotchet? Are we forbidden to devise and to use more efficient instruments, or to improve the methods of operating? Dr. Murphy seems to think that in fixing the minimum conjugate diameter admitting of craniotomy at 1·75″ I estimate the application of that operation too highly. In the lectures referred to I adopted the standard which my experience then justified. I am now prepared to go much further, and hope, if the programme of the next meeting of the Obstetrical Society permit, to demonstrate, by a New Method of Embryotomy, how a mature fœtus can be drawn through a pelvis one inch in conjugate diameter only; and that not in "twenty-four hours," but in about thirty minutes.

HINTS ON THE

STUDY OF DISEASES OF THE SKIN; WITH CLINICAL DEFINITIONS OF THE NAMES, ETC., IN USE.

By JONATHAN HUTCHINSON, F.R.C.S.,
Surgeon to the London Hospital, to the Hospital for Skin Diseases, and to the Moorfields Ophthalmic Hospital.

The morbid processes which the skin displays for our examination are assuming every year more and more importance in reference to general pathology. If I am not mistaken, the time is not distant when skin-diseases, instead of being deemed an unimportant if not repulsive speciality, will be recognised as affording almost unequalled opportunities for the definite study of the laws under which morbid processes and their results become modified, and of the relations which these processes bear to each other. Skin-diseases will then take their proper place as introductory to the study of general Medicine, and, before trying to understand diseases which are to a large extent concealed from observation, the student will attempt to master first those which are exposed to view.

It is part of the gain of an advancing science that the terms used should acquire gradually more definiteness of meaning. The modern study of skin-diseases has very greatly simplified our knowledge of them, but with this clinical advance we have done but little towards defining and giving precision to the terms which we use. An overloaded and in some respects erroneous nomenclature is at present one of the chief encumbrances of the subject, and one of the main hindrances to a more rapid and general advance in our knowledge of it.

An individual observer can undertake no more grave responsibility than the attempt to change the mode of use of well-known names. Such changes should be made only under urgent necessity, and with the concurrence of those best entitled to give opinions on the subject.

It is my object in the present papers to submit to the consideration of the Profession certain definitions of the names in use amongst us. In many instances these definitions will, I trust, be nothing more novel than a somewhat precise expression of the meaning which common consent has given to them, but in other instances I shall have to modify that meaning somewhat. When the latter is the case, reasons will always be assigned, and I shall still keep as closely to the usage of our great authorities as practicable.

My definitions will in all cases be clinical, rather than etymological, and intended simply to be useful in practice and in teaching. It is no doubt an essential requisite to the clear use of words that we should recognise, whenever feasible, their original meaning and derivation. I feel sure, however, that it will be readily granted that a majority of our old names of disease have long ago lost any accuracy of etymological signification which they may have possessed, and have acquired other and often different ones by conventional usage. With all such the clinical investigator may deal freely, remembering always that "the name of a thing is that which it is known by," and that in endeavouring to give a precise definition he must keep as close as he can to the meaning which is recognised by custom.

We often hear it remarked that "you must not prescribe for a name;" but whilst fully appreciating the common sense which dictates the caution, I must venture to say that it derives a large part of its value from the vague and inaccurate way in which many of our words are used. A good, inclusive, definite, name ought, when correctly applied, to go a long way towards suggesting the prescription. In no department of practice is it possible for names, if used with judgment, to go further than in skin diseases. A name, to be useful, ought to imply some knowledge or theory of cause, pathology, prognosis, and treatment. Such names as "gout," "ringworm," "shingles," "favus," "chorea," etc., do this more or less closely, with, of course, due allowance for differences of opinion; but "prurigo," "lichen," "eczema," "impetigo," and many others, do not do it at all, and, as used at present, afford no clue in any one of the four directions above mentioned. They are names of symptoms common to many different causes, not of diseases in the substantive sense. Without in the least advocating their disuse, it is greatly to be desired that their exact meanings should be assigned to them, and that students should be carefully informed that they are not the names of diseases in any comprehensive sense, and that they cannot be employed in the same way as are the names psoriasis, lupus, shingles, etc. "Eczema" means merely any inflammation of the skin, however produced, of which transitory vesicles, an abraded surface, and a sticky fluid effusion are the main results; "lichen," any eruption of which the free production of minute persistent papules which do not suppurate is the main character; and "impetigo," any inflammation of the skin resulting chiefly in the formation of numerous small pustules. These inflammations may be produced by various causes; they may vary as to severity, as to duration, and as to treatment required; and they may, and often do, occur merely as complications of other more definite varieties of disease. Instead of speaking of "lichen," "impetigo," "eczema," etc., it would often help the student to a much clearer idea of what is meant to use a longer expression, and say "vesicular inflammation of skin," "pustular inflammation of skin," or papular, as the case may be.

It is desirable, for obvious reasons, to avoid all multiplication of terms, and especially to keep down the ever-increasing crop of those which have only conventional meanings. A sound rule in this direction is to discourage the use of adjectives in technical or conventional senses, and to insist that all the words requiring a definition in order to be understood shall be plain substantives. Better that the specialist should be obliged to explain his meaning in homely English, and even with some circumlocution, than that he should be allowed to bury it under a pompous classical epithet which few except himself will comprehend as it was meant.(a)

With a very few exceptions, all cutaneous diseases are simply inflammations of the skin, produced either by derangement of nervous function, by something wrong in the state of the blood, or by external irritation. The exceptions are—certain malformations of the skin and some forms of atrophy of the skin or its appendages. All classifications of skin-diseases are arbitrary and worse than useless which do not take relationship according to *cause* as their basis. In this way only can we hope to place allied diseases in proper juxtaposition with each other. To classify by the kind of eruption produced, whether papules,

(a) In a few instances adjectives used in a conventional sense have acquired such well recognised meanings that it would be foolish to attempt to disuse them. Thus, for instance, "erythema nodosum" is the name of a disease which everybody knows, and either noun or adjective would be equally useless without its fellow. In some instances we shall be obliged to retain adjectives with conventional meanings because high authorities have given them to diseases for which we have no other names, but here I think the name of the author ought to be added until usage shall have further helped us in the matter. Thus the "pityriasis rubra" and the "lichen ruber" of Hebra must probably be known a little longer by those unfortunate terms, but every lover of clear nosology must regret that in each instance an adjective which merely denotes colour is allowed to give a meaning to its substantive, which meaning includes many other features. To adjectives which are used in their own proper sense without any conventional extension or limitation of meaning there is but little objection, but we ought still to be as economical of them as possible, and careful to use only such as are very easily understood. A display of classical pedantry is here wholly out of place. Adjectives used merely to designate the part affected are permissible, and in some instances very useful. In several instances adjectives of location have become essential parts of names, and cannot be disused. The fear of misleading students into the belief that such an adjective implies peculiarity of the disease as well as special position is sufficiently real to make us prefer English terms to classical ones, and of the latter the genitive of a substantive rather than an adjective.

pustules, vesicles, etc., is useless, inasmuch as the very same cause may produce much variety in the kind of rash, and several of these are often present in the same case. It is impracticable in our present state of knowledge to classify skin diseases completely, inasmuch as there are some respecting which we know nothing whatever as to their cause. Such diseases it is better not to classify at all, but content ourselves with describing them well and giving them appropriate names. It is a good rule in selecting names to give preference to such as are descriptive of some strongly marked peculiarity, but which do not imply any theory as to their real nature. In some instances we already know enough of causes to be able to give without risk of error a name which shall include and imply such knowledge.

(To be continued.)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

BIRMINGHAM GENERAL HOSPITAL.

TWO CASES OF DUCHENNE'S PARALYSIS WITH MUSCULAR DEGENERATION, OR PARALYSIS WITH APPARENT HYPERTROPHY—FAMILY HISTORY OF CONCURRENT PARALYSIS—MICROSCOPIC APPEARANCES OF THE AFFECTED MUSCLES.

(Under the care of Dr. JAMES RUSSELL.)

THE following two cases of the form of paralysis described by M. Duchenne, and illustrated in the last volume of the *Pathological Society's Transactions* by Mr. J. L. Clarke, Mr. Adams, and Dr. Hillier, have lately fallen under my observation. I subjoin a description of the condition of the patients, together with particulars of their family and personal histories. The family history of the second patient will be seen to present five cases of paralysis, besides the case of my patient, in three generations, and in the two instances in which particulars could be obtained the paralysis was found to have been of the progressive kind, the upper extremities of the patients becoming implicated. A case of progressive paralysis also occurred in the family of my first patient in the person of the patient's elder brother; and it will be observed that, although the muscles of the leg have never been enlarged, they present the same microscopic characters with the specimens obtained from the calf and hip muscles of the other brother, so far as the small specimens obtained by the *emporte-pièce* (for the use of which I am indebted to my friend Dr. Foster) enable us to judge. I may refer to the *Lancet* of May 8 for the report of another case lately under the care of Dr. Foster.

Case 1.—Z. W., aged 11, was admitted April 5, 1869. I visited his family twice in company with my clerk, Mr. Greenway. We saw the paternal grandparents, who have always been healthy, save that the grandmother has lately had an attack of hemiplegia. Their children, eight in number, were perfectly healthy; seven are still alive; no miscarriage. Maternal grandmother died of rheumatic fever; grandfather stated to be very well; five children healthy. The parents of the patient are healthy. There is entire absence of any evidence of rheumatism and syphilis, both from personal and family history. We examined the hearts of parents and children; they were quite healthy; the corneæ were clear; the incisors healthy, except that the mother has lost one front upper incisor, that the second child has her upper front incisors decaying at the sides in common with other teeth, and the sixth child has her front incisors (first dentition) decaying. The parents have had nine children; one miscarriage. The eldest and fifth child died of inflammation of the lungs and of measles; the second child is now 16 years of age; all are quite healthy and well developed, except Thomas (the third) and our patient (the fourth), both of whom are paralysed. No fits in any member of the family.

Thomas, the third child, aged 14, was sickly as a child, but improved up to his eleventh year. About a year and nine months ago he sat down for two hours in a field by a bonfire; he was unable to get up, so that his mother had to carry him home; he has never walked on his feet above a yard from the door since. It is, however, evident that there has been weakness in walking anteriorly; moreover, he frequently wetted and once or twice dirtied his bed—a thing new in him. For the last twelve months he has only got along by walking on hands and knees, for he could never use crutches; but he has ceased to wet or dirty his bed; his bowels have become very costive. The evidence of his parents is absolute against there having been any enlargement of muscles, and against progression on the toes. The boy is well made; his face very impassive; his pupils rather large and sluggish; his intellect clear, but below par. He usually sits with his right leg bent under him, and manifests considerable weakness in the muscles of the back; as he lies his legs are closely bent on his thighs. In progression he goes on hands and knees, advancing slowly, but with a perfectly symmetrical movement, just like a quadruped, his palms being placed flat on the ground, in the manner of a forepaw, indicating long practice in this method of locomotion. He is feeble in his upper extremities, but they suffice for ordinary purposes; he can place a book on his head. The trunk muscles, with those of the hips and back, preserve their normal proportion, but in raising himself after having stooped over the bedside, want of power, both in his loins and in his arms, is plainly indicated. The muscles of the shoulders and upper extremities are extremely attenuated, so as to fix the attention at once by the disproportionate smallness of the arms. The lower extremities are of about normal bulk, and retain considerable contractile power. The muscles of the thighs are normal, but those of the calves are preternaturally firm approaching, though not equalling, in this respect the calves of his brother. I shall give a description of the microscopic appearances presented by the muscular tissue of the calves, in connexion with the examination of his brother. The hamstrings are contracted, so that the knees cannot be fully extended, owing doubtless to his habitual posture. The integuments of the lower extremities are somewhat mottled. Temperature of lower extremities, 98·4° (normal), in six out of nine observations; in the other three, from 96° to 97°. An interrupted galvanic current of moderate power produces contraction in the muscles of the lower extremities to about the same extent as in the other muscles of the body, which are quite sensitive to its influence. Height of the boy 43 inches (not allowing for the flexion of the knees), girth of calves 9 inches, thighs, 12½ inches, of upper and fore arm 6 inches. The muscles of the eyes, face, tongue, throat act naturally. Sensation tested by a hair is natural. He readily discriminates heat from cold, but is not sensitive to tickling of the soles.

Zachariah, aged 11, our original patient, is a well-made boy. His corneæ clear; the middle upper incisors have a transverse furrow; surface of lower half rather uneven; but no disposition to pegging. Heart healthy. His mother is sure that he walked perfectly up to the last six months. At that time weakness in walking first showed itself, and has increased gradually, but up to a week before admission he could walk across the street, though when he came in he was unable to walk a step without support, but he has now much improved in this particular. To the last he has been very useful with his arms, nursing the baby, etc. His mother declares that the boy walked on his toes from the beginning of the paralysis, and that the calves of the legs began at once to increase. There was also marked projection of the hips from the time when the failure was first noticed. "I thought his bottom was not right, it seemed so hard." She describes him very graphically as walking with his hand behind him, and his body swaying. He complained throughout that his legs ached, and said that the feeling had gone out of his hands, and that his feet were numbed. His bowels have not been costive, nor has he wetted or dirtied his bed. The boy has a sharp expression of face, and a state of intellect above the average. Pupils are quite normal in size and contractility. Muscles of the upper extremities and of the upper part of the body are of average size and proportion, but nurse reports him as being rather clumsy in using his arms. The erector muscles of the spine in the lower half of the trunk, the muscles of the hips, and those of the calves are remarkably enlarged and much firmer than natural. The hips project considerably; the erector spinæ is very prominent even as he sits, and the rounded calves—a roundness in which the muscles on the front of the leg participate—form very remarkable objects. The boy cannot raise himself from the sitting posture without help, nor straighten himself after stooping unless by climbing up his thighs. In sitting little would be observed about him, but in standing or walking the pose of the body and limbs is very singular. The loins are excessively hollowed; the chest and abdomen are projected forward, calling to one's mind the look of a pouter pigeon; the arms are placed against the sides, and the shoulders are raised; the legs are separated widely, and he supports himself on his toes, especially of his left foot. He cannot stand more than a few seconds without support, and his entire weight soon

falls upon the person supporting him. He can now walk up and down the yard without help. In doing so the eyes are directed intently upwards; the muscles of the face are fixed; his lower extremities are straddled and straight; the knees scarcely bent; the feet are extended; he progresses entirely on the ball of his toes, swaying his body with each step from one side to the other, and balancing himself with his outstretched arms. The peculiar waddle, the intent gaze, the fixed attention of every muscle of the face and trunk, the high shoulders, the projecting chest and belly, the pointed toes, form altogether a most singular picture. The integuments of the lower extremities are remarkably mottled; the skin is rather fine; the nails perfect. Temperature of lower extremities, 98·4° (normal), in five out of nine observations; in the remaining four, from 96° to 97°. The muscles of all parts of his body alike did not answer to the induced current, contrasting remarkably in this respect in two experiments with the brother, though he felt it very sensibly. Sensation to a hair, to warmth, and tickling is quite normal in all parts. The muscles of the head, face, throat act naturally.

Ophthalmoscopic Examination by Dr. Welch, House-Physician.—Zachariah: The fundus of each eye, on examination both of the direct and inverted image, appears normal, with the exception of a narrow crescentic white line running along the outer side of the disc. Thomas: Fundus quite healthy.

Microscopic Appearances.—I am indebted to my friends and colleagues, Dr. Foster and Mr. T. H. Bartleet, for assistance in making an examination of specimens taken from the muscles of these two boys. The specimens were obtained by two separate operations in each case. Zachariah, the boy with enlarged muscles: Specimens from the calf and the hip. They consisted of muscular fascicles and of foreign element in different proportions. The latter consisted of a membranous-looking material without structure; of strands of different diameters, from $\frac{1}{500}$ inch to double that size, exceedingly twisted and contorted, some without, some with a fibrous structure; and of fine curled single threads. The muscular fascicles were much more abundant in the calf than the hip. In one specimen from the former situation the fascicles were in large numbers, even constituting the larger proportion; in another specimen, on the other hand, taken from the calf, we only saw two fascicles, one of them partially atrophied. In only one specimen (from the hip) were the transverse markings of the fascicles naturally distinct; in all the others they were either absent or only visible here and there. The longitudinal markings were very delicate. In no fascicle was there any sign of granular or fatty degeneration. Thomas: I looked with great interest at the specimens from the rather firm calf of Thomas, the boy who had not had enlargement of the muscles. They presented precisely the same appearance with the specimens described above. The foreign element was generally even more abundant. In one specimen only were the coexisting muscular fascicles healthy in appearance; in the other, the transverse striæ were faint, and the longitudinal very fine.

Case 2.—S. R., aged 10. This boy is not now in the Hospital. I visited him twice with my friends Dr. Foster and Dr. Malins, and my pupil Mr. Cochrane. The following is the remarkable history of his family:—There is entire freedom from any rheumatic history. The hearts of the parents and children are healthy. There is no evidence of syphilis; the corneæ and the front teeth of all the children are quite healthy. Father's health and his family history perfectly satisfactory. The mother is quite healthy. Her mother's brother (patient's great uncle) was "weak" (paralysed). She had heard her mother say that she had to carry him up to bed—just as she herself did for her own children. There were nine children of the generation of patient's mother—one of them born dead; one miscarriage. Two of these children (patient's uncles) walked up to the age of nine years, and then became paralysed. They died at the ages of 16 and 17. The rest were healthy. Three of them died young. Patient's mother has had nine children, one of them stillborn. All were stout and healthy at birth; none died under the age of five. The first and fourth child (boys) died paralysed, as will be related. The second and third died from inflammation of the bowels and fever. The fifth is our patient. All these were males. The remaining children (girls) are quite healthy; eldest aged 8, youngest 4 years. No fits in any member. The two boys who died paralysed began to lose power at the respective ages of 4 and 9. They never walked at all for six and four years before death. Both of them lost the use of their upper extremities also to such an extent, that in eating they had to rest their elbows on the table, and finally had to be fed. The one died, aged 16, of an acute attack in the bowels; the other, aged 13, of consumption (fever, expectoration, and wasting). Neither had large muscles; on the contrary, their limbs wasted, but the former of the two is positively asserted to have walked on his toes and to have swayed his body. Samuel, the fifth child, aged 10, has clear corneæ, excellent front teeth, and a healthy heart. His legs first failed at the age of 3 or 4, and he grew worse by degrees. They began to grow large at a very early period in the history of his disease, but have only become "so very large" the last four years. He has never fully lost the power of walking; has never had pains nor any spasmodic action. He can now walk three or four miles, but is very easily thrown down, and when we saw him he had a bloody nose from such an accident. His walk, and especially his run, are unsteady. He stands steadily and well, but the heel is not fully placed on the ground. He has marked difficulty in stooping, and especially in raising himself again. The right grasp is decidedly more feeble than the left, and he is stated to fail somewhat in his arms, though he throws stones and spins tops. The muscular enlargement is confined to his calves, which also present unnatural firmness. In girth they are within an inch of the thickest part of the thigh, which itself is not reduced in size. In the thighs, however, the belly of the quadriceps extensor projects so much as to cause a very apparent deformity, but it is not firmer than normal. The arms are small, but the muscles are fairly nourished. Sensation to touch is perfect. Intelligence is stated to be good, but he is very shy and unmanageable before strangers.

LEEDS GENERAL INFIRMARY.

ACUTE MILIARY TUBERCULOSIS.

(Under the care of Dr. CLIFFORD ALLBUTT.)

The following case is interesting on account of the remarkable depression of temperature occurring in a tubercular patient during a severe attack of diarrhœa.

William S., aged 26, was admitted into the Leeds Infirmary on April 2, 1869, suffering from acute miliary tuberculosis. The fever was of the type of the enteric and not of the catarrhal or the remittent hectic form. Unfortunately the temperatures were not regularly recorded, but Dr. Allbutt had been in the habit of taking the temperature at every visit in order to ascertain the character of the movement and to point out to the students the diagnostic value of the thermometer in such cases. The morning temperatures, taken between half-past eleven and one o'clock, ranged between 101·5° and 102·5° until the end of April. The pulse averaged about 120°. On May 1, the pulse being the same, the temperature fell to 95·4°, the observation being carefully taken twice over. This temperature persisted for three mornings, and then rose to 97·4° and to 98·5° on the next two mornings. On May 6 it reached 100·4°. The time of depression or collapse temperature coincided with a severe attack of diarrhœa, and, although death approached, the temperature rose as the diarrhœa was checked by treatment. Death took place early on the 7th. Profuse miliary tubercle was found in the lungs and peritoneum. There was scarcely any ulceration of the bowels.

The Limerick Board of Guardians have increased the salary of Dr. Phayre, Resident Medical Officer, from £130 to £160 per annum.

Pulverised Ether in the Reduction of Hernia.—M. Demarquay long since showed the utility of pulverised ether in preventing pain during the operation for hernia, and M. Chavergnac now brings forward seven or eight cases to show that this agent may be usefully employed in obtaining the reduction of hernia without operation. The anæsthetic effect of the vapour allows of the performance of taxis without pain, save a disagreeable sensation of burning in the parts in contact with the ether. It is, however, the intense chilling produced by the pulverised ether, so much greater than that produced by merely pouring the fluid on the part, that is the important feature. Its suddenness leads to the rapid condensation of the gases enclosed in the strangulated intestine and the diminution in volume of this. Its effects are superior to those produced by ice, because the vapours of the ether come in contact with every part of the tumour, and while ice slowly reduces the temperature from 0° C. to — 4°, in less than a minute *rectified* ether lowers it to — 15°. Sometimes these effects, owing to the great heat and tension of the parts, are not produced immediately, and the application then has to be repeated two or three times.—*Presse Belge*, May 9, from *Abeille Méd.*

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Medical Times and Gazette.

SATURDAY, MAY 29, 1869.

ST. BARTHOLOMEW'S HOSPITAL.

We are sorry to learn that the governing body of this Institution have issued an order forbidding the House-Surgeons and their dressers from prescribing quinine, hemidesmus (which is the substitute for sarsaparilla at this Hospital), iodide of potassium, Peruvian bark, and other expensive drugs, for casualty patients. This prohibition, which was given in an abrupt and discourteous manner, without previous notice to, or consultation with, the House-Surgeons, has been very properly met by them with a temperate remonstrance (dated May 22) addressed to the Medical staff, asking their aid in getting the obnoxious restriction removed. The House-Surgeons state (1) that their prescriptions have been sent back from the drug department dishonoured and undispensed; (2) that in consequence they recommended all such patients as in their opinion required these medicines for out-patient letters, and that, on the day preceding the date of their protest, some twenty were sent away without any advice or medicines; and (3) that the greater number of those to whom out-patient letters were given were seen at the out-patient room, not by the Assistant-Surgeon of the day, but by unqualified students, mostly junior to the dressers, without any restriction as to the remedies to be prescribed.

The House-Surgeons have abstained from stating one point which may be taken as conclusive in their favour. They and their dressers, according to the custom at St. Bartholomew's, have purchased and paid for their posts, and consequently have an equitable, and probably also a legal, claim to all customary rights and privileges which were allowed to them at their admission to their respective offices. The governors of the Hospital may make any bargain they please with new-comers, but they cannot with any justice vary the conditions on which the incumbents for the time being hold their offices.

The truth is that the "casualty" department of St. Bartholomew's, which is the cause of these troubles, and will doubtless be the cause of many more to come, is a thing of very recent growth. Those whose recollections carry them back a dozen years will remember no such inordinate waste of energy and drugs as that which may now be seen any morning in Smithfield. It seems to be no uncommon thing for more than 500 new patients, and nearly as many old ones, to be seen in about two hours and a half by two House-Physicians and two House-Surgeons, with the assistance of a few clinical clerks and dressers. It may please the vanity of a few to be able to quote large figures, representing the apparent usefulness of the Hospital, but it must be clear to the good sense of the majority of the governors, who are chiefly men of business, that the more indiscriminate relief the Hospital gives the more is the district pauperised, the more prescriptions must be given at random from want of time to inquire into the cases, and the more poor Practitioners must be ruined. In fact, the Hospital would do a far greater service to the district in which it is placed by shutting up its casualty department altogether than by conducting it on the present system. The Medical and general press have lately been inveighing, with good reason, against the profuseness of Medical almsgiving. It may be hoped that these domestic differences at St. Bartholomew's may have the effect of bringing public opinion to bear on a Hospital which—with all its excellences—is one of the chief offenders in that respect.

It can hardly be that want of money has led the governors to the restriction in the use of remedies of which we have spoken; else they would hardly spend large sums of money, as they are doing at present, in gilding and decorating the apartments in which "illustrious visitors" are entertained.

Old students of St. Bartholomew's will be glad to learn that the Medical staff have determined to invite Professor Huxley to offer himself for the vacant post of lecturer on physiology for the school. Such an appointment could not fail to increase the efficiency and reputation of the school. The election is to take place on June 8, and applications are to be sent in to the House Committee on or before June 4.

PUBLIC PARKS AND GARDENS.

We hasten to bring under the notice of the Medical Profession the handsome and profusely illustrated work of Mr. Robinson on the parks and gardens of Paris.(a) We hope that it will be carefully read and considered as it deserves to be by all our municipal authorities and the functionaries who have the charge of our public places. Mr. Robinson pleads for the liberty of breathing in the huge disorderly collections of houses which form our towns. "All round London," he says, "admirable preparations may be seen for the formation of a mighty cordon of suburban St. Giles's twenty years hence." He does not condemn any reasonable expense bestowed on our London parks, but he thinks the present system of culture extravagant, and that it absorbs money which might be better distributed. "Each park is approaching nearer and nearer to the character of a costly garden, while, for want of a few hardy trees, a patch of green sward, and a spread of gravel to act as a playground for children instead of the gutter, many close districts of London are so foul and cheerless as to be a byword over the world. What is wanted is diffusion: better laying out of the plan of streets; wide tree-planted avenues, such as the Brompton-road and the St. Marylebone- and St. Pancras-roads might have been if we had been blessed with competent municipal government. Small squares accessible at all reasonable hours and trees planted everywhere are the desiderata. Our present roadways are mean, narrow, and dull; and Mr. Robinson fears that even the magnificent opening afforded by the Thames Embankment will be spoiled, and that the footway will be far narrower than is considered fit for a second-rate boulevard in Paris. Of course the kinds of trees and shrubs adapted for town culture are fully described, and of these the best is judged to be the plane. Evergreens are dismal in winter, and more dismal in summer. Whilst the greater part of Mr. Robinson's work is devoted to the means of making outdoor life contribute more to health in London he does not neglect the indoor department, and shows that the French, with their minute culture and great care, produce salads, early vegetables, mushrooms, and fruits which we

(a) "The Parks, Promenades, and Gardens of Paris, described in relation to the Wants of our own Great Cities, and of Public and Private Gardens." By W. Robinson, F.L.S. With upwards of 430 illustrations London: John Murray, Albemarle-street. 1869. Pp. 648.

import largely, and might produce ourselves if we would but condescend to learn the way.

Sanitary reformers and historians of progress are fond of recounting the numberless things in which we are better off than our forefathers; but all these really consist in this—that the earth is better cultivated. People used to eat salt meat half the year, because there was no keep for the cattle in winter, and scurvy and dysentery used to ravage the population from the want of fresh vegetables ere our gardeners had learned to grow a "sallet," and before the New World had sent us the potato. As things are now, fresh meat and fresh vegetables are to be had all the year round by those who can pay for them; but housekeepers know that in the interval between February and June, when our apples and autumn fruits have been used up, and during our cold and sleety springs, it is matter of great expense and difficulty to provide fresh vegetables and fruit for an occasional party, and still more for daily consumption in middle-class families. The London poor, as a rule, eat little but potatoes; in Paris, as Mr. Robinson calculates, they eat sevenfold as much green vegetables. We thankfully admit that we have no scurvy—the potato and watercresses save us from that; but we are certain that our people would be more wholesomely fed if they could get fresh vegetables more cheaply. Want of a good vegetable market is a crying evil in London. At Covent Garden there is no room. If there were such a market, all produce could be readily exposed for sale; there would be wholesome competition; housekeepers with ready money would go and buy their bargains fresh, instead of getting, as at present, scanty supplies of spoiled and heated vegetables from the greengrocer's shop or the costermonger's basket. It is not a nice idea to find a specimen of *cimex lectularius* in a bunch of watercresses at breakfast; yet it cannot be wondered at, considering that the only storeplace of the costermonger may be under the family bed.

Mr. Robinson shows clearly enough that if the public health can be improved by a better supply of fruit, the remedy is in the hands of our own horticulturists. They would have better crops if they took more care. They blame our climate, but forget that the climate on the other side of the Channel is nearly as variable, only the French take care to protect young and tender plants and blossoms against wind and storm. Moreover, as Mr. Robinson shows, in 1868, when we had a hot sun and cloudless sky, our markets, always scanty, became almost empty through the defects of our horticulture.

Mushrooms are grown in prodigious quantities in the exhausted stone quarries near Paris, some of which, by the bye, have been converted into catacombs or ossuaries for the reception of bones from the old Paris churchyards. There are no such facilities near London. The French asparagus is superb; but it owes its perfection to scientific culture. By the way, if *green* they will not eat it, but either cut it up for soups or make it into a medicinal syrup. The English carrot is now so coarse and stringy that few gentlefolk will eat it; the West-end greengrocers get small, short, round carrots from France, and sell them at two shillings and sixpence a bunch in the early spring. The variety and quantity of *cichoraceæ* cultivated and sold in France for salads are enormous, and not only are they abundant and early, but crop succeeds crop till late in the autumn. The chervil, tarragon, and other umbellate and composite plants are used to add flavour. Orach, chenopodium, and salsify are vegetables worth cultivating for variety's sake. Curiously enough, the French neglect the rhubarb, so common with us, and the seakale; in green peas and cabbages, too, Mr. Robinson thinks that we surpass them, but in most other points—in abundance and excellence of fruit, in cheapness and freshness of salads and vegetables—they are far in advance of us; and this, not through superior climate, but from greater care and skill. The Physician who would fain see a healthier colour in the cheeks of the middle-class town children would desire for Mr. Robinson's book the widest circulation amongst all who have the management of parks and public places, or who are engaged in the cultivation of fruits and vegetables.

MR. GROVE'S ADDRESS AT ST. MARY'S HOSPITAL.

We give in another column an abstract of an address delivered by Mr. Grove at the prize distribution at St. Mary's Hospital. Mr. Grove, as a philosophical outsider, gives all the weight of his authority to the right side of the contest, which has been raging for many years, with regard to the arrangement of Medical education. On the one side, we have men of great eminence—let us mention Trousseau and Graves—arguing in this way:—The treatment of the sick can only be learned by experience. The varieties of disease are so enormous that no time is too great for their study. The physical sciences—chemistry, botany, physics, and the like—throw very little light on the bedside phenomena. Therefore do not let the student waste his time on them, but put him from the first day into the wards of the Hospital. On the other hand, we say, we fully admit Medicine as an art to be an empirical one, but it requires and deserves to be approached with all the aids science can give it. We demand the early training in language, mathematics, and general information which make the gentleman. We demand, secondly, training in general physical science, in the discipline of exactitude, in weighing, measuring, analysing, so that our art shall be carried on with as much help from general science as is possible. We claim, thirdly, a training in those branches of science which are purely Medical: in biology, in anatomy, and of course in anthropotomy or human anatomy, though we hope the day will come when no man will call himself anatomist merely because he knows human anatomy, the most complex, which ought to be learned last. Then a youth would come into the wards prepared to profit by what he sees. But how are things now? Of the preliminary training we will not speak, but of the science training, general or special, we will allege these two things. It is impossible to have efficient scientific teaching so long as it is divided amongst a number of small Hospital schools which cannot afford the teachers or apparatus, and yet enjoy a monopoly against "unrecognised" schools. It is not every Medical school at which a boy can be prepared for the science examination of the University of London. Secondly, even as regards Medical science, the complaint is that, when boys come into the wards, the clinical teachers find them so ill-prepared that they are obliged to teach them the anatomy and physiology—of the heart, for instance—before they can even venture to touch on the phenomena of disease. We hope that Mr. Grove will not let his interest in Medical education stop with the delivery of this address, but that he will take fitting opportunity of informing himself of the extent to which the study of our necessarily empirical art is aided and purified by scientific training.

THE WEEK.

TOPICS OF THE DAY.

The Medical Council will meet on Thursday, July 1, at the Royal College of Physicians. The Council is now in the eleventh year of its existence. To it is assigned undoubtedly the highest position and authority in the Profession of Medicine. It possesses a large revenue and abundant funds, and yet it is dependent on the generosity of one of the examining bodies for the use of rooms in which to hold its meetings and transact its business. We think, if the Council is to remain a permanent institution, this is by no means a politic arrangement. It places the members of the Council in an undignified position as the guests of a College which, however exalted by merit and precedent, is still one of the examining bodies in Schedule A of the Medical Act, and is therefore in some sense under the supervision of the Council of Education. The Council is already under great obligation to the College for shelter and

accommodation during the past ten years, and we cannot help thinking that the sooner it possesses a local habitation the better. The rooms of the Royal College of Physicians are not the best suited for such an assembly, and as the Council can well afford to procure a domicile elsewhere, we hope that steps will be taken in the present session to remedy its present awkward and dependent position.

County-court law seems likely to obtain a reputation as brilliant and undying as crowner's-quest law. The queer judgments which are often given by the briefless barristers who preside in the county courts may quite vie with the deliverances of the traditional coroner and his jury. A very curious instance of this kind of justice has been lately reported in the Welsh papers. Mr. Summers, Surgeon to the Pembroke County Prison, applied to the Haverfordwest County Court to recover the sum of thirteen shillings and sixpence, his charge for a four-mile journey on a wet night, and for medicines supplied to a journeyman carpenter. The sapient presiding judge, one Mr. Terrell, said he considered the charge excessive, that he should make no difference between the night and day services of Medical men, and cut down the amount to five shillings. Upon the delivery of this extraordinary dictum by the county-court dignitary, Mr. Summers not unnaturally made some indignant comment, whereupon Mr. Terrell committed him for contempt of court. He was taken into custody by the bailiff, and was not released until he had made an apology to the aggrieved functionary. As we do not know what Mr. Summers may in his annoyance have said, we confine ourselves to Mr. Terrell's judgment in the case, which seems to us so preposterous that we feel confident that it would not be confirmed by any court of appeal. Of course, like Dogberry, every judge is of necessity "a wise fellow, and, which is more, an officer, and one that knows the law, go to"—but it would require a higher dictum than that of any county court to convince us that English justice required Medical men to work for the same payment by night as by day, and that five shillings is an adequate remuneration to a Professional man for a journey of eight miles (there and back) on a rainy night, and a supply of medicines. We should like to know how barristers sitting in county courts would like to be remunerated according to a similar scale, although, if Mr. Terrell's judgment be an example of the valuable services they render to the public, even such a scale of payment might not unreasonably be thought excessive.

To judge by the tone of some of the leading public prints when discussing the work to be done by the new Sanitary Commission, the Medical Profession might be gainers, instead of losers, by sanitary improvements. For instance, in a leading article in the *Times* the Commission has been gravely advised "not to comply too readily with all the demands that may be made by the Medical Profession on behalf of the public health." The writer proceeds to base this advice on the diversity of Medical theories. He asserts that "nothing would please the Faculty so much as to have England mapped out into sanitary provinces and departments, each under the rule of a well-paid Medical officer." And he afterwards adds—"We are not prepared to erect a Medical despotism which may issue an edict for the adoption of one or other theory in a given county, town, or village." Now, considering the unselfish and disinterested services which the Medical Profession have rendered the whole community by advocating and enforcing, at the expense of no small amount of Professional prosperity, the cause of hygienic reform, we were scarcely prepared for warnings of this kind. Even were it true that the Medical Profession had for its main object the erection of so many Medical Officerships of Health in different counties, the emoluments of these would be but a small set-off against the crop of "hot fevers, agues, and fluxes," which used in pre-sanitary times to be reaped with such profit by Death and the Doctor. A few posts were but a small recompense, even were they sinecures, for the thousands of lives saved to the nation. But we assert that the advocacy of sanitary reforms by the Medical Profession has been untinctured by any selfish considerations, and is without rival as an instance of self-sacrifice on the part of a class to the good of the community. To argue that, because sanitary science is not fixed and stereotyped, we must put off sanitary legislation and supervision, is almost as paradoxical as to assert that because political science includes many theories, some of which are contradictory, we must wait until they are reconciled before the Crown and Parliament begin to govern the nation.

The judgment delivered by Vice-Chancellor James in the case of Pike *v.* Nicholas is of great interest and importance to all writers and men of science. Mr. Pike is the author of a tolerably well-known work, of which we some time ago gave an account, on "The English and their Origin." Dr. Nicholas, the defendant, is the writer of a book called "The Pedigree of the English People." Although the latter book is not absolutely copied from the former, there is such a close similarity between certain sections and chapters, that, in spite of some clever manipulations of the subject-matter, the judge had no hesitation in declaring that Dr. Nicholas's work was a plagiarism. The action, however, was brought on the ground of a legal invasion of copyright. Now, plagiarism is not necessarily a legal invasion of copyright. On this point Vice-Chancellor James said a man publishing a work gives it to the world, and, so far as it adds to the world's knowledge, adds to the materials which any other author has a right to use, and may even be bound not to neglect. Mr. Pike's theory that the modern English are largely Celtic, after he had given it to the world was no longer exclusively his own. He had no monopoly in it, nor in the arguments, illustrations, and facts by which he had supported it. But there was a legitimate and piratical use of an author's work, and Sir W. James laid it down that an author has a right to this—that no one is to be permitted, whether with or without acknowledgment, to take a material and substantial portion of his work, of his argument, his illustrations, his authorities, for the purpose of making or improving a rival publication. That the part taken in this case was material and substantial there was no better evidence than the defendant's own circular inviting subscriptions. Mr. Pike, therefore, gained the verdict. Portions of Dr. Nicholas's book were ordered to be cancelled, and Mr. Pike obtained his costs, and as damages the profit upon all the copies of Dr. Nicholas's book that had been sold.

The annual dinner of the Royal Geographical Society has relieved the dulness of the Whitsuntide holidays. The presence of the Prince of Wales and of several of his fellow-travellers, and the prospect of hearing something from the returned *savants* about the Nile and the desert, made the meeting far more attractive than the annual dinners of scientific societies usually are. Professor Owen, who is one of the most pleasant after-dinner speakers it has been our lot to listen to, on this occasion eclipsed himself. The sketch he gave of the geology of Egypt, which he had studied in the cuttings of the Suez Canal, was of very great interest. The desert is an upraised sea-bed, and on it were alternating strata of argillaceous and silico-calcareous and gypsous materials, which seemed to show that about the close of the miocene period alluvial deposits washed from neighbouring lands by fresh water had begun to take place. The appearances suggested to the Professor that at that far-distant period the *contourage* of the African continent might have gained so much of its present form as to cause a watershed in the direction indicated by the course of the present Nile. If this be the case, the Nile has established a new right to be called the Father of Rivers. But Professor Owen's account of what he saw in Egypt will scarcely bear compression. We shall give a better idea of the speech by appending an extract:—

"But in the main the preparation of the dry land resulting in fertile Egypt seems to be due to slow elevation and annual

alluviums, for long ages, doubtless, spread out beneath estuary seas, but finally adding to and superficially forming upraised dry land. Of fertile and habitable land, Egypt is the most recent or last formed, and it is that which yields the most ancient evidences of social and civilised man. Of these marvellous evidences—marvellous for their magnitude, number, and variety—I shall only say that they transcend all previous conception. Conceive a temple with columns of 11 feet in diameter, bounding aisles of proportionate height, and such columns exceeding 100 in number, covered, moreover, with sculptures in low relief. The prodigality of labour so displayed amazes and bewilders. But this is a subject out of my province. I will only refer to the late researches of that distinguished Egyptologist, Mariette Bey, whose urbane, lucid, and learned explanations made the museum he has founded at Boulak so instructive that his discoveries, especially at Sagarah, have tended to increase our confidence, if not to confirm the idea of past time given by Manetho, during which a dynastic rule and polity prevailed in Egypt. Ethnologically, we learn, from sculptures and figures of the second, third, and fourth dynasties, exhumed by Mariette, that the founders of such governed society in the fertile soil of Egypt were certainly not African, not Ethiopian, but Asiatic, with indications of a more northern origin than the Assyrian or the Hindoo. The so-called Invasion of Shepherds introduced the Arabian blood, and the Nubian allies of the southward-driven monarchs of the 16th dynasty, by whom the Arabs or Palestine people were finally expelled, brought in the African strain. To the Arabian shepherds, Hycksos, or Sheiksos, Egypt was indebted for the horse as a beast of draught. Previous to this Philistine or Arabian invasion, the manifold frescoes on the tombs of Egyptian worthies show no other soliped than the ass. The dromedary was a still later introduction. Coming now to the actual Egyptian fauna, most interesting was it to the naturalists, favoured by the hospitality of the royal flotilla, to witness as they steamed along so many kinds of birds, previously studied as stuffed specimens in our cabinets, or as captives in our Zoological Gardens—to witness and compare the flight of flocks of flamingoes, spoonbills, pelicans, the varied forms of waders, the graceful undulatory course of the crested hoopoes, the darting of the kingfishers, the manœuvres of the birds of prey, from the vultures and eagles to the kites and sparrow-hawks. Of the rarest of all these Egyptian birds, I had the opportunity, so much valued by ornithologists, of handling the recently killed specimens which fell to the unerring aim of the Prince's rifle or fowling-piece. The addition to the staff of a skilled taxidermist, equal to the prompt preparation of any rare bird, bat, beast, or fish, was no suggestion of mine, but of the Prince, as was likewise the provision of a seine net, the use of which enabled me to observe, fresh or living, the curious forms of siluroids, snouted mormyri, and other Nilotic scaled rarities, which previously I had known only in a dry state or preserved in spirits. Of crocodiles I saw none; steam and the improved rifles have driven them to the cataracts. The consequence is that between Cairo and Thebes the fishes have marvellously multiplied, and, correlatively, the pelicans, flamingoes, spoonbills, and all the varied forms of heron, ibis, and curlew that feed upon the spawn or fry of fishes—very interesting evidence of the effects of disturbing a natural balance in the contest for existence."

Amongst the memorabilia of the week is the birth of two children connected by a band of flesh and cartilage, in St. Luke's Parish. The mother is an Englishwoman, aged 23, and has been married twelve months. The children were born dead. They were united by a band of flesh and cartilage five inches in breadth, extending from the upper part of the chest to the navel. They were fully developed, and their united weight was 8½ lbs. One was sixteen inches long, and the other was half an inch taller. Each child had all her external and internal organs complete. The circulation was carried on through one umbilical cord.

The Australian papers contain an account of a somewhat uncommon case. An Englishwoman was speared by a native; she was pregnant, and the spear penetrated her abdomen just above the navel. The spear was withdrawn, but the woman was delivered of a dead child, which had received a wound in its left groin. The mother recovered.

Dr. T. H. Green, Lecturer on Pathology at Charing-cross, has been appointed Assistant-Physician to the Hospital. There exists a curious anomaly in the arrangements of the Charing-cross staff. Why an Hospital should have two Assistant-Physicians and no Assistant-Surgeons it is difficult to divine. The appointment of Physician to the Skin Department has not been filled up.

In addition to Messrs. Gay, Erasmus Wilson, and Erichsen, it is said that Mr. Henry Lee is likely to be a candidate for one of the vacant seats in the Council of the Royal College of Surgeons.

THE OBSTETRICAL SOCIETY AND THE AMALGAMATION SCHEME.

Without doubt one of the prime obstacles in the way of the amalgamation scheme is the peculiar position of the Obstetrical Society. The founders of this Society did not intend that it should be a mere debating club on subjects connected with obstetrics, but a body which should well and fitly represent a department of practice unsurpassed in its importance, and too much overlooked and ignored by previously existing bodies. It has been their aim, as it has been that of their successors, to keep the Society up to this level, to make it a representative body, like the College of Physicians or the College of Surgeons. They desire that Medical education should be improved in this direction, and to that end they wish to superintend it, or, in other words, to have the power of granting a qualification to practise Obstetric Medicine and Surgery.

THE MIDDLESEX HOSPITAL MEDICAL AND SURGICAL REPORTS FOR 1868.

The Medical and Surgical Registrars of the Middlesex Hospital, Dr. Cayley and Mr. Arnott, show that the total number of patients admitted during 1868 was 2043, with a death-rate of 12·469, or, excluding the hopeless cases of cancer which this Hospital receives, the mortality per cent. was 9·005. In the Medical wards 153 patients died and 139 post-mortem examinations were made. Disease of the kidneys was met with in 86 subjects, valvular disease of the heart in 28 cases, recent pericarditis in 19, old pericardial adhesions in 7, white patches in pericardium in 23, recent tubercle in 23, obsolete tubercle in 18, amyloid disease in 7. A very minute and laborious table gives the various combinations of morbid appearances in the same subject. Nine cases of disease originated in the Medical wards—viz., 4 of erysipelas, 2 of scarlatina, and 2 of pyæmia. These cases are given in the frankest good faith, but they most fully establish the rule that no patient who enters a Hospital ought to be subjected to the risk of dying from a disease which he contracts in the Hospital. For instance, a man (A) is admitted into bed No. 18 on February 4 with erysipelas of the face. On the 8th a dropsical patient (B) with punctured legs took the erysipelas and died; on February 18 an epileptic (C) who occupied bed No. 20 took erysipelas and recovered; and on February 26 another dropsical patient (D), who was occupying the bed vacated by A, who left the Hospital, took the erysipelas and died. Two deaths and one illness from the incautious introduction of a contagious disease. Out of 50 cases of scarlet fever treated, in 11 the disease was taken in the Hospital; and of the 11, 8 were patients already under treatment, and 3 servants of the Hospital. Of the frightful contagiousness of typhus the following are examples:—

"Ten cases of typhus were under treatment during the year —males, 2; females, 8. One patient, a nurse in Northumberland Ward, acquired the disease in the Hospital; she had been attending on other cases in the same ward. She recovered. Another patient appears to have contracted the disease from visiting her daughter, who was a patient in Northumberland Ward with typhus. She died; her daughter recovered. A patient in Northumberland Ward with enlarged spleen was discharged to avoid any risk from infection, but was shortly afterwards attacked by typhus and died at home."

On the Surgical side 1034 patients were admitted, with a total mortality of 103, which is 9·847 per cent., or, excluding cancer, 5·233. Mr. Arnott gives a valuable table of 135 cases

of cancer (including epithelioma and rodent ulcer). Fifteen cases of erysipelas and pyæmia were admitted. Forty patients contracted disease in the Surgical wards; 11 of them took erysipelas, 10 pyæmia (one of whom recovered), 10 pneumonia or pleurisy, and 6 scarlatina. The operations performed were 137, with 12 deaths. Amongst them were 8 amputations with 6 deaths, 5 of them from Hospital diseases. One ovariotomy ended fatally. The other operations seem to have been remarkably successful. The clinical and pathological work at this Hospital is evidently well done, and this report shows at a glance that it is well recorded.

RETIREMENT OF MR. ERNEST HART.

It is no secret that Mr. Ernest Hart has suddenly thrown up his appointments at St. Mary's Hospital and elsewhere, given up his practice, quitted and dismantled his house, and left London. It is believed that the reasons for thus suddenly cutting short a career of much success are entirely of a private nature, and we can therefore do no more than express our regret.

SAVAGE THOUGHT IN MODERN CIVILISATION.

There have been few lectures of greater interest this season than that delivered at the Royal Institution on Friday evening, April 25, by E. B. Tylor, Esq. Two years ago he delivered a lecture on the Early Mental Condition of Man; and dealing with his subject from a different point of view, he now, taking for granted a rude early condition, shows how much of savage thought exists in our most highly civilised societies. One of the most interesting portions of the lecture dealt with the subject of spiritualism, an offspring of animism. This doctrine, which is now being revived among us, he shows to be universal among savage tribes. The savage, in common with the spiritualists, believes that physical effects are brought about by spiritual beings. He believes that his conjuror has special means of corresponding with these spirits, which he himself does not possess, just as a medium is looked upon by his followers as their agent with the spirits. The rope trick is an old and well-known one among the North American Indians and natives of Siberia. Table-turning was known 150 years ago in Central Asia. The feat of rising in the air is familiar in Buddhism and in the lives of the saints. Even rapping as a means of communicating with the spirit world was reduced to a system, the same as now prevails, in the middle ages. Spirit writing is practised among the Chinese as in London and New York. In short, a medium is a relic of barbarism, the introduction into our-nineteenth century culture of the philosophy of the savage.

Another topic of interest handled by Mr. Tylor was the subject of modern games of chance, as a survival of the notion that the die was under the guidance of a spiritual agency; lots, a direct means of ascertaining the Divine will. Fortune-telling by means of cards is not dead among us, and the most religious people will not unfrequently seek guidance by a chance opening of their Bible. Both belong to the same order of thought. The notion of charming away a disease is somewhat similar. The disease is looked upon as an entity—a spirit which may be enticed to leave its quarters, and so release the sufferer from his complaint. Toothache charmers are not uncommon in different districts, and worthy clergymen will sometimes believe in their own power to heal diseases by the laying on of hands. Many ceremonial acts, especially in religion, take their origin in this animism. Symbolical purifyings by fire and water are examples. These may be thought to be hygienic, but they are probably most common among nations which care least for personal cleanliness. The Christian rite of baptism partakes of this nature. The last subject discussed by Mr. Tylor was the associations with the east and the west, the rising and the setting of the sun. He shows that the position of our churches is associated, though remotely, with the worship of the sun, whilst the position in which many nations bury their dead is also influenced by the rising and setting of that luminary. As Mr. Tylor remarked, illustrations of the survival of savage thought in our modern culture might be indefinitely multiplied; but the above illustrations will suffice to show that this survival or revival is more frequent than we should have believed.

DR. MACPHERSON AND THE CONSTANTINOPLE CONFERENCE.(a)

Inspector-General Dr. Macpherson is well known as having gained an immense experience of cholera during his long service in the East; hence anything from his pen on the subject is received with respect, more especially as he has shown himself too acutely critical to be easily satisfied with many theories which are current amongst ourselves. In a pamphlet which he has just published, he rebukes the too ready acceptance of superficial ideas by European Physicians, and is especially severe on the International Sanitary Conference at Constantinople.

"That body," says Dr. Macpherson, "declared that 'cholera seems to be an original product of the valley of the Ganges. The cholera of the invading character which we have in our days, is necessarily the result of new conditions, which have been produced in India about the year 1817. Cholera's being only of late years in a state of permanence must be due to some new and special condition of these localities; some special peculiarities as to houses or food, or recently acquired habits—for instance, the burying of the dead.'"

On the contrary, he shows:—

"That cholera of various degrees of intensity has always prevailed in India, as it does at the present day. If we refer to old Hindoo Medicine, we find that under the head of *Ujerna* were described four kinds of cholera, the worst form of which was *vidhuna visuchi*. . . . Different writers make different distinctions among choleraic attacks, but the following are the common forms met with in India, and I may remark that I have had occasion to treat the disease in each of twenty-four consecutive years. You have ordinary bilious attacks of vomiting and purging. You have much more violent choleraic attacks, sometimes fatal ones, often connected with some article of food that has acted as a poison. . . . You have true cholera endemic in districts, occurring sporadically, and generally showing a tendency at particular seasons to become epidemic, and you have the same disease raging with epidemic violence. The symptoms of all these forms of disease run into each other. In their commencement there is no absolute line of demarcation between them, any more than between European and Indian cholera. . . . The disease known as Indian cholera has existed as an endemic in the East as long back as we have any certain European accounts. Our early histories do not, indeed, always give full and systematic descriptions. Particular symptoms, such as suppression of urine, rice-water evacuations, secondary fever, are often not mentioned at all. But the disease was one which at once arrested the attention of strangers. It is mentioned by Linschott as the first and chief Indian disease, before dysentery and fever. This could not have been the case if it was only the ordinary European cholera. It is spoken of as a cruel pest: as coming on quite suddenly, and with no warning; as being dreaded as much as the plague in Europe; as killing most of those it attacked; as often killing in a few hours; as prevailing at particular seasons; and as being very fatal both to Europeans and to natives. . . . One great characteristic of Indian cholera has been called by the recent Constantinople Conference its invading character, or power of spreading, or of epidemic diffusion. . . . We have ample proof of the disease having been widely epidemic on the Coromandel and Malabar coasts in the middle and latter half of the eighteenth century. . . Any increased power of spreading in the west and south, if admitted, is no new feature of the disease. It is at most an old one intensified, just as the disease has not shown any single symptom since 1817, that had not been often observed before. It is indeed a matter of fact that about the year 1817 the disease, after a period of comparative slumber, awoke to a fresh period of prolonged activity, which continues to this day. I confess that, after a good deal of study of the subject, I have not been able to arrive at any satisfactory reason for the fresh outbreak of that year."

(a) "Cholera in the East, from the Commencement of European Connexion with it." London: Richards. 1869.

Dr. Macpherson then criticises the causes that have been alleged for the outbreak of 1817, such as bad rice, decayed fish, bad weather, inundations, increased intercourse, movement of armies, all of which were in existence long before.

"It has been," he adds, "a favourite French notion to throw the onus of the production of cholera in India on English domination, and to attribute it to neglect on the part of the English Government of the great canals and works of the Mahomedan emperors. I need not inquire where those great works were situated, or at what period they fell into decay. It seems sufficient to remark that cholera is first known to us in districts in which there never were such works, and that its great centre at present is in a part of India where none such ever existed."

Public privies can have little to do with it, for the great outbreak of 1817 was long before the adoption of public privies in Indian cities. The importation of cholera into Persia, Arabia, and the Red Sea has been constant since the earliest times.

"Cholera still prevails in its oldest seats, and on the side of India in closest and nearest communication with the Persian Gulf and the Red Sea. The common notion that cholera is the product of the low plains of India appears to be groundless, and the importance attached to the Gangetic valley is quite exaggerated. The French idea of uprooting cholera by draining the delta, and, as one gentleman put it, by running about twenty canals through it, can scarcely be entertained by any sane mind."

The large knowledge of Dr. Macpherson makes it necessary that whoever desires to know the real history of cholera must read and weigh what he has written.

FROM ABROAD.—QUININE IN PURULENT INFECTION — PROFESSOR WURTZ' REPORT ON THE GERMAN CLINICS—THE PARIS FACULTY.

At the last meeting of the Académie de Médecine M. Alphonse Gnérin related a case of purulent infection, which gave rise to an interesting discussion. He believes that it has been an error on the part of Surgeons to regard this "Surgical typhus" as necessarily fatal. When cases have recovered they have been declared not to have been true examples of purulent infection. However, a case occurred last autumn at M. Guérin's Hospital about the nature of which there could be no doubt. The patient, admitted for a crushed thumb, three weeks afterwards exhibited well-marked symptoms of purulent infection, which went on to the production of metastatic abscess in the calf. Quinine was exhibited in large doses—viz., one drachm (per diem, we presume)—and the patient left the Hospital cured. Some time after he hung himself, and at the autopsy his liver was found presenting a characteristic umbilicated cicatrix of a healed abscess. This, therefore, M. Guérin regards as a case of purulent infection cured by quinine. M. Gosselin freely admitted that this was a case of recovery from purulent infection, such as is every now and then met with. He has met with two instances of recovery in well-marked pyæmia coming on after amputation. But it is a very different question whether the recovery in this case was due to the large doses of quinine which were given, seeing that cases sometimes do recover where this has not been given. M. Guérin observed that he had met with several other cases the recovery of which he attributed to the large doses of quinine that were given, and the reason why he had selected this one to lay before the Academy was that it offered an irrefutable proof that recovery had taken place. M. Verneuil, although he had not met with cases of recovery in his own practice, had witnessed in that of others indubitable instances. But for a metastatic abscess to become cured it is requisite that it should be under the skin or so placed in a viscus that it could obtain spontaneous issue; and it is quite evident that such an abscess lodged in the kidney or the brain could not be cured. For this reason, M. Verneuil doubts whether the abscess of the liver of which the cicatrix had been exhibited was really a metastatic abscess at all, but rather simply the result of infaretus of the liver, so often met with in autopsies after various diseases. M. Broca observed that no one at the present day can doubt the curability of purulent infection, and in his own practice he has met with four examples of this. These were all well-marked cases in which metastatic abscesses were produced, and the patients in the highest peril. As to the conclusion concerning the effects of treatment, he feels the same reserve as M. Gosselin. He has given large doses of quinine in the disease, and still lost his patients, and to the present time he can rely on the efficacy of no medicinal substance. He believes the best practice is to "tonify" the patient, and to this end he gives tonics, rum, wine, "Todd's potion," etc.

"What, in fact, is purulent infection? It is, if I may be excused the expression, a kind of struggle between the economy and a septic agent. This is shown by the experiments of Trousseau and Dupuis, and more recently of Sédillot, for if a small quantity of pus is injected into the blood of an animal the animal resists, but if additional quantities are thrown in it succumbs. What is best to be done is to endeavour to render the economy sufficiently strong to resist during this struggle. I am of opinion, then, that recovery from purulent infection may take place spontaneously, but I do not believe that there is any medicinal agent that will bring it about. I am, moreover, convinced that there are several kinds of purulent infection, and that there are cases in which the symptoms are less grave than in others, and in which there is a chance of recovery. I sum up with saying, then, that I believe in the curability of the affection, and I will even go further, in adding that I also believe that there are cases of purulent infection in which the patient has never for an instant been in danger of his life."

M. Briquet is a believer in the efficacy of quinine in this affection. It is evident, he observed, that each shivering fit increases the purulence, and if we can arrest the paroxysms of purulent fever we gain the more chances of a recovery, and that quinine can arrest these paroxysms is his firm belief. M. Hérard drew attention to an observation by M. Guérin, that he the more believed that the quinine had been efficacious in this case because it had been so well tolerated by the patient, and that he would have been more doubtful on the point if there had been singing in the ears, cephalalgia, and the various other signs of commencing intoxication by quinine. For his own part, M. Hérard would come to exactly the opposite conclusion, for he would only rely upon the presence of the ordinary physiological effects as proof of its therapeutical action. In fact, there is no proof whatever in this case of M. Guerin's that the quinine was absorbed.

M. Wurtz, Dean of the Paris Medical Faculty, has returned from his mission to Germany, where he was sent by the Minister of Public Instruction in order to observe and report upon the system of Medical instruction in its largest sense as there practised. The results of his visit are to be embodied in an elaborate report, but in the meantime he has published the portion which relates to "clinical instruction." This is highly interesting, and we purpose presenting an early translation for the perusal of our readers. In the meantime, we give, in Professor Wurtz's own words, reasons for producing this portion of his report apart.

"Conformably to your Excellency's instructions, I have visited in succession Bonn, Göttingen, Greifwald, Berlin, Leipzig, Prague, Vienna, Munich, Würzburg, Heidelberg, and Zurich, directing my attention principally to the chemical, physical, and anatomical laboratories, the physiological and pathological institutes, and the clinics established in the Hospitals for instruction. From among these scientific establishments, I intend to present you with a detailed report, accompanied with explanatory plans, on the laboratories and institutes. But I believe it better to keep separate from this the information I have collected concerning the Clinics—establishments of an entirely special character, the conditions and *régime* of which are often complicated, and in which the needs of instruction and the rights of science meet limitations and sometimes obstructions. Within this domain of observation and experiment the materials are not those which foresight can command and which pecuniary resources can procure at will. In this point of view a clinic will always be a very different institution to a laboratory. Science does not there reign as sovereign, but finds herself face to face with important in-

terests, which she is often obliged to subserve and always to respect. A matter at once so special and so delicate appears, then, to call for separate consideration. I shall arrange what I have to say under four heads—1. The administration of the Clinics and the relations of the Hospital direction with the teaching body; 2. The general Medical and Surgical Clinics; 3. The special Clinics; and 4. The Poliklinik, or visitation of patients at home."

While the Government and Professors are working hard in perfecting schemes of education and multiplying appliances, the students seem to continue in an unruly and discontented condition. The Whitsuntide holidays have been purposely prolonged, in order to give them time for reflection, as it has been announced quasi-officially that a recurrence of the insulting interruptions which some of the Professors have been subjected to will be followed by a temporary closure of the Faculty. As is usual on similar occasions, difference of opinion prevails as to where the fault lies in these unfortunate disputes, although all agree that the mode in which the students have chosen to express their views on the matter is about the worst imaginable. On the one hand, it is stated that the students are subjected to examinations of needless minuteness and severity on merely accessory branches of knowledge, and that these are conducted at a too late period of their studies, entailing upon them in preparing for them great neglect of their proper practical Medical and Surgical studies. On the other hand, it is stated that the examinations are by no means severe, and it is roundly asserted that the students have been so humoured and given way to in their various encounters with the Faculty, that they seem to be rapidly assuming the position of dictators as to what and when they will study, and how their proficiency is to be tested. It seems, however, to be generally acknowledged that the Faculty requires reorganisation, that it is too close a body, insufficiently expansive, and not enough alive to the progress going on around it; while the chopping and changing about of chairs by the Professors in order to suit personal convenience rather than to the furtherance of the interests of their respective classes has given rise to much dissatisfaction. In the meantime, under the enlightened administration of M. Husson, the Director of Public Assistance, laboratories and courses of lectures on special subjects neglected by the Faculty are being set up on such a scale as almost to create a rival school of Practical Medicine.

THE FORTHCOMING ELECTION AT THE COLLEGE OF SURGEONS.

(From a Correspondent.)

This event is looked forward to with as much interest as ever, and it is now ascertained that both Mr. Gay and Mr. Erasmus Wilson will again offer themselves as candidates for two of the vacant posts. Mr. Erichsen will, we understand, also come forward. As regards the first-named candidate, Mr. Gay was so nearly successful last year, although he came forward at a brief notice, that there cannot be a doubt as to the result on the present occasion. Still, those who wish to see this excellent and highly esteemed Surgeon on the Council must not relax their efforts under a sense of too great security.

We hope also that Mr. Erasmus Wilson will be successful on the present occasion. Last year this gentleman polled a large number of votes. In his recent large work on "Diseases of the Skin" Mr. Wilson has given new proof that he has pursued the investigation of this class of diseases in a thoroughly scientific manner, and his recent munificent donation to the College of Surgeons shows that he is in real earnest with regard to the importance of dermatology as a part of Surgical education.

The Fellows of the College should also bear in mind that Mr. Erasmus Wilson signalised himself whilst a very young Surgeon by writing one of the best manuals of anatomy, which has been so appreciated by students past and present, that eight editions of the work have been called for. Bearing this in mind, the electors, we are sure, will not allow any prejudice regarding specialism to operate against a man who has deservedly obtained a very high reputation as a scientific Surgeon and anatomist, and who is, we believe, most worthy of a seat in the Council of the College.

Mr. Erichsen's high character and reputation are such as to insure his success if he presents himself on this occasion, especially as we believe there are three, if not four, vacancies, and there seems nowadays to be a disposition amongst the electors to introduce into the governing body a fair amount of new blood.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.

Address by W. R. Grove, Esq., Q.C., F.R.S.

The distribution of prizes at this school, by William Robert Grove, Esq., Q.C., F.R.S., took place on the 22nd inst. The proceedings were commenced by Mr. Gascoyen reading a report of the progress of the school during the past year, which showed it to be in a very prosperous condition.

The prizes and certificates of honour were then distributed to the following students of the school:—

Winter Session, 1868-69.

Scholarship in Anatomy, value £25.—Prize: Mr. Alfred John Wall.

Prosectorship in Anatomy.—Prizes: Mr. Walter G. Watson and Mr. George Millson.

Prize for Students of the First Year, value £20.—Prizes: 1st, Mr. William Thomas Drew; 2nd, Mr. James Lidderdale. Certificate of Honour: Mr. W. H. Williams, in the class of anatomy.

Prize for Students of the Second Year.—Prize: Mr. Edward John Parrott.

Prize for Students of the Third Year.—Certificates of Honour: Mr. H. J. K. Vines, in the class of Medicine; Mr. P. R. D. Gabbett, in the class of Clinical Surgery.

Prize for Practical Anatomy.—Prize: Mr. Walter G. Watson. Certificate of Honour: Mr. H. B. Harrison.

Summer Session, 1868.

Certificates of Honour: Mr. H. J. K. Vines, in the class of Practical Chemistry; Mr. J. F. Parsons, ditto; Mr. G. M. Grant, ditto.

Prize for Students of the Second Year.—Prize: Mr. H. J. K. Vines. Certificate of Honour: Mr. B. R. Anderson, in the class of Forensic Medicine.

Comparative Anatomy.—Certificate of Honour: M. Le Baron Armond de Watteville.

Mr. Grove then addressed the meeting on the importance of the study of physical science to the practice of Medicine. Having given some examples of ignorance of common facts, he animadverted on the system of remunerating Medical Practitioners in proportion to the quantity of medicine given to their patients, and the injury arising from a blind following of systems. The Physician is the student of nature—that is, of what we deduce or generalise from observed phenomena. Disease he regarded, speaking crudely, as a too sudden departure from uniformity of action, and in investigating the causes of the derangement thus produced it was impossible to proceed one step without a knowledge of the physical sciences. In this investigation the difficulty of the Physician is increased by his power of making experiments upon the human body being very limited. Experiment is to some extent supplemented by post-mortem dissections, comparative anatomy, and physiology, and may be more so by observations on individuals or classes of individuals. The increased importance of scientific education for Medical students would, Mr. Grove trusted, induce all interested in the subject to aid the endeavours made to introduce the study of Physics into general education. In speaking of education, he considered that doctrine fallacious which regarded the best education as limited to a small range of subjects. The opposite extreme should be avoided, but the mind was rendered more elastic, and more was learned, by variety in study. In sketching some of the relations of science to the healing art, Mr. Grove observed that, while in the watch or clock we have ordinary mechanical force, in the steam-engine heat in addition to this, in the voltaic battery chemical action, electricity, magnetism, heat, light, and motion, "in the human body we have all these (and possibly other forces or modes of force of which we are at present ignorant), not acting in one definite direction, but contributing in the most complex manner to sustain that result of combined action which we call life. . . . An acquaintance with the motions, sensible and molecular, which the different forces produce in the human body, the means of stimulating them when torpid, of checking them when too

active, of apportioning them by diverting forces from one organ to another, as happens frequently without the Physician's aid—what is all this but physical science? Medicines, I need not say here, give no life, though they may take it away; they only promote, arrest, or divert the action of different natural forces in different organs. They may cure the totality of the organic being by such diversion of force, or by destroying derived or parasitic vitality (fungoid growths which detract from the general apportionment of force, or eat into vital organs), but they do not, and cannot, create force. But far more than drugs can do is done by the eminent Physicians of the present day in what I may term regulating the movements, external and internal, of the body, after they have, by improved skill in diagnosis, detected the causes of the excess, the deficiency, or the irregularity of motion which produce the disease. Half the world in the present day are said to die of repletion and half of inanition. It is not, however, mere quantity of food, but its chemical action, which is better, and will be better, understood—food for repairing the structures—food for enabling them to go on with the varying movements, chemical force transformed into heat and motion, and adapted to habits and circumstances, to exercise and rest, to temperature and climate, to mental activity and sleep." In making a few remarks on Hospitals, Mr. Grove said that these were the only charities for which he would not have a prohibitory law of mortmain gradually introduced. He concluded with a few words of advice to the students, remarking that the Medical Profession offered the grandest field for human exertion, the widest scope for progressive improvement. They would meet with hard rebuffs; but they must meet failure without repining and success without exulting. Their one rule of life should be, "*Fais ce que tu dois, advienne que pourra.*"

THE CAREER OF A SPECIALIST—JOHN HARRISON CURTIS, AURIST.

In these days, when specialism is rampant, it may not be out of place to record the career of one of the most remarkable men who in our time devoted himself to the practice of a specialty. "It is now sixty years since" that a young man who had no Medical qualification, but had been what was then called "dispenser in the navy," left the Hospital at Haslar to seek his fortune in the great metropolis. This was John Harrison Curtis. He had nothing to recommend him to the patronage of the public either with regard to Professional capacity or Professional acquirements. Personally he was insignificant, short in stature, and in general personal qualifications inferior to most of his contemporaries who succeeded in legitimate practice to attain a high position. But his mind was remarkably self-reliant, and he possessed that "coolness" and self-possession which are occasionally more essential to a successful career than are more solid and useful qualities. Mr. Curtis married a lady who was a *protégée* of a Mrs. James, who had considerable landed property in the county of Kent. Mr. Curtis, who had great natural shrewdness, soon discovered that Aural Surgery was neglected by the Profession, and at once determined to practise that specialty. He must at this time have had considerable pecuniary means at his disposal. He took a large house in Soho-square, which was at that time a fashionable part of the metropolis, furnished it richly, and at once assumed the position and habits of a man of wealth. At first he was contented to cater for practice by the publication of pamphlets, well printed on large-sized paper, and advertising them with great perseverance in the public journals. But he soon found, as many others of his class have done at the present day, that to found a "Hospital" or "Dispensary" for the reception and treatment of persons afflicted with disease was the surest mode of obtaining notoriety and wealth. He then founded the institution now known as the "Royal Dispensary for Diseases of the Ear." His estimate of the value of this mode of advertising his claims to the support of the public proved to be correct. Crowds of poor people, and rich ones too, flocked to the Dispensary in Dean-street for advice and relief. The fame of the "great aurist" soon became not only metropolitan, but national. Then he invited Practitioners of Medicine to attend a course of what he styled "lectures," which there is very great reason to believe he never delivered, but which he certainly published. No one who knew Mr. Harrison Curtis ever suspected him of being guilty of composing these contributions to the practice of Aural Surgery. Mr. Curtis, whose income even in the earliest days of his practice was comparatively large, could afford to pay liberally for these productions, and he did so. It is known that the razor-strops of the celebrated Packwood were "hoisted into fame" by advertisements in the newspapers, partly prosaic and partly poetical. A customer on one occasion inquired of Mrs. Packwood as to who was the author of the advertisements in question. "Oh, sir," said she, "we keeps a poet." Mr. Curtis did not acknowledge the fact, but it is well known that he "kept" an author. Who the author was that Mr. Curtis employed in his early days of practice we do not know, but in later years his "lectures" were written by a man of great talents and acquirements, the late Dr. Hume Weatherhead. They attracted considerable attention, were lauded in the newspapers, and Mr. Curtis had the reputation of being a man of science and education. Almost his last work, which was entitled "Observations on the Preservation of Health," was very successful, and went through several editions. The result as regards Mr. Curtis's success was striking, and to him no doubt perfectly satisfactory. He was immediately placed highest in the list of public favourites *quoad* the practice of his specialty. He had scarcely time to attend to the numerous applicants who came to his private house for advice. It is a fact well known that for very many years his "Professional" income was upwards of £5000 per annum. He numbered among his patients royal persons, members of the aristocracy, and a vast mass of the public. He was profoundly ignorant even of the anatomy of the ear, but he took the precaution of having in his waiting-room gigantic models of the organ of hearing for the edification of his patients. He had, moreover, constructed for him by an ingenious artist of the day a chair which communicated by tubes from his consulting- to his waiting-room. By sitting in this chair and placing his ear to the mouth of the tube, the listener could hear distinctly the conversation of those who were in the adjoining apartment. It was, moreover, his policy and practice to have a tall, splendidly attired and powdered footman to receive his patients. More of this hereafter. I have said that he attended all classes of people, and he once related to me an anecdote so characteristic of the man that it is worth repeating. He was summoned to Whitehall-gardens to attend Mr. Peel, then Secretary of State for the Home Department, who was suffering from a temporary deafness. One of Curtis's modes of practice, which he adopted in almost every case, was to clear out the affected organ by means of injecting warm water through an immense syringe. This instrument, which was not unlike one of Read's garden syringes, he carried down with him to the residence of his illustrious patient. On his arrival, he found Mr. Peel in the drawing-room, in the society of the Duke of Wellington, Sir Astley Cooper, and Sir Henry Halford. He immediately commenced to syringe the ear. During the operation, Mr. Peel became rather too inquisitive as to the nature of his complaint, its situation, and the *modus operandi* of the remedy. Curtis was in a very difficult position, but his natural shrewdness and his imperturbable coolness made him equal to the occasion. "I saw," he said, "that I must stop this inconvenient questioning; so, putting the point of the syringe by the side of the passage, I gave him a dig, and said, 'Mr. Peel, if you don't hold your tongue, I shall certainly do you a mischief.' He was dumb as an oyster afterwards." This circumstance is a good illustration of the shrewdness and tact with which he treated persons who were too inquisitive. Contrary to the practice of those who rely for success mainly on the credulity of the public, and not on ability or attainments, he had the rare faculty of being able to hold his tongue.

Mr. Curtis, I believe, only once made his appearance in public as a contributor to the proceedings of any Medical society. This was in 1837, at the Medical Society of London, which then held its meetings at Bolt-court, Fleet-street. A paper was read, purporting to be written by himself. It was on the treatment of deficiency of cerumen in the ear by the injection of creosote. I sat next to Mr. Curtis on that evening; it was the only time that I saw him anxious and perplexed. Inconvenient questions were put to him on certain points, but more particularly by the late Dr. Jas. Johnson, at that time one of the most prominent Fellows of the Society. Mr. Curtis attempted to answer these questions, and he did so in such a subdued tone and in such an unsatisfactory manner, that Dr. Johnson requested him to speak up. "Are you deaf, Dr. Johnson?" said Mr. Curtis in a somewhat angry tone. "No," said Johnson; "and if I were I should not apply to you for relief." Curtis was efficiently silenced by this satirical remark. One of the visitors of that evening was the late Joseph Toynbee, and I have reason to believe that the lamentable position in which Mr. Curtis was placed that evening induced Mr. Toynbee to take up the practice of Aural

Surgery. He could not fail, as were all present, to be struck by the gross ignorance displayed by the greatest aurist of the day on the commonest principles of treatment of diseases of the ear. I reported the proceedings of the Society in the pages of a Medical journal with which I was then connected. Mr. Toynbee addressed a letter to the editor of that journal with the object of exposing the fallacy of Mr. Curtis's views of pathology. This letter was published with the initials of its author. Previous to its publication I called upon Mr. Toynbee and requested him to put his name in full to the communication; this, however, he declined to do, on the ground that he had not yet made up his mind as to whether or not he should devote his labour to the anatomy of the ear and the elucidation of the nature and treatment of the diseases to which it was subject. Mr. Toynbee, however, made further communications on the subject to the journal in question, still keeping up the *incognito* of "J. T."

It is difficult in a sketch of this kind not to advert with some prominence to the career of Mr. Toynbee as an Aural Surgeon. "Joe" Toynbee, as he was called, was a fellow-student of mine at Dermott's School of Anatomy in Gerrard-street, Soho. He was there as a private pupil of Mr. W. Wade, then the Resident Surgeon of the institution. "Joe" was a most indefatigable student of minute anatomy. Early and late, though then a mere boy, he was to be found in the dissecting-room pursuing his investigations with a perseverance which was truly remarkable. This was partly owing to an innate desire to investigate to the utmost the minute anatomy of structure, and to the fact that his teacher (Dermott) always took six weeks to demonstrate the anatomy of the bones of the head to his often inattentive and bewildered audience. There is no reason to doubt that the influence exerted by this teaching of minute anatomy gave the colour to the future life and career of one of the most splendid and successful anatomists who ever lived. Mr. Toynbee's contributions to the anatomy of the ear, now in the Royal College of Surgeons, are unequalled for their beauty and completeness. There is no such exhibition in the world. As a minute anatomist, Toynbee was perfect. But his mind was microscopic. There was nothing suggestive in it. It is a curious fact, but not less curious than true, that Toynbee's splendid dissections were associated with no therapeutic or practical results. He was an anatomist, rather than a practitioner. He obtained great fame in virtue of his dissections only, and it was left to men possibly of a lower stamp to inaugurate and carry out systems of treatment, which he never failed afterwards to adopt. He gained the Fellowship of the Royal Society entirely by his dissections, and he was justly entitled to it. But it may be fairly asked whether these wonderful contributions to minute anatomy will be ever more than curious specimens of labour and skill. Is it not a fact that there are two classes of diseases of the ear—one of them curable, the other incurable? Any one can treat the first class with success, but no one the second. A quondam colleague of mine in periodical literature—a Physician who has risen to considerable eminence since—in talking over the question of Aural Surgery to me, once said, "Why, if I failed in practice I would become an aurist; there are myriads of patients afflicted with incurable disease of the ear who go what is called 'the round,' just as they do in other cases of incurable disease. A man must indeed be sadly deficient if he could not make a thousand a year out of such cases." I have said that Curtis relied mainly for success upon appearances, and this he carried to extremes. His hours for consultation were between 11 and 2. He would not see a patient five minutes before 11 or five minutes after 2; and this practice he carried on even to the last—to a time, indeed, when he literally "wanted a guinea." He never allowed a servant to hand him a letter or card except on a silver salver. He always saw his patients in full dress, *temp.* George IV. His make-up was perfect. His hair was curled; his coat blue, with bright Wellington buttons; a white waistcoat, and black continuations, silk stockings, and pumps. His last footman was a tall handsome man of the name of Webster. I called on him one morning, and was received by Webster at the door. "Is Mr. Curtis at home?" I said. "Yes, sir," he replied, "but he is very much occupied this morning; the rooms are all full; can you wait?" I said, "I am a Medical Practitioner, and, if you give this card to him, I think Mr. Curtis will see me." I was kept waiting in the hall for a minute or two, and was then ushered into the consulting-room of the "eminent aurist." "Webster," said he, "always admit this gentleman when he calls; there is no occasion to humbug him." Curtis, who was really of a kind and genial nature, apologised to me for the stupidity of his servant. "Did you observe him well?" he said. "Well," I replied, "he struck me as being a very handsome and splendidly dressed footman." "Ah!" was his rejoinder, "he is a fortune to any man in my position; you shall have a better view of him." He accordingly rang the bell, and Webster appeared. "I wish to give Mr. Clarke one of my last lectures; you will find it, Webster, in the bookcase." Webster went to the bookcase, and during the process of unlocking it and searching for the lecture Curtis kept up a kind of dumb pantomime by pointing to the really handsome fellow before us. Curtis was desirous of getting the patronage of the Queen to his dispensary, and he remarked, "I shall do this through Webster." "How?" I inquired. "Oh!" he said, "with Webster on the box beside the coachman in a well-appointed carriage I could get admission even to the Palace itself; but I go to Cambridge House to-morrow, and shall get the Duke to preside at the next annual meeting, which will be held next week; but mind," said he, "I shall succeed in my object." I was incredulous, but Curtis's anticipations were correct. The Duke of Cambridge did preside at the next annual meeting of the Dispensary. I was present. The report, which was read by the secretary, gave a very flattering account of the institution. The bluff old Duke eulogised the management, and above all its founder, and ended in his good-natured way by saying, "Can I do anything for you, Curtis?" The reply was, the Dispensary would have more influence and usefulness if her Majesty would patronise it. "I think I can manage that for you," said the Duke; and he did manage it, for in less than a week the little house in Dean-street, Soho, was the "Royal Dispensary for Diseases of the Ear." Curtis, who earned large sums of money, easily made away with it with equal facility. He was elected a member of the Junior United Service Club, at which he disposed of the earnings of the morning with great readiness at night. Curtis's fortune began to decline; he became a bankrupt, and was characterised in the *Gazette* as "John Harrison Curtis, bookseller, Soho-square." It is doubtful whether this reverse had any material influence on the after ruin which attended him. He who so long had ruled absolute, as it were, without "a brother near the throne," had now to contend with formidable rivals in practice. Pilcher, Toynbee, and Yearsley entered the field against him. His practice dwindled, but he obstinately refused to curtail his expenses, and he was utterly ruined. He retired to the Isle of Man, broken in fortune, in constitution, and in spirit. There is no doubt that, in the last year or two of his life, he became insane. The late Mr. Ogden, who was Attorney-General or Governor of the Isle of Man, mentioned to me many circumstances in proof of the melancholy condition to which poor Curtis had been reduced. He died in an asylum. It was stated to me by Mr. Churchill, the publisher, that Webster, subsequently to his service with Curtis, became one of the gate-keepers at the Kensington entrance of Hyde-park. He was still splendid, even in the autumn of life. "Have you heard anything of your old master?" said Mr. Churchill to him on one occasion. "Yes, sir," said Webster, "I heard that he was in destitution in the Isle of Man, and I sent him a sovereign." In the history of human nature there is no more melancholy instance of the rise and fall of a man, if we except that of Beau Brummel. Brummel, like Curtis, had been at "the top of the tree" in his particular walk. Like Curtis, he died in a miserable garret in Boulogne, to the last keeping up his imaginary dignity, never forgetting what he had been, and Curtis, in the same way, "kept up his dignity" under the most abject poverty. When Curtis left London, my friend, William Harvey, with an earnest and honest desire to make the Royal Dispensary an institution useful to the poor, and instrumental in developing the art and science of Aural Surgery, purchased the goodwill. He consulted me on this occasion. I said, "Harvey, in taking to this venture you will be in the position in which Wilkes described himself to be in an affair of gallantry. 'I want only,' said Wilkes, 'half an hour in advance of others to talk my face away, and then I shall succeed in my suit.' Wilkes was one of the ugliest men proverbially who ever lived, but he was right in his assumption. It will take you, Harvey," I said, "some years to talk away the ugly face of the Royal Dispensary, but I believe if you persevere you will be successful in making it handsome as well as useful." Harvey had the advantage of being thoroughly well educated. He had, moreover, for many years been in extensive general practice. He was laborious and painstaking. He succeeded in "talking away" the "ugly face" of the Dispensary. The opportunities thus afforded him of practice have not been lost to the public and the Profession. If Harvey had done nothing more than contribute his valuable and practical work on "Rheumatic

Diseases of the Ear" to aural pathology, he would have sufficiently redeemed the promise which he held out to himself.

J. F. C.

DUBLIN OBSTETRICAL SOCIETY.

DEBATE ON DR. EVORY KENNEDY'S PAPER ON PUERPERAL FEVER.

We have been favoured, through the courtesy of the editor of the *Dublin Quarterly Journal of Medical Science*, with the proof-slips of the report of an adjourned debate by the members of the Dublin Obstetrical Society on the paper lately read by Dr. Evory Kennedy before that Society, and since published in the above-named journal, on "Zymotic Diseases as more especially illustrated by Puerperal Fever." The questions involved as to the nature of puerperal fever and the relative merits of large and small Lying-in Hospitals are of the highest importance both in a social and scientific point of view, and have been already discussed by the French and New York Academies of Medicine and the Norwegian Medical Society, and have latterly attracted a renewed share of attention in this country in consequence of the remarks by Sir James Simpson in favour of small detached Hospitals for the treatment of all forms of disease.

It was hardly to be expected that the public expression by Dr. Evory Kennedy, himself a late Master of the Rotunda Lying-in Hospital of Dublin, of the opinion that, in the city of Dublin alone, seven and a half parturient women die out of every nine from being confined in Hospitals—in other words, "that in all the deaths which have occurred in Dublin for the last seven years in parturition, out of every nine deaths, seven and a half women have died who would in all human probability be at this moment alive had they been confined in their own houses or in isolated cottage Hospitals"—should have passed unchallenged among the members of the Profession in that city.

The discussion has already occupied the members of the Society during three meetings, and has not yet been concluded. It has been most ably conducted, and is of a highly interesting and important nature. In laying before our readers an analysis of the opinions of the various speakers, we have pleasure in stating that the report in full will appear in the forthcoming number of the *Dublin Quarterly Journal of Medical Science* among the proceedings of the Obstetrical Society.

Dr. Johnston, the present Master of the Lying-in Hospital, considers Dr. Kennedy's statement to have been based on wrong hypotheses, and cannot see the grounds upon which he states that when "continued fever, typhus, or erysipelas is prevalent in Medical and Surgical Hospitals," it is a necessary consequence that "puerperal fever should prevail in the Lying-in Hospital." Nor does he think that if such an epidemic should be prevalent in the city generally, there is any reason to say, because a patient was admitted to an Hospital labouring under one or other of these diseases, as has frequently happened, the institution should be charged with being the *habitat* of such a poison, or that it in any way engendered it; and he maintains that it is not the case that "where puerperal fever is epidemic, it shows itself generally in our great maternity Hospitals in the first instance." He contrasts the overcrowded, ill-ventilated, and filthy rooms of the lower classes with the splendid and airy wards of the Lying-in Hospital, where every hygienic measure is carried out with the most scrupulous care, and says that where such rules are strictly enforced it is hardly, if at all, possible that malaria miasm or any poison could find "a *habitat*," and confidently affirms that nothing approaching to contagion has appeared during his time in the Lying-in Hospital. No doubt there have been deaths from metria, but in almost all instances they were either victims of seductions sent for the most part from the country away from their friends to hide their shame under the shadow of the Hospital, where among the many they might pass unnoticed, or others labouring under great distress of mind, without home, deserted by cruel hard-hearted husbands. And it is a remarkable fact, and worthy to be noted, that where a patient was attacked with the malady it was confined to that particular individual, never extending beyond her.

Dr. Atthill took exception to two of Dr. Kennedy's propositions—1st, that any parturient female may generate and absorb a poison capable of producing metria; and 2nd, that the generation and absorption of the poison of metria are in a direct proportion to the number of puerperal females cohabiting at their parturient period, or who breathe the same atmosphere when lying-in. If the first were true, he thinks that a larger proportion than occurred in Dr. Kennedy's own practice—viz., 1 in 1000—would have generated and absorbed this poison. He considers the question as to the self-generation of metria to be merely speculative, but has no doubt whatever that the contagion of erysipelas, scarlatina, etc., will produce it. He quotes the result of the investigation into the causes of the mortality in the Vienna Lying-in Hospital, published by Dr. Arneth in 1851:—

"In consequence of extraordinary precautions having been taken to prevent the male attendants, who were all engaged more or less in dissecting and in making post-mortem examinations, from entering the wards till their hands had been thoroughly cleansed and disinfected, the mortality fell at once to 1¼ per cent. in 3526 deliveries, and has continued at a comparatively low rate ever since. This is a striking instance of one of the causes of metria, and, at the same time, a proof of Dr. Kennedy's assertion—that it is a preventible disease; and I think that until all possibility of infection from this source is carefully excluded, we cannot rightly estimate the effect of such assumed influences as self-generation, or generation in consequence of aggregation."

Dr. Atthill also considers the fact that on the side of the Vienna Lying-in Hospital in which the patients were attended by females the deaths were only 30, against 600 among the same number of patients under exactly the same circumstances, except having been attended by male pupils, to be totally incompatible with the theory "that metria is generated in a direct proportion to the number of parturient females cohabiting during their parturient period," or that this is the cause of the disease. Dr. Atthill then refers to the statistics of the Dublin Lying-in Hospital for various years, in which large numbers of women were delivered with low rate of mortality, although many of them had been sent to Hospital only because they were "bad cases," and says that "from the foregoing facts I think we may, without hesitation, conclude that the generation and absorption of metria bear no relation whatever to the number of parturient females collected together during their parturient period."

Dr. S. More Madden expressed the opinion that puerperal fever, although undoubtedly contagious, does not spread by contagion alone, but is diffused by what the old writers, with great propriety, termed "the epidemic constitution of the atmosphere." He at the same time confirmed Dr. Johnston's statement, that the patients who most frequently succumb to puerperal fever in the Dublin Lying-in Hospital are the victims of seduction, to whom the present is full of anguish, and the future lighted by no ray of hope. Dr. Madden considers that the present death-rate of the Dublin Lying-in Hospital is much lower than Dr. Kennedy's calculation, based on the average of the last fifteen years, leads him to think it is—viz., 1 in 30 and further states that it is still decreasing every quarter.

Dr. Kidd laid before the meeting statistics of the Coombe Lying-in Hospital for fifteen years, from 1854 till 1868 inclusive. The total number of deliveries during that time, exclusive of cases of abortion and of premature labour before the seventh month, was 6573. The total deaths amounted to 1 in 77·3. Of these the deaths from puerperal fever were 1 in 119·5, and from all other causes 1 in 219·5. During those fifteen years 15 patients, labouring under various forms of fever, were removed to other Hospitals, and whilst it is known that some of those recovered, the history of the majority is unknown. In order, however, that there may be no under-calculation on the point, it is assumed that all have died, which would raise the number of deaths from metria to 70 and the total deaths to 100. The death-rate on this estimate would be 1 in 93 from metria, 1 in 219·1 from other causes, and 1 in 65·7 from all causes. Dr. Kidd considered Dr. Kennedy's argument as to contagion being the chief, if not the only, cause of puerperal fever, to be too exclusive, and he thought if they adopted it they were sure to commit serious and grave errors. There could be no doubt that, as Dr. Johnston had put before them, the causes of puerperal fever were often individual—causes belonging to the patient herself. Distress of mind, as had been well shown by Dr. Collins, was a fruitful source of puerperal fever. No patient succumbed to it so rapidly as the woman who had been seduced. There are also epidemic causes producing it, as may be inferred from the returns of the Rotunda Lying-in Hospital, extending over a great number of years; else how could they account for it that during three years of Dr. Collins's mastership they had it very prevalent, and that during the succeeding four years they scarcely had it at all? When Dr. Kennedy, who had been Dr. Collins's assistant, and had helped to carry out the reforms that he instituted,

became master, and again the fever became prevalent, was it because Dr. Kennedy took less care than Dr. Collins? Was it because the contagion was allowed to form a focus whence to spread in the Hospital? He was sure that was not the case, and they must look for some other cause. This applied to all the Hospitals of which they had a history. Again, the form of puerperal fever varied. In no two outbreaks of it would they find exactly the same form. How were they to account for that? Could they believe that it was because the contagion varied, or that there was some difference in the condition of the atmosphere? He believed that that was the explanation of it. But while speaking in this way of individual and epidemic causes, Dr. Kidd never for one moment doubted the influence of contagion. On the contrary, he believed the disease to be highly contagious, and that if they were to prevent it they could only hope to do so by directing their attention to this point. The statistics of extern practice and of lying-in Hospitals had been compared. If the results could be depended upon, Lying-in Hospitals ought to be closed at once and for ever. But could they be depended on? From the result of his experience from twenty years' extern practice of the Coombe Lying-in Hospital, he believed they could not be depended upon, and entered upon illustrative statements. But, notwithstanding all this, he must admit that there was a large proportion of mortality due to the influence of the Hospital. He believed it was impossible to collect a number of patients under one roof and yet not to have an Hospital atmosphere, and that that atmosphere was more or less injurious. He did not attach much importance to the statement of Dr. Arneth with regard to the cause of puerperal fever in the Vienna Lying-in Hospital depending upon the introduction of septic matter by the hands of students from the dissecting and post-mortem rooms. Although it was quite true that for some years the mortality in the wards attended by female pupils had been much lower than in those attended by males, it was stated at that Society some years ago by Dr. Denham, on his return from the Lying-in Hospital of Vienna, that during the past few years the mortality had been reversed, and that the mortality in the branch attended by the females was very much larger than in that attended by the males. As for Dr. Kennedy's proposal for the complete isolation of lying-in patients, the plan had been tried in the Hospital of St. Petersburg, which had been reformed by the Grand Duchess Helena, but what had been the result of that? The reform was instituted in 1852. The mortality for the seven years preceding it was 3·12, and for the seven years succeeding 2·93—that was to say, before the patients were placed in separate wards, one out of 32·17 died, and that after this change, after they had gone to all this expense and trouble, and more or less injured the efficiency of the Hospital, the only change was that one died in 34·09. He did not think that was an inducement to go to the expense, and to lessen the efficiency of their Hospital by attempting to have separate wards for each of the patients. There remains another expedient, and that is the isolation of the sick patients. This is the plan about to be adopted on the approaching enlargement of the Coombe Lying-in Hospital, and would be an extension of the system on which they had been working for many years. As soon as they saw a patient manifesting any signs of puerperal fever they emptied the ward. They could not send the patient home nor use the pole-axe, so they sent her for some time to Cork-street Fever Hospital; but the difficulties attendant upon this were so very great that they were obliged to give up the practice. They now sent out all that were healthy, and shut up the Hospital until the patient was removed—until she recovered or died; and they did not allow any other patient into it until it was thoroughly cleansed and fumigated.

Dr. Churchill considered that there had been too much stress in Dr. Kennedy's paper laid on the spontaneous generation of puerperal fever in Hospitals, and that there is hardly a due estimate of the epidemic influence as a cause. It was his belief that, whilst puerperal, like any other fever, may originate under bad sanitary arrangements, it is really epidemic, and so propagated to a much greater extent than by contagion. Although zymotic metria is not peculiar to women confined at home, they are not exempt from it. That it also occurs in small lying-in Hospitals Dr. Churchill adduced several instances. On the other hand he thinks that it cannot be doubted that a large Hospital, however well arranged, with many patients, however well cared for, will prove an admirable hotbed for intensifying and propagating the disease when once it appears there. Dr. Churchill does not doubt that, under the favouring circumstances of personal uncleanness, abstinence from water, from clean clothes, and fresh air, puerperal fever may be both generated and propagated by contagion, but Dr. Kennedy is himself a proof that, with due care, the disease is not conveyed by Medical men, and Dr. Churchill can honestly state that he has never had the slightest reason to suppose that he has himself been the vehicle of the disease. But it is yet true that, in a few instances, puerperal fever has dogged the steps of one Medical man, when others in the neighbourhood have been exempt. If asked to explain this, Dr. Churchill simply avows that he cannot. Dr. Churchill, having next made some most valuable remarks as to the worth of statistics and the correct method of compiling and using them, and having elaborately contrasted the mortality of extern maternities and small and large Lying-in Hospitals, proceeded to remark that

"If, as I hope and believe, these statistics are accurately given, however imperfect they may be as to numbers, I think they at least establish this one practical point—viz., that until we can find a much smaller death-rate among the collection of small Hospitals, we should be very cautious in destroying the large ones, or diverting them from their present use. . . . It may be a question whether, if we had no Hospitals, it might not be more beneficial to the poor to provide small parochial Hospitals rather than one large one, and for one special reason—viz., that, in the event of puerperal fever making its appearance, the Hospital can be closed with less inconvenience. But we are not placed in such circumstances, and what might be right and proper in such a case would, it appears to me, be both hasty and injudicious now."

Dr. Morgan mentioned an interesting fact with reference to the mental condition of patients affected with puerperal fever, that in the Lock Hospital they had two beds for puerperal patients in a small ward communicating with the larger by a door. They had had seventy-four deliveries, and, so far as he knew, only one death. These patients were suffering from syphilis, and were deserted by their friends. They had done very well in that ward, and for the last twelve months there had been no case of puerperal fever, although there had been five or six of erysipelas in the ward adjoining.

Dr. McClintock moved, and Dr. Denham seconded, the adjournment of the debate.

Dr. Kennedy, before adjourning, made some remarks in reply. Fortunately there had been such a discrepancy of opinion amongst the gentlemen who had spoken since his paper was read, that he thought they had answered each other pretty well. In the first place, Dr. Johnston mentioned that he said that there was a necessary consequence in the recurrence of puerperal fever after any epidemic disease showed in an Hospital. He (Dr. Kennedy) merely stated that it had been observed to occur. He used no such language as had been attributed to him, and the thing was as to its first appearance in the Hospital. He stated distinctly that it was of a capricious character, and if they wanted any proof, the opinion of the gentlemen who had spoken had left little doubt that no human being could ascribe a course to it. It was quite impossible to arrive at its cause any more than that of any other zymotic disease. Dr. Kennedy next defended some of his statistics, and stated that what he wished to convey in his paper was, that this mysterious disease had been on the increase, and particularly for the last fifteen or twenty years, especially for the last fifteen, and this was what drew him out at this moment, and what made him urge upon his enlightened, intelligent brother Professional men the necessity for meeting the urgency of the case. For fifteen years the death-rate had never fallen lower than 1 in 31½, and in one year it was so high as 1 in 14. He had not much confidence in statistics unless he knew by whom they had been prepared, and concluded by saying that he hoped anything he had left unanswered had been met by the gentlemen on the other side, for in the words of an eminent judge, "I agree with the two doctors for the reasons assigned by the other two who differ from them." The meeting then adjourned.

We have only got through one *fasciculus* of the proofs so kindly put at our disposal, and must defer the analysis of the other.

CLAUDE BERNARD IN THE SENATE.—The chief reason, it is said, for the election of this distinguished *savant* has been that the attacks so often made in the Senate upon scientific and superior instruction may be met by one who is so authorised and capable of defending it. On his reception by the Emperor, M. Bernard did not hesitate to declare his intention to endeavour to render his new position profitable especially to scientific interests, surprising his Majesty somewhat by the statement that between the two Prussian laboratories at Bonn and Berlin there had been expended no less a sum than 3,000,000 francs.

REVIEWS.

On a New and Successful Mode of treating Certain Forms of Cancer, to which is prefixed a Practical and Systematic Description of all the Varieties of this Disease, showing how to distinguish them one from another, and from Tumours, &c., assimilating them. By ALEXANDER MARSDEN, M.D., F.R.C.S.E., Surgeon to the Cancer Hospital, London and Brompton, and to the Royal Free Hospital, etc. London: John Churchill and Sons. 1869. Pp. 96.

WHAT strikes us most forcibly in reading this little book is the fact that the author must live in a world of his own, remote from men and books, so that he thinks nothing was done or known before him, and really mistakes a very old remedy for a new one. He first gives a "concise but systematic description of every form of cancer and tumour assimilating cancer," and says he is "not aware that this has ever before been attempted." He thinks that only a few years ago "cancer was looked upon as rare," that it was not studied, and that it was not "till the establishment of the Cancer Hospital seventeen years ago that the first grand step was taken." He divides cancer into five orders—scirrhous, medullary, epithelial, melanotic, and cystic or colloid. The varieties of these orders are next described, and, with an account of rodent ulcer or lupus, and of tumours "assimilating" cancer, fill the first forty-eight pages.

In the next chapter, on "Various Treatments that have been recommended," the author reiterates the singular notion that it is to the Cancer Hospital that the world is indebted for a knowledge of the pathology and treatment of the disease. "We," says he, speaking for the Surgeons of the Cancer Hospital, "have discovered how, with almost unerring certainty, to distinguish at the patient's side true cancer from false. We have discovered a better method of treating true cancers—a method certainly resulting in longer life and far less discomfort to the patient; in many cases we have discovered means of perfectly arresting the disease, and many more have been sent out of our hands, so far as time can show, cured." Having spoken of what the Surgeons of the Cancer Hospital know and can do, he deprecates the mischiefs resulting from the ignorance of other people. He "cannot lay too much stress on the importance of being able at an early period to determine between malignant tumours and non-malignant. . . . There is more mischief done by the application of strong and stimulating ointments, liniments, etc., to incipient cancers (these being sometimes mistaken for harmless tumours) than can well be imagined, even by Surgeons taking a high place in their Profession." Having then recounted and dismissed with contempt a long list of other remedies, the author proceeds to describe his own, which is an arsenical paste composed of two drachms of arsenious acid and one of mucilage of acacia. This, without discarding the knife altogether, he considers applicable to all cancers "except the cystic, provided they have not exceeded certain limits—viz., four square inches (of ulcerated surface), and then not more than a fourth must be attacked at a time." "Many cases of scirrhous and medullary cancer," he adds, are amenable to this treatment; but its chief value is for the epithelial, which, if treated in time, may in nine out of ten cases be cured. This, he says, was not the case ten years ago. This is the "new" treatment.

It may interest Dr. Marsden, and may mitigate his fears for the ignorance "even of Surgeons taking a high place in their Profession," that even outside the Cancer Hospital something is known of cancer and of arsenic as a caustic therefor. Yea, moreover, there is a toy called the microscope, wherewith benighted persons (outside the Cancer Hospital, it must be admitted) have scrutinised cancers and tumours, in order the better to know them apart. But not one word does the author say about this instrument or its use at the Cancer Hospital. Dr. Marsden mentions the works of Velpeau, Walshe, Paget, Cooke, Pemberton, and Collis as exceptions to "the long list of authors whose works, if suddenly swept out of existence, nothing would be lost to posterity." But he makes no mention of Hughes Bennett—a singular omission, when complaint is made that, but for this Cancer Hospital, the disease had not been studied. He might have mentioned authors to whom arsenic was not unknown. There is one H. Lebert, who has written some pretty big volumes, which are read outside the Cancer Hospital, and especially a "*Traité Pratique des Maladies Cancéreuses et des affections curables confondues avec le cancer*, Paris, 1851;" for he it observed that many of the best pathologists deny the name of cancer to the epithelial disease which Dr. Marsden cures by arsenic, and call it "cancroid." Lebert, with other pathologists of the widest experience, speak of arsenic in the treatment of true cancer—*i.e.*, the scirrhous and medullary—not as "new," but as obsolete, and not so much to be relied on as the knife, save in exceptional cases. But as for the "cancroid" or epithelial cancer of the skin, arsenic is a remedy nearly 300 years old, and in Lebert's book is found every detail of application. So little is there of anything new in this remedy that it was employed by the Surgeons of the late Pope Gregory XVI. for cancroid of the nose, and produced a cure which was permanent till the death of his Holiness eight years afterwards. Dr. Marsden would have escaped criticism had he described his own experience in the use of an old-established remedy for cancer and for epithelioma; but, as things are, his work does not answer to the expectations raised by his title-page.

Companion to the Last Edition of the British Pharmacopœia, comparing the Strength of its Various Preparations with those of the London, Edinburgh, Dublin, United States, and other Foreign Pharmacopœias; with Practical Hints on Prescribing. By PETER SQUIRE, F.L.S., etc., etc. Seventh Edition. 1869. Pp. 383.

MR. SQUIRE evidently allows himself little respite from the task of collecting, condensing, and arranging in this excellent work all the information necessary for the Physician who prescribes and the chemist who dispenses. Most of our readers know that he gives the facts and figures, the properties and uses, the doses, the combining proportions, and the formulæ of all the pharmacopœial drugs and preparations, as well as of almost all the other medicinal substances used by civilised man. Mr. Squire's long experience enables him to suggest most valuable hints as to the preparation and combinations of medicines, and it is impossible to turn over the pages of his work without finding some useful hint or reference. This edition, although not increased in price, contains about fifty more pages than the sixth, and amongst the new matter is a valuable account of the metrical system of weights, an analysis of the organic materia medica, and in about thirty pages a summary of the principal mineral waters, spas, and baths of Europe. Altogether, it is a very perfect book.

GENERAL CORRESPONDENCE.

WATER ANALYSIS.

LETTER FROM DR. C. MEYMOTT TIDY.

[To the Editor of the Medical Times and Gazette.]

SIR,—I perfectly agree with Mr. Frank Clowes in his letter in the *Medical Times and Gazette* of the 15th inst., concerning the accuracy of the process used by Dr. Frankland for determining the nitrates and nitrites. I feel perfectly sure the idea of salivation never entered Dr. Letheby's brain when he spoke of the process as "dangerous" (if he used that word), but Mr. Clowes may perhaps admit the possibility of shaking a drop or so of sulphuric acid into one's face or eyes; and this is certainly an accident which, should it happen, might without exaggeration be termed dangerous.

Now, with respect to my experiments by Dr. Frankland's process for estimating the organic carbon and nitrogen, I am perfectly at a loss to understand what I can possibly have said to have led Mr. Clowes to suppose that I have failed to appreciate the paramount importance of excluding every form of dirt or dust. For this purpose I have adopted (the only point where I have a little varied from Dr. Frankland's method, which he was kind enough to show me in detail) a plan I consider preferable to Dr. Frankland's. Instead of using filter-paper stretched over the capsule, which I used, I may say, in all my earlier experiments, I afterwards employed two layers of fine and most carefully dusted muslin, and over this two perforated zinc covers, so placed that the holes of one did not coincide with the holes of the other. During the whole process the capsule was protected from any ammonia that might be present in the atmosphere of the laboratory. The beakers I have used have been always exactly the same as those used by Dr. Frankland. I cannot imagine what has led Mr. Clowes to suppose that I operated with differently shaped ones. And again I repeat, with all the precautions I have taken, I cannot but regard the process as most unsatisfactory, and the results most untrustworthy.

Dr. Letheby can take care of himself, as your readers all know by this time; but allow me to inform Mr. Clowes that the method by which Dr. Frankland calculates the supposed "previous sewage contamination" is no secret. It is not the estimation of nitrogen as nitrates and nitrites complained of, but the unwarrantable and sensational deductions of these experiments. Respecting these Dr. Frankland stands alone; all leading authorities differ from him in this matter.

Chemistry owes Dr. Frankland a deep debt of gratitude for his laborious and original researches, and it must be a matter to all of the deepest regret that in this case Dr. Frankland should have allowed his originality to run wild; I am convinced it will not be long before Dr. Frankland will admit it has done so.

The subject of the water-supply is not one that can be properly dealt with by the pure chemist, for he only looks at it from one point, forgetting there are other points from which it should be viewed of equal if not greater importance.

I am, &c. C. Meymott Tidy, M.B.,

Joint Lecturer on Chemistry at the London Hospital.

Cambridge-heath, Hackney, May 26.

ANIMAL VACCINATION.

Letter from Dr. Blanc.

[To the Editor of the Medical Times and Gazette.]

Sir,—As it is impossible for me to reply to the many applications I receive for cow-pox, I shall feel obliged by your kindly inserting this letter in the *Medical Times and Gazette*.

I must decline to supply the Profession with cow-pox collected from heifers for the following reasons:—

1st. Cow-pox taken from heifers does not keep in tubes or on points.

2nd. When used immediately after reception, it may succeed; nevertheless, failure is likely to take place.

Vaccination with cow-pox can only be practised with real benefit direct from the heifer. From the testimony of others, and from my own personal experience, I can advance that, under those circumstances, success is the rule, and the results obtained altogether so satisfactory as to leave far behind any other system.

I understand animal vaccination possible as a part of our national arrangements only by adopting the following plan:—

1st. For those who desire to benefit from the advantages of fresh lymph direct from the heifer, let them come to me or to any other Medical man who, like myself, will devote himself entirely and exclusively to animal vaccination. If animal vaccination is really worth what we state it to be, the little trouble of having to come to mine or other similar vaccinator's residence should not for an instant be considered, nor stand in the way when the health and welfare of those entrusted or dear to us is in question.

2nd. For those who have no objection to human lymph, or even prefer it, let them once or twice a week send or bring to me a few healthy children; from them lymph of first and second transmissions can be collected in tubes (it then keeps very well). Or they can vaccinate other children direct. The lymph, not being far removed, will still possess many of the essential properties of cow-pox.

3rd. Let public vaccinators and private Practitioners, or some enterprising Surgeons in large provincial towns, follow my example, and vaccinate with it direct from heifers. To such I shall always be happy to supply cow-pox (it always takes well on heifers, even after a fortnight in tubes), and a few days at my place would be sufficient to teach them the *modus operandi*. Nor would it be necessary for such Medical men to keep up a constant succession of animals, but only vaccinate from them when they have collected a few hundred children; by applying to me they would at any time get a fresh supply, as I intend always keeping a regular succession of heifers.

This week I have supplied cow-pox in tubes or on points to many of those who have applied for it. I have done so against my own convictions, as my refusal might have been misconstrued. I have warned them all of the probability of failure.

I am willing and anxious in a matter of such deep and general interest to help in any way my Professional brethren, and I cannot do so better on this occasion than by placing before them the case honestly in all its bearings.

I am, &c. H. Blanc, M.D.

9, Bedford-street, Bedford-square.

THE PHARMACY ACT AMENDMENT BILL.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your paper of the 15th inst. you say the altered Pharmacy Amendment Bill "reserves the rights of all persons registered as legally qualified Medical Practitioners before the passing of this Act."

I should be glad to know how this will affect unregistered diplomas obtained years ago, whose holders have not hitherto practised in this country, but who would probably wish to reserve to the full extent their right to do so. This is the position, I suppose, of most members of the Indian services.

May 22. I am, &c. J. M. H.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 27.

Dr. Burrows, F.R.S., President, in the Chair.

A paper, by Mr. Thomas Smith, was read on

nephrotomy as a means of treating renal calculus.

The object of this paper is to introduce to the notice of the Society, for discussion and consideration, a method of treating stones in the kidney and ureter that the author deems worthy of more thoughtful deliberation than it has hitherto received. The operation of nephrotomy, though mentioned and recommended, with certain reservations, by Hippocrates, was by him and his followers restricted to cases in which there was an external swelling, cases in which, as they expressed it, "Nature showed the way." Even in this limited application, it is doubtful if the operation has ever been performed, except for the relief of renal abscess. So far as the author can ascertain, nephrotomy has been but once employed for the extraction of calculi from the kidney or ureter. This case, which occurred in the seventeenth century, is detailed in this paper. The operation was performed on the person of Mr. Hobson, the British Consul at Venice, from whose kidney an Italian Surgeon successfully removed two or three small stones, by an operation performed in the lumbar region. Mr. Hobson subsequently visited England, and was seen and examined in London by competent Medical men, who have given an account of the case in the *Philosophical Transactions*. In discussing the subject of the paper, the author lays down as most desirable—1st, that we should be able clearly to recognise the existence of stone in the kidney; and, 2ndly, that an operation should be devised for the removal of the stone which should not put the patient's life in a danger disproportionate to the gravity of his disease and his desire for relief. A method of examining the kidney by palpation is described, by which the author has been able in one case to recognise the existence of tubercular deposits in the infundibulum of the ureter. Should it be impossible from any circumstance to employ this method of examination, so as to recognise a renal calculus, the author is of opinion that in some cases the subjective symptoms alone are so pathognomonic that the diagnosis might be considered sufficiently clear to proceed to operation; since by the plan of operation recommended in the paper, the kidney could be made the subject of tactile examination without serious danger to life. A plan of operation is detailed by which the pelvis of the kidney can be reached so as to examine it with the forefinger without injury to any important structures. Whether the performance of this operation would enable a stone to be removed without fatal damage to the renal tissue would (in the author's opinion) depend largely upon the shape, size, connexions of the stone or stones, and the physical conformation of the patient; and while he confesses that there are cases of long-standing branched calculi that could not be removed without inflicting unjustifiable injury to the kidney or the surroundings, yet he believes that he has met with renal calculi that could have been removed without any such violence. If the conditions affecting the removal of the calculus were unfavourable, he believes that the operation would reveal these conditions without injury to the renal tissue, and could then be abandoned without having placed the patient's life in serious danger. The author thinks that the possibility of removing a stone from the kidney by nephrotomy should first be decided by operation on

the dead body of one who has died with a stone in the kidney. He hopes that this experience may shortly be forthcoming, either by others performing the operation themselves on patients who may have died with the disease, or by the kindness of some Surgeon giving the author an opportunity of performing the operation under similar circumstances; and this is one of the chief reasons why the author has made this communication to the Society.

Mr. Curling thought the paper, although unsupported by cases, a most valuable one, considering the nature of the disease. Two points were to be considered, the practicability of diagnosis and of extraction. In children he thought the disease rare, but it was not so in the adult, and in the latter the difficulty of diagnosis was greatest. Still the subjective signs were pretty certain. Then, supposing the existence of a stone demonstrated, could it be removed? In the cutting part there was no very great difficulty or danger. In colotomy he had often had his finger on the kidney, and had found no difficulty in reaching its pelvis. Were the stone in the pelvis, there would be no great difficulty in removing it. But in the museum at the College of Surgeons there were plenty of specimens to stagger the Surgeon. The symptoms might depend on calculi in the calyces, and there would be great difficulty in removing these. In itself the operation would be neither difficult nor dangerous, but its results were more doubtful.

Mr. T. Holmes said that Mr. Smith had himself shown the great difficulty in diagnosing such cases. He had seen the case referred to, and had coincided in the opinion, yet they turned out to be wrong, as the swelling was tubercular. This was evidence of the initial difficulty, and only in children, as a rule, could we detect the stone; but in adults, notwithstanding the symptoms, how were we to know in which kidney the stone was situated? In the case related the seat of the stone must have been known, and could be pointed out, and probably the stone lay outside the kidney, so that that organ would not be cut at all. Further, calculi frequently existed without any indication of their presence.

Mr. Kiallmark thought that, as to telling in which kidney the stone lay, that was easy enough from the pain; but even if the situation was known, was the operation justifiable except when suppuration was present?

Mr. Maunder had taken the opportunity of performing the operation on the dead subject, and found very little difficulty in exposing the kidney, especially on the right side. The danger of an exploratory operation would be comparatively slight, judging from that of colotomy. As to diagnosis, if there were any difficulty there would probably be found a stone in both. Many years ago, when dealing with the subject, he removed one of the kidneys of a kitten, which did well; not so in the case of a grown cat.

Mr. Callender asked which edge of the quadratus he took for guide, to which Mr. Maunder replied that he took the outer one.

Mr. C. Moore thought it important to make up our minds as to the condition of the kidney itself, as this was always important after an operation. If a stone were present the kidney would be probably so much damaged as to cause death itself. Again as to the stage of the disease. If the operation was too early performed, no stone might be found; if too late, it might be unnecessary, as the stone might be encysted.

Mr. Spencer Wells said he could answer the objection raised by Mr. Moore, as he had seen three cases where renal calculi had caused extensive suppuration, yet the patients had recovered perfect health after the escape of the calculi. When a Surgeon in the Navy he opened a lumbar abscess in a seaman; a large quantity of pus escaped, and then a calculus as large as a scarlet-runner bean. Ten or twelve years ago he opened an abscess by the side of the rectum in a gentleman, and after the pus escaped, he removed a small calculus, which Dr. Bence Jones examined, and said was nearly pure uric acid. In all probability this had been arrested in one of the ureters just before it entered the bladder. The third patient was a woman who had a large cyst of the right kidney, which he treated by tapping and drainage. Two calculi afterwards passed into the bladder and away by the urethra. These cases proved that patients may regain complete health after a renal calculus has set up extensive suppuration. It was even more probable that success would follow nephrotomy, if a Surgeon could remove a calculus before it had caused so much damage to the kidney.

Mr. Smith, in reply, admitted the difficulty both of diagnosis and extraction, and he only suggested the operation now. The vertical incision was the easiest. No doubt many calculi could not be extracted, but if these were very common they would not get into our museums. He would only operate where the diagnosis was well marked.

Mr. T. Spencer Wells reported

A THIRD SERIES OF 100 CASES OF OVARIOTOMY, WITH REMARKS ON TAPPING OVARIAN CYSTS.

The author has arranged in a table all the cases in which he has completed the operation of ovariotomy, from the 200th case included in previous papers to the 300th. In other tables he gives particulars of all his incomplete and exploratory operations. He finds that the mortality lessens as experience increases. Of the first 100 cases, 34 died, and 66 recovered. Of the second 100, 28 died, and 72 recovered. But of this third series of 100 cases, only 23 died, and 77 recovered. The author has endeavoured to ascertain what influence tapping ovarian cysts may have upon the mortality of subsequent ovariotomy, and he has arranged in a table all his cases where tapping had never been done, and those in which it had been done from once to sixteen times. The general mortality of the 300 cases was 28·33 per cent. Nearly one-half of the patients, or 135, had never been tapped. In them the mortality was 27·40 per cent.—not one per cent. less than the average mortality. Rather more than one-fourth of the patients, or 78, had been tapped once. In them the mortality was 25·64 per cent. There were 19 who had been tapped three times, and the mortality was 26·32 per cent. Of the 36 who were tapped twice the mortality was exactly the same as that of the group of cases tapped from four to sixteen times—namely, 33·33 per cent. The author is led by these facts, and by other considerations discussed in the paper, to the following conclusions:—1. That one or many tappings do not considerably increase the mortality of ovariotomy. 2. That tapping may often be a useful prelude to ovariotomy, either by giving time for the general health to improve, or by lessening shock when the fluid is removed a few days or hours before removing the more solid part of an ovarian tumour; and 3. That when the syphon-trocar is used in such a manner as to prevent escape of ovarian fluid into the peritoneal cavity, and of entrance of air into the cyst, the danger of tapping is very small.

Dr. West agreed with Mr. Wells as to tapping being of service, especially as a preliminary operation which might satisfy the Surgeon, the patient, and her friends. In most cases the patient cannot be said to die of the tapping. We were apt to be dazzled by the success of ovariotomy. He would not speak so, were it not necessary for him to, as it were, recant his former opinions. He could, therefore, with greater grace advocate the use of the minor operation. He would ask if any one now used iodine after tapping.

Mr. Spencer Wells, in reply to Dr. West, said that he had lately conversed with M. Nélaton and M. Boinet, who had both large experience in the treatment of ovarian cysts by iodine injections, and he found that they had both arrived at the same conclusion as his own experience of seven cases would lead to. Of his own seven cases, only one patient was alive who had not since undergone ovariotomy. This one was still in tolerable comfort nearly ten years after the injection; but rather a large cyst could still be felt. If a cyst was unilocular, with thin walls and limpid contents, then, after tapping and injecting iodine, a radical cure occasionally followed. But it was very doubtful whether iodine had much or anything to do with the cure, because tapping alone, without the use of iodine, in this form of cyst was also occasionally completely successful. No more fluid was secreted, the cyst collapsed, its walls probably coalesced, and after a time no trace of it could be detected by the most careful examination. When the contents of a cyst are viscid, iodine is quite useless. In such cysts, and in multilocular cysts generally, injections of iodine should be restricted to cases where for some reason ovariotomy cannot be performed, but where a cure may be hoped for after suppuration and drainage. Here washing out the cavity, once or twice a day, or oftener, with plenty of iodine in solution, becomes very useful, by deodorising the offensive secretions, and probably by preventing absorption of putrid fluid and blood-poisoning.

THE PATHOLOGICAL SOCIETY.

Tuesday, April 20, 1869.

R. Quain, M.D., President, in the Chair.

On taking the chair the President said a few words on the lamented death of Mr. Bruce, expressive of his regret and of the loss the Society had sustained.

Dr. Greenhow then proceeded to exhibit certain specimens of Miners' Lungs, of which he produced five, the results of a long accumulation. From irritants it matters not of what kind bronchitis and interstitial pneumonia are set up. Various kinds of diet may give rise to these affections, but the result is the same. The characters generally observed are marks of former pleurisy, lungs are dense, and certain portions more consolidated than others; the consolidations being frequently nodular and presenting no trace of pulmonary tissue. Sometimes the tubules are dilated and surrounded by pigment. Bands of fibrous tissue are frequent, as are also cavities. Pigment is extremely abundant, and is mostly black, but sometimes red; it forms a special layer below the pleura, and consists chiefly of soot or coal dust. In reply to Dr. Crisp, Dr. Greenhow stated that these lungs contained no tubercle.

Dr. Moxon inquired whether this was true pigment or a deposit of black dust, for how could this latter reach the positions in which we find the pigment? He was convinced in his own mind that he had seen hematosin crystals in the pigment.

Dr. Wilson Fox said that all pigments were not produced by inhaled soot, as was well seen in acute pneumonia and miliary tubercle, which were always associated with deposition of pigment. In pneumonia the change from blood pigment to melanotic material might be observed; where the irritant was colourless the pigment would still be present. Comparatively few of these men suffer from phthisis. In several of Lenker's patients tubercle was manifest, and remembering the tendency of chronic phthisis to harden he would rather attribute the tubercle to a constitutional taint. It would be found rather in chronic than in acute cases.

Dr. Bastian thought the mode of evolution and the nature of the pathological change were subjects of the greatest importance, and ought to have a direct bearing upon the terms employed. He objected to the name interstitial pneumonia proposed by Rokitansky and now retained by Dr. Greenhow, on the ground that where such tissue change was found in organs, there was in a very large number of cases not the slightest evidence, either from the clinical history or from the subsequent microscopical examination, that inflammation had existed. It was, he believed, admitted by all that the tissue change in these cases which had been brought before the meeting by Dr. Greenhow—in which there was some ground for believing that the pathological condition had a more or less proximate relationship to inflammation of the bronchi—was in every way similar to that which was met with in cases of cirrhosis of the lung. From a very careful examination of the details of almost all the recorded cases of this disease, it seemed evident that in a very large number of them no inflammation in the ordinary sense of the term had existed. What seemed to have taken place was rather an actual overgrowth of the fibrous tissue of the lung, though why this took place in these cases was at present wholly unknown to us. The result was that the proper tissue of the lung was obliterated and stamped out, and in its place there remained a new growth of fibre tissue. This change might then be described as one of fibroid substitution; thus the mere fact would be stated and no theory implied. There was no more reason for saying that such a new growth of tissue was a direct result of inflammation than there would be for stating that any fibrous tumour occurring in the body was a result of inflammation. Indeed, a perfectly gradual transition could be remarked between such mere overgrowth of fibre tissue in an organ of a simple kind or of a syphilitic origin, and a definite fibro-nuclear tumour, through the intermediation of the various kinds of syphilitic gummata and of grey granulations. Dr. Bastian equally objected to the use of the term chronic inflammation as applied to many of the pathological states of other organs, taking as an instance that fibroid induration which was known to be produced in the liver in cases of heart disease, giving rise to mechanical congestion of this organ. The new fibre tissue grows in these cases from the walls of the distended vessels whose blood current is retarded, and there is often not a tittle of evidence to show that inflammation has had anything to do with the evolution of the morbid change.

Dr. Greenhow said that, in these lungs, the deposit was soot, not coal-dust. All the workers were not exposed to the same conditions, some working in a much more smoky atmosphere than others.

Dr. Semple exhibited a specimen of Fibroid Enlargement of the Thyroid Body, which had caused much dyspnœa.—Referred.

Dr. M. Mackenzie exhibited a portion of one of the Cervical Vertebræ, which had been expectorated during life. A young woman suffered from severe and deep syphilitic ulceration of the throat. One day she brought up the piece of bone shown. There was a good deal of blood brought up also. She was treated with iodine, and got well. He also showed a specimen of Epithelial Ulceration of the Œsophagus. The canal was not much impinged on, yet the disease caused death by dysphagia.

Dr. L. Down showed the Microcephalic Skull of a young man, aged 19 or 20, which was nearly the smallest on record. Virchow attributes such conditions to premature fusion of the bones. Such was not the true cause, for here the bones were not united by bony union, the sutures being quite visible. The boy was more intelligent than would be judged from the cranium; but his intelligence was below the average.

Mr. Pick exhibited a specimen of Joined Twins. There was no very accurate history as to the specimen. The presentation was described as a footling. There was a broad band of union between the two, extending the whole length of the sternum, as if half of one joined half of the other. There was, then, only one thoracic cavity, but there were two hearts, while there was but one pericardium. The lungs were double, but the livers were united end to end, so as to appear single. The two hearts were joined. The right one was natural, but communicated with the left by the auricle. The left one had a single ventricle only. There were pulmonary veins in the left side only. In one the feet were clubbed.

Dr. Murchison exhibited some specimens of Gallstones, which, in one instance, had caused death. In one patient the death was due to obstruction from gallstones, but there was no jaundice. Thirty years before death, the patient had been jaundiced. In a second case, a female, aged 53, had been ill for three months with pain and swelling in the right leg. For ten days she had been vomiting, and she was much reduced and very weak. She was sallow, and her tongue dry and red. There was a good deal of tenderness over the liver, and there was bile in her urine. She suffered from pyæmia with purulent deposits, yet there were no rigors, sweating, nor fever. Before death, she vomited a dark substance. The femoral vein was plugged, and gallstones were found in the bladder and in a cavity ulcerated in it. There were deposits of pus in the liver.

Mr. Birkett showed the Bladder and Rectum of a man who had suffered from stone, and who, when seen, was dying of peritonitis. A hard mass was felt between the rectum and the symphysis pubis, which turned out to be a stone immovably fixed. He could give no good history of his case, but had been accustomed for some time to pass water by the rectum. He had stone at 16, and lived till he was 49. The stone turned out to be in the site of the prostate: a cyst existed behind the bladder, from which there were openings into the bladder, the rectum, and the prostate. The cyst had ulcerated through, and had given rise to the fatal peritonitis. The stone was curiously shaped, which perhaps partly accounted for the absence of all symptoms.

Mr. Birkett also showed a specimen of Cystic Sarcoma, the growth of ten years. The lady was healthy, and the growth only inconvenienced by its size till the cyst gave way. The integuments, although ulcerated, did not adhere to the cystic growth. Usually such growths were innocent, but sometimes more malignant, especially when non-capsulated.

Mr. Maunder suggested, with regard to the first case, that a stone may have passed away by the rectum, and the one exhibited subsequently formed in the prostate.

Dr. Dickinson showed some specimens illustrative of the pathology of cerebro-spinal meningitis. A child 6 months old had been ill of convulsions for three days before its death. Its head had been thrown back, its eyes open, but not squinting. There were no spots on the surface. A softened material was found about the base of the brain, and soft lymph in the ventricles and on the cord. There was no tubercle.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, May 5, 1869.

Dr. Graily Hewitt, President, in the Chair.

The following gentlemen were elected Fellows:—Dr. Fisher, Sittingbourne; Dr. Marriott, Sevenoaks.

Mr. Spencer Wells exhibited the uterus and ovaries of the patient from whom he had removed the fibro-cellular uterine tumour which he had shown at the last meeting, and which had been reported on by Dr. Braxton Hicks. It was seen that the tumour had been an outgrowth from the posterior surface of the fundus, the rest of the organ being healthy, with the

exception of another very small outgrowth. The patient died on the third day after operation, not from any bleeding, peritonitis, or other direct consequence of the operation, but from fibrinous deposit in the right side of the heart. Superfibrination of the blood had been feared from the first, on account of the rapid rise in the temperature of the body from 98·4° to 101° within twelve hours, and then rapidly upwards to 105·8°. This was accompanied by hurried breathing and feeble rapid pulse, with scanty secretion of urine, charged with urates and pigment. The first sound of the heart became feeble more than twenty-four hours before death, and was inaudible for fully twelve hours. In all operations where peritonitis might be expected, Mr. Wells said he considered its direct effects far less serious than its tendency to cause excess of fibrine in the blood and separation of the fibrine in the heart.

In reply to a question from the President, Mr. Wells said there appeared to be certain seasons in which this condition of the blood was epidemic, and at these seasons croup, diphtheria, and other conditions characterised by fibrinous exudations, were also prevalent. Dr. Richardson was constructing a table which would probably be of great value to Surgeons, showing by meteorological observations certain relations of temperature, barometric pressure, dryness of the air, amount of ozone, etc., when fibrinous deposits might or might not be feared.

Dr. Routh said that in the *éclat* of operation it was perhaps not sufficiently considered that this tendency to fibrinous deposits was perhaps remediable. It was not because it was epidemic that we should remain satisfied, and let our patients die. Diphtheria was such a disease, and yet Physicians tried to cure it, and often did. Rheumatism also was a disease in which there was a tendency to fibrinous deposits, but it too was curable. Why not try the same means with this affection at its onset? Dr. Richardson had stated to him that rheumatic fever was amenable to ammonia, and the alkaline treatment for that disease was common. In peritonitis accompanied with flocculent deposits, the fluid was often acid, showing that the blood was less alkaline than normal, and pointing to the use of alkalies, which might also be found useful in ante-mortem clots.

A report, by Dr. Hicks, on the microscopical appearances of Mr. Wells's specimen was read.

Dr. Hicks then exhibited the Uterus of a woman whom he had a week before delivered by the Cæsarian section. The body of the uterus contained some large masses of fibroid, especially near the fundus, from which one about 1½ inch in diameter was pendulous into the peritoneal cavity. There was one diverging at right angles from the left side of the cervix, about 6 inches long and nearly 4 inches in diameter when removed. This had occupied the brim, and was firmly attached to the pelvic walls, pushing the cervix uteri over to the right side, leaving only an opening large enough to permit the fœtal arm to protrude, and one finger to pass by it; excepting for this opening the whole brim was completely shut up. It was very hard. As it was impossible to deliver by the natural passages, Dr. Hicks performed Cæsarian section, aided by Drs. Bush, Shears, and Frodsham. The principal difficulty arose from hæmorrhage, a very large sinus having been divided which bled so profusely as to require a suture to be passed beneath it on either side. The seat of the placenta also bled inordinately, requiring the use of liq. ferri perchloridi. The sutures which compressed the sinus were carried through the parietes, whereby both were brought into contact, thus preventing any escape of the uterine contents into the peritoneum. No further bleeding took place. There had been much vomiting during pregnancy, and this continued next day, but on the second day it much diminished; the third day it was moderate; the beginning of the fourth day she sank from peritonitis. The child was born alive, but soon died. Chloroform was administered. The patient had been in slow labour some time, and the amnial fluid had been draining away probably for weeks.

Mr. Curgenven exhibited a genealogical chart, illustrating the extreme hereditary tendency which existed in a family with which he was acquainted to the production of twins.

Dr. Meadows related a case of Procidentia Uteri, with considerable *allongement* of the cervix, which occurred in a young unmarried woman, 19 years of age, and in whom he performed the operation of amputation of the cervix. The procidentia had existed for about a year, and came on as the result of lifting heavy weights. Various means were tried to keep the uterus in its proper position, but without success, the failure being due partly to the elongation of the uterus and partly to the fact that there was little or no perineum to support the organ. Finally, it was decided to amputate a part of the cervix, which was done with the single wire écraseur. Rather more than the usual amount of pain was experienced, and there was a short but somewhat smart attack of febrile disturbance after the operation, which lasted for about two days. The next day it was observed that the patient could not retain her urine, and on making an examination a few days after it was found that a portion of the bladder had been removed with the cervix. On examining the specimen it was then discovered that not only had this occurred, but that a portion of the peritoneum from Douglas's pouch has also been removed, so that, in fact, the peritoneal cavity had been laid open. Strange to say, the symptoms resulting from the latter occurrence were exceedingly slight, and only lasted for a day or two. A few weeks afterwards Dr. Meadows closed the opening in the bladder, which was a large one, and the patient recovered without any further bad symptoms. Dr. Meadows brought this case before the Society as a warning to others, and as illustrating one of the dangers of this operation, which, he stated, was not noticed in any work on uterine Surgery, except that of Dr. Marion Sims, who had himself met with a similar accident, and who also referred to another case which occurred in the practice of an eminent accoucheur in New York.

Mr. Spencer Wells said that a chain or wire might be properly applied; but when it was tightened, lax tissues beyond the part first constricted might be drawn within its grasp, if this was not prevented by pins passed beyond the site of constriction or by some kind of shield. Possibly the accident described by Dr. Meadows so honourably and usefully might be so explained.

Dr. Braxton Hicks considered the Society should be proud to contain a Fellow so candid. He had himself, in the removal of a malignant cervix, invaded the posterior pouch of the peritoneum; but the case did well. He thought the accident could always be avoided by pushing up the uterus as high as possible. If no prolongation of the cervix remained, he considered it needless to operate. If any great length remained, then it could be removed without danger of including either bladder or peritoneum.

Dr. Rogers eulogised the courage and honourable spirit which had induced Dr. Meadows to bring before the Society the history of this accident. He (Dr. Rogers) could not think that when once the wire was fixed around the cervix any tissue that had not been previously within its circlet could be drawn in during the operation and cut away. A careful exploration by the sound in the bladder would have shown how low down on the cervix the bladder was attached, and then this unfortunate accident would have been prevented.

Dr. Protheroe Smith, whilst expressing his admiration of the candour of his colleague in bringing this case before the Society, would remark, what all who were in the habit of performing this operation must have noticed, that the resistance of the tissues to the action of the instrument was very considerable. And this resistance he believed chiefly to arise from the mucous membrane and its connecting tissue. He would therefore advocate the plan which he had adopted on several occasions of cutting through the mucous membrane before using the écraseur. In this way, too, there was less risk of drawing adjacent parts within the grasp of the wire. He believed that this plan had been also usefully adopted in operating on hæmorrhoids.

Dr. Gervis could hardly assent to Dr. Protheroe Smith's view that the mucous membrane offered the chief obstacle to amputation of the cervix. In cases in which he (Dr. Gervis) had miscalculated the density of the cervix, and used a wire or rope of insufficient strength, it had happened that before the operation was complete the wire had snapped; but in these cases the mucous membrane had always been cut through, and the obstacle which had proved too great for the wire had been the compressed inner tissue of the cervix itself, and the same held good in cases of removal of large polypi.

Dr. Rogers wished to remark, on the suggestion of dissecting up the bladder from the cervix before the wire was applied, that he (Dr. Rogers) had performed this dissection on the dead body, and found the difficulties and danger from hæmorrhage would be so great that he had not ventured to perform it on the living subject.

Dr. Protheroe Smith, in reply to Dr. Gervis, could but say that his experience led him to the opposite conclusion, and that he had observed that the mucous membrane of the cervix was that which was most resistent and tough. In reply to Dr. Rogers, he begged to state that he did not dissect up the mucous membrane from its connexion with the bladder; he simply cut through the membrane around the cervix, about an inch above the os.

Dr. Grailly Hewitt read a paper on Peritoneal Adhesions of the Gravid Uterus as a cause of Post-partum Hæmorrhage.

In this paper the author pointed out an occasional cause of retention of the placenta, and consequent liability to post-partum hæmorrhage arising from adhesions between the upper part of the gravid uterus and the adjacent parts, whereby the uterus is prevented from descending in the proper manner after the expulsion of the child, and mechanically held in a distended condition. It was shown how such a state of things must render retention of the placenta and hæmorrhage very liable to occur. This cause of difficulty had not, so far as the author was aware, received attention by obstetric authors. The proof of the connexion between these adhesions and the accident in question was given by a case which he had observed a few years since. The patient had been delivered of twins, the placenta was retained, and a most profuse bleeding had occurred. The placenta was removed by the hand, the fundus uteri lying very high up in the abdomen. Seven days later death occurred from gradual exhaustion, there having been a little secondary hæmorrhage. The examination post mortem showed firm tough broken-off adhesions at the top and back of the uterus, giving it quite a shaggy aspect. The ends of these string-like bands hung freely, and were two to three inches long. It was evident that the uterus had been adherent superiorly by these adhesions, and that they had been broken through when the uterus was finally made to descend. A drawing of the uterus made at the time was exhibited. Next the author related another case where, after delivery, retention occurred, and the placenta was found enclosed in the fundus of the uterus at a very unusual height in the abdomen. In this case also a very violent hæmorrhage occurred, but after the placenta had been extracted. Lastly a case was related where adhesions appeared to have been present tying over and obstructing the bowel, and causing such extreme pain at the end of the eighth month that the question of inducing labour had to be considered. The labour set in in a few hours, the pain having been increasing. The subsequent events appeared to bear out the opinion as to the nature of the case just expressed. The author finally expressed the belief that further inquiry would prove the connexion now pointed out between uterine adhesions and post-partum accidents to be one not perhaps infrequently existing, and its practical importance could scarcely be overrated.

Dr. Gervis was hardly prepared as yet to accept fibrinous bands of no greater strength than those attached to the specimen exhibited as sufficient to prevent due uterine contraction unless there were coexistent uterine inertia. Adhesions of a nature to check uterine contraction must almost of necessity have been the result of peritonitis occurring during the progress of gestation, and he would like to know if there were any evidence of such peritonitis having occurred during pregnancy in the cases cited. He had recently attended in her confinement a lady who had been the subject of pelvic cellulitis and abscess of a chronic character, and in whose confinements since the first occurrence of the cellulitis there had on each occasion been much anxiety from post-partum hæmorrhage. In her last confinement this danger was again apprehended, and it did, in fact, occur; and in this case he had certainly at the time looked upon it as arising from inertia uteri, due to the general depression of strength brought about by her long-continued sufferings, but, viewed in the light of Dr. Hewitt's suggestive paper, it might well be that one element in these repeated post-partum hæmorrhages was the existence of adhesions due to the pelvic cellulitis. He would like to ask the experience of others in similar cases.

Dr. Cleveland had been partly anticipated in the remarks made by Dr. Gervis. He could not conceive how adhesions formed during pregnancy could be of such strength and firmness as not to be separated when the uterus contracted after the birth of the child. In the first case related by the author the uterus, as usual, recovered its contractile power, and followed the hand on withdrawal to its natural size and position. Although the paper was of much interest, further evidence was, he thought, required before adhesions could be regarded as an efficient cause of retained placenta or post-partum hæmorrhage by mechanically preventing uterine contraction.

Dr. Rogers thought that adhesions to the bowels would not prevent uterine contraction, but that such adhesions, if high up in the abdominal cavity, might have that effect.

Dr. Holman thought it was a matter of experience that in cases where there had been peritonitis or pelvic cellulitis, there was increased tendency to post-partum hæmorrhage. Many cases were met with in which the uterus did not contract, and in which the hand had to be left within it for some time after the separation of the placenta. In such cases it was quite possible that adhesions might assist the inertia in the production of hæmorrhage, and if they were strong they would not be broken down until the uterus was pressed down by the hand externally. As to the case of irregular contraction, it had long been the practice, he thought, to apply one hand over the uterus externally, whilst the other was employed in delivering the placenta, and thus a perfect knowledge was obtained whether firm regular contraction had taken place and the uterus fairly sunk in the pelvis.

Dr. Wynn Williams observed that he could not agree with the President that adhesions were a frequent cause of hæmorrhage after parturition; for, if it were so, there should surely be numerous instances where such adhesions were demonstrated by post-mortem examination, as peritonitis during pregnancy was not at all uncommon. In the first case, the very fact of the adhesions having been ruptured either by the contraction of the uterus, or by the manual pressure exerted on the uterus, proved to his mind that they could have been little or no impediment to the uterine contraction. He had recently attended in her confinement a patient who had been operated upon by Mr. Wells for an ovarian tumour. Partly from want of power, and partly from the uterus being fixed by the pedicle of the removed ovary, he had had to complete the delivery by forceps. The same causes rendered it necessary to extract manually the placenta, and, although subsequently the uterus was got to contract, it was impossible to press it down into the pelvis. In this case, however, there was scarcely any hæmorrhage. He wished also to call attention to the great advantage to be derived in cases of post-partum hæmorrhage from the introduction into the uterus of a sponge saturated with tincture of perchloride of iron.

Mr. Spencer Wells said that in Dr. Williams's case the tumour had been enormous, and distension of the abdominal muscles might account for feeble expulsive power. He had upwards of twenty cases of childbirth noted after his ovariotomy cases, and in none had uterine adhesions led to any unusual difficulty. But such adhesions certainly might have such an effect, for Sir J. Simpson had recorded a case where the pedicle of an adherent fibroid had been ruptured by the uterine contractions, and he (Mr. Wells) had seen a patient where fatal strangulation of adherent intestine had been so produced after labour.

Dr. Rogers disputed the relevancy of Dr. Williams's case. It was simply one of adhesion of one of the broad ligaments of an unimpregnated womb low down to the abdominal wall. Such adhesion did not, of course, prevent the enlargement of the uterus when impregnated, nor could it prevent the subsequent contraction on labour coming on.

Mr. Spaull related the particulars of a case of severe post-partum hæmorrhage successfully overcome in a patient who during her pregnancy had had several attacks of peritonitis, and in whom consequently he thought it very likely that adhesions had taken place.

The President observed, in reply, that adhesions such as those described co-existing with a feeble condition of uterus would present a combination of circumstances highly favourable to hæmorrhage. It was difficult enough sometimes to get the uterus to contract at all, but if drawn upwards or restrained by tough adhesions the difficulty would be greatly increased.

The President exhibited a form of head suture for perineal operations which he had used, and which was less likely to lead to sloughing of the enclosed parts than the quill suture ordinarily employed. Round vulcanite beads, $\frac{1}{8}$ in in diameter, and perforated for the wire, constituted the suture.

Dr. Meadows bore testimony to their value.

Dr. Routh thought they might in practice prove disadvantageous, as in chronic cases of laceration he liked to see a little sloughing in the trails of the deep sutures, as it made the new perineal cushion more firm and durable and thicker.

The Ladies' Sanitary Association have issued an appeal for the expenses of their "park parties." They have sent out into the parks, for fresh air and healthful recreation, during the last eight seasons, two thousand one hundred and nineteen parties of the poorest children in London, from the ragged schools, mews, etc., providing toys, music, slices of bread, teas, dinners, and even clothes, where the need was great, paying guides, who are generally the masters and mistresses of the schools, to conduct the children to the parks, and keep them there three or four hours, twice in each week, during the summer months, in each year. Thus one hundred and fifty-two thousand seven hundred and ten poor children have been strengthened, instructed, and made happier.

NEW INVENTIONS.

L. A. LOEWENTHAL AND CO.'S CHOCOLATINE.

(Manufactured at Breslau; London Depôt, 70, Fenchurch-street, London, E.C.)

THE use of cacao must be largely on the increase amongst the English, if we may judge by the increasing number of preparations that are brought into the market; and we are sure that the more it is known and understood the greater its use will be. Of its various preparations, some are pre-eminently nutritive with their rich emulsion of oil; some are light, bitterish, subastringent, and aromatic, and bear more resemblance to the grateful infusion of tea. Much depends, in the choice of a preparation, on whether it is required as food or as a refreshing drink. We would advise our readers always to prefer one which aims at purity without admixture, and which consequently cannot be of the lowest price. Such appears to be the character of MM. Löwenthal's preparation before us. It only requires to be mixed with boiling water, and then is of an attractive rich brown colour, clean taste without bitterness, and sufficient fulness of body to be satisfying to the stomach. There is just a *soupçon* of the chocolate oil, but nothing rich or cloying. Many cacao drinkers are dissatisfied unless the liquid they get is as thick as peasoup. Now, we hold that this is wasteful and unnecessary in most cases; but if people will have it so, let them use pure cacao enough to obtain the desired result, if they choose to go to the expense; if not, instead of absurdly buying cheap cocoa, in which a high price is paid for the starch and sugar mixed with it, let them make a thick sweet gruel of arrowroot or other starch and sugar, and flavour it with genuine cacao in smaller quantity. This is cheaper and more satisfactory. We have often recommended barley gruel with cacao, for the double purpose of appeasing the stomach and pleasing the palate. Children would be pleased to have their farinaceous puddings sometimes flavoured with cacao.

NEW BOOKS, WITH SHORT CRITIQUES.

An Introduction to the Classification of Animals. By T. H. Huxley, LL.D., F.R.S., Professor of Natural History in the Royal School of Mines, and of Comparative Anatomy and Physiology to the Royal College of Surgeons of England. London: John Churchill and Sons. Pp. 147.

⁂ This is not exactly a new book, but rather a portion of the Lectures on the Elements of Comparative Anatomy Professor Huxley published in 1864. Never having had leisure to prepare a new edition of this work, which has been long out of print, and it having been urged upon him that this portion was of great use to the students of comparative anatomy, it has been mostly reprinted, and appears in its present form. We regret that Professor Huxley has not had time to give us a new edition of the work, but, as a little is better than nothing, we accept the instalment, and tell the student he can have no better text-book to begin with.

The Bahamas: A Sketch. By Surgeon-Major Bacot. London: Longmans. Pp. 112.

⁂ Mr. Bacot gives a very interesting account of these tiny and sandy islands, which are now but little known to most people who have not special duties to call them thither, although during the American civil war the chief town, Nassau, was the head-quarters of the blockade-runners whereby the Southern Army received their foreign supplies. Mr. Bacot has consulted various authorities, and contributed the fruits of his own experience, the whole being collected into seven chapters, dealing respectively with introductory matter, the aborigines, the adventurers, the pirates, the colonists, the climate, and the census. Many of the particulars are most interesting.

Report on Pilgrimage to Juggernauth in 1868. By David B. Smith, M.D., Sanitary Commissioner for Bengal. Calcutta: G. M. Lewis.

⁂ The district of Orissa is but too well known to us in this country from the terrible famines with which it has been devastated, and by the shrines to which pilgrims from all parts of India resort. It has been conclusively shown, and by none better than Dr. Murray in his report on the great Hurdwar fair, that these meetings are the means, certainly one of the chief, whereby cholera is propagated throughout India. It was with a view to the prevention of this that Dr. Smith undertook his journey into Orissa, and, like most others, he concludes that, as it is not possible to prevent these pilgrimages, every precaution should be taken to prevent the dissemination of disease by their means. The work is of very great interest to sanitarians both in this country and in India, Dr. Smith's notes on cholera being especially worthy of notice.

On the Identity of the White Corpuscles of the Blood with the Salivary, Pus, and Mucous Corpuscles. By Joseph G. Richardson, M.D., formerly Resident Physician at the Pennsylvania Hospital. (From the *Pennsylvania Hospital Reports.*)

⁂ When using a high power in examining some specimens of urine, Dr. Richardson noticed certain bodies, inside corpuscles resembling those of pus in a state of rapid motion. The corpuscles, in fact, exactly resembled the salivary corpuscles. On diluting other specimens of pus with water, so as to bring the specific gravity to about that of saliva, similar phenomena were observed. Subsequently, by adding water to blood, the white corpuscles were seen to enlarge, to contain these same rotating bodies, and finally to burst, causing their dispersion. From these facts Dr. Richardson concludes that the three sets of bodies are identical in their origin and structure.

On Neurotic Cutaneous Diseases, including Erythema. By Henry Samuel Purdon, M.D., L.R.C.P.E., Physician to Belfast Hospital for Skin Diseases, etc. London: H. K. Lewis. Pp. 116.

⁂ The affections described by Dr. Purdon are erythema, herpes, pemphigus, urticaria, prurigo, dermatalgia, and cutaneous anæsthesia; these he esteems nervous affections. Herpes and pemphigus he holds to be the connecting links between erythema and urticaria. Now, of all the pathologies which are or have been popular, the most dangerous, as being the most delusive, has been the neuro-pathology. We are neither humoralists nor solidists, but we cannot conceal from ourselves that a belief in nerve influence, especially as acting through what is called the vaso-motor system, has led more men astray than either of the former. Now, if by erythema we mean mere redness, that is no doubt produced by the accumulation of blood in a part, in all probability accompanied by dilatation of the blood vessels merely; but we are not inclined to limit the causation of this to nerve influence alone. If by erythema we are to understand reddening produced by nerve influence and nothing else, that is quite another matter, and the sooner it is so understood the better.

Klinische Beobachtungen zur Pathologie der Geburt. Von Dr. F. Winckel, Professor der Gynaecologie an der Universität Rostock.

Clinical Researches on Puerperal Pathology. By Dr. F. Winckel, Professor of Gynæcology in the University of Rostock. Rostock: C. B. Leopold. Pp. 269.

⁂ Dr. Winckel's important observations are chiefly directed to the subject of puerperal temperatures under certain normal and abnormal conditions. The latter are chiefly face presentations, twins, navel presentations, obstructions on the part of the mother, and so on. Another subject he discusses is the relation of the fœtal pulse to the fever of the mother, a question of great interest to both physiologists, pathologists, and accoucheurs. Writers and readers on the diseases of the puerperal state will do well to consult this important and concise contribution to obstetrics.

Anatomie et Physiologie du Poumon considéré comme Organe de Sécrétion. Par le Dr. Fort, ancien Interne des Hôpitaux, Professeur Libre d'Anatomie et de Physiologie à l'Ecole Pratique, etc.

The Anatomy and Physiology of the Lung considered as an Organ of Secretion. By Dr. Fort, formerly Hospital *Interne*, Free Professor of Anatomy and Physiology at the Practical School. Paris: Delahaye. Pp. 106.

⁂ Dr. Fort thinks that the lung has not been sufficiently considered as an organ of secretion. This may or may not be true, but its function and its structure have certainly not been neglected from this point of view as far as we on this side the water are concerned. We used to be taught that the lung was an alveolar gland, just as the kidney was called a tubular gland. There can be no doubt, however, of the merit of Dr. Fort's production. His object is clear before him from beginning to end, and he works his subject well out. The illustrations are numerous and good.

A Manual of Practical Hygiene. By Edmund A. Parkes, M.D., F.R.S., Professor of Military Hygiene in the Army Medical School, etc., etc. Third edition. London: John Churchill and Sons. Pp. 649.

⁂ We suppose that every one is now aware of the unique excellences of Dr. Parkes's work, so that we may spare ourselves the trouble of further praising it. We need only say that Dr. Parkes has been at pains to render the new edition of his work worthy of himself. Many chapters have been recast or rewritten, and new illustrations have superseded old ones, or been added to the collection.

The High Death-rate: An Answer to the Question, What is to be done? Being the substance of a paper read before the Manchester and Salford Sanitary Association March 19, 1869. By J. Conyers Morrell. Manchester: Powlson. 1869.

⁂ Mr. Morrell's answer is—Keep your rain-water away from the sewage, and deodorise the latter with sifted ashes and dry earth.

MEDICAL NEWS.

UNIVERSITY OF ST. ANDREWS.—The following gentlemen having passed their examinations obtained the degree of Doctor of Medicine on April 23 last:—

Blakeley, Thomas, Bermondsey, Surrey.
Clarke, J. Lockhart, Belgrave, London.
Craster, Thomas W., Middlesborough-on-Tees.
Fauchie, Martin, Penicuik, Edinburgh.
Jones, Edwin, Blackfriars-road, London.
Llewellyn, Llewellyn, Whitechapel-road, London.
McMillan, Thomas Law, Victoria, Australia.
Neate, Charles, Herefordshire.
Swete, E. Horatio W., Weston-super-Mare.
Welby, Erasmus, Newark-on-Trent.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary written and *viva voce* examinations on the 22nd, 25th, and 26th inst. for the Fellowship of the College, were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and when eligible will be admitted to the final Professional examination for this qualification:—

Beck, Marcus, diploma of Membership dated July 26, 1865, of University College.
Betts, Arthur R., of Guy's Hospital.
Bradley, Samuel M., June 10, 1862, of the Manchester School.
Branfoot, Arthur M., of Guy's Hospital.
Byam, Samuel H., of St. George's Hospital.
Carter, A. H., of University College.
Coates, Matthew, January 14, 1859, of Bristol and Paris.
Cumberbatch, A. E., of St. Bartholomew's Hospital.
Dixon, Henry E., of Guy's Hospital.
Fuller, C. C., February 6, 1857, of University College.
Hamerton, W. H., of Guy's Hospital.
Harris, Michael, of Guy's Hospital.
Herman, George E., of the London Hospital.

Ingoldby, J. T., of Guy's Hospital.
Jones, G. T., July 23, 1849, of University College.
Jones, Thomas, of Liverpool and Guy's Hospital.
Kennedy, Edward, May 4, 1869, of the Manchester School.
Manley, F. C., January 23, 1866, of Guy's Hospital.
Maybury, A. C., April 27, 1866, of St. Thomas's Hospital.
Michell, Thomas, December 6, 1859, of the London Hospital.
M'Kellar, A. O., April 24, 1867, of the Manchester School.
Mummery, John H., of University College.
Paget, W. S., of Liverpool.
Perkins, Charles E. S., of Guy's Hospital.
Rand, John, March 12, 1857, of Guy's Hospital.
Roberts, A. C., of Guy's Hospital.
Robson, F. A. H., June 27, 1856, of University College.
Rope, H. J., of King's College.
Rowland, G. Le Hunt, of King's College.
Skrimshire, F. W., of King's College.
Smith, H. A., of St. Bartholomew's Hospital.
Tay, Waren, April 25, 1866, of the London Hospital.
Tweedy, John, of University College.
Walker, G. E., April 23, 1863, of University College.
Waller, Walter A. E., of Guy's Hospital.
Warner, Francis, of King's College.
White, R. W., of King's College.
Wigg, H. C., January 19, 1869, of University College.
Winkfield, Alfred, December 2, 1859, of St. Bartholomew's Hospital.
Woodcock, John R., July 28, 1864, of the Manchester School.
Wright, R. T., April 27, 1866, of King's College and Edinburgh.

It is stated that seven out of the 51 candidates admitted to examination failed to satisfy the Court, and were referred to their anatomical studies for a period of six months.

Licentiates in Midwifery.—The following Members of the Royal College of Surgeons, having undergone the necessary examination, were admitted Licentiates in Midwifery at a meeting of the Board on the 26th inst.:—

Barratt, Arthur N., L.F.P. and S. Glas., Brighton (not a Member).
Bulmer, Thomas S., M.D. Victoria College, Toronto, Hackney (not a Member).
Hubbard, Thomas W., St. Lawrence, near Ramsgate, diploma of Membership dated January 19, 1869.
Hull, George A., Warwick-gardens, W., January 20, 1869.
Robinson, Charles A., Kingston, Jamaica, May 25, 1867.
Roberts, Owen, Silchester-road, W., May 6, 1868.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, May 20, 1869:—

Anderton, James Parkinson, Halliwell, near Bolton.
Hardyman, Charles Edward, Bracondale, Norwich.
Kelsey, William, Monkgate, York.
Le Tall, Frederick Tindall, Woodhouse, near Sheffield.
Mills, Daniel Ernest, Nottingham.
Webster, William, King's Lynn.

As an Assistant in compounding and dispensing medicines:—

Iredale, George, Leeds.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

GREEN, T. HENLY, M.D. Lond., Lecturer on Pathology, Charing-cross Hospital Medical School—Assistant-Physician to Charing-cross Hospital.

JONES, Mr. E. S., L.R.C.S. and L.R.C.P. Edin., late of Coedmadoc, Wales—House-Surgeon and Secretary to the Denbighshire Infirmary.

NAVAL APPOINTMENTS.

ADMIRALTY.—G. Duncan, M.D., has been promoted to the rank of Staff Surgeon in her Majesty's fleet, with seniority of May 11; Dr. Alexander Fisher, Surgeon to the *Endymion*; Dr. James Dunlop, Acting Assistant-Surgeon to the *Endymion*; James Tremble, Assistant-Surgeon to the *Impregnable*.

BIRTHS.

ASHDOWN.—On May 22, the wife of George Ashdown, Surgeon, Northampton, of a son.

CARPENTER.—On May 15, at 1, Lambeth-terrace, S.E., the wife of J. W. Carpenter, M.D., of a son.

CLAREMONT.—On May 22, at Millbrook-house, Hampstead-road, the wife of C. C. Claremont, M.R.C.S., of a son.

GOULDSBURY.—On May 22, at St. Stephen's-road, Westbourne-park, the wife of V. Skipton Goulsbury, M.D., Staff Assistant-Surgeon, of a daughter.

GRIBBIN.—On May 18, at Great Edward-street, Belfast, the wife of E. D. Gribbin, L.F.P.S. and L.S.A., of a son.

KIDD.—On May 20, the wife of Archibald Napier Kidd, M.D., F.R.C.S.I., Armagh, of a daughter.

LITTLEJOHN.—On May 22, at 24, Royal-circus, Edinburgh, the wife of H. D. Littlejohn, M.D., of a daughter.

PEARSE.—On May 21, at Botesdale, the wife of Arthur Pearse, M.D., of a daughter.

ROGERS.—On May 20, at Rainhill, the wife of Dr. Rogers, of a son.

SECCOMBE.—On May 22, at Terrington St. Clement, Norfolk, the wife of John T. Seccombe, M.D., of a son.

MARRIAGES.

BLAKER—SMITH.—On May 19, at the parish church, Brighton, by the Rev. Thomas Cooke, assisted by the Rev. A. P. Perfect, Nathaniel Paine Blaker, 29, Old Steyne, Brighton, Surgeon, to Fanny Jane, second daughter of John Oliver Smith, Esq., Richmond-villa, Brighton.

COCHRANE—LITTLE.—On May 20, at the parish church of Clonleigh, John Cochrane, Esq., eldest son of James Cochrane, Esq., Croghan House, Lifford, to Martha, eldest daughter of Robert Little, M.B., T.C.D., Surgeon to the County Donegal Infirmary, Combermere, Lifford.

GRAHAM—CHASE.—On May 25, at Holywell Church, Oxford, Arthur R. Graham, M.A., M.B., of Weybridge, late of Peterhouse, Cambridge, to Eleanor Parkhurst Chase, youngest daughter of the late John Woodford Chase, Esq., formerly Captain in H.M.'s 70th Regiment of Foot.

MAY—DUNN.—On March 11, at St. John's Church, Ballan, Australia, the Rev. Henry May, M.A., incumbent of Trinity Church, Yarkandandah, only son of the late Henry May, Esq., of Mapledurham, Oxfordshire, to Helena Jane, third daughter of George Dunn, M.D., of Doncaster.

DEATHS.

BULLAR, JOSEPH, M.D., at Basset Wood, near Southampton, on May 18, in the 61st year of his age.

CALLAWAY, THOMAS, F.R.C.S., late Assistant-Surgeon to Guy's Hospital, at Sydney, New South Wales, where he had gone for the benefit of his health, on February 28, aged 47.

DUNBAR, CUTHBERT WALTER, youngest son of Dr. J. A. Dunbar, Inspector-General of Hospitals, Bengal Army, retired, at 3, Spring-grove-villas, Cheltenham, on May 21, in his 12th year.

FLUDER, CHARLES JOHN, Surgeon, eldest son of the late Charles Fluder, Surgeon, Lymington, Hants, at Cromer, Norfolk, on May 17.

GIBSON, WILLIAM, M.R.C.S., L.S.A., at his residence, Walton, Leicestershire, on May 18, aged 58.

HORNER, JONAH, M.D. Edin., brother of the late Fewster Robert Horner, M.D., Hull, at his residence, Redcar, Yorkshire, on May 20, aged 70.

LEWIS, ROBERT, Esq., of Merton College, only son of James Lewis, M.D., of Maesteg, Glamorganshire, at Oxford, on May 17.

MILES, Dr. THOMAS, late of Greenwich, at the residence of his father, Stamborough House, Halwell, Devon, after a long and painful illness, on May 20, aged 28.

MOORE, EDWARD, M.D., L.R.C.P. Lond., at 15, Charles-terrace, Victoria-park, on May 22, aged 64.

SECCOMBE, ELIZABETH MARGARET, the beloved wife of John T. Seccombe, M.D., at Terrington St. Clement, Norfolk, of pulmonary consumption, on May 23, aged 26.

WEAVER, JOHN DAVIES, Consulting Surgeon to the Chester Infirmary, at Christleton-road, Chester, on May 23, aged 49.

WEEDING, Dr. SAMUEL, late of Mount House, Ryde, Isle of Wight, at Clarendon Lodge, Notting-hill, on May 23, aged 76.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BURTON-ON-TRENT.—House-Surgeon for an Infirmary just completed. Candidates must be duly qualified. Applications and testimonials to the Hon. Sec., J. C. Grinling, Esq., Burton-on-Trent, on or before June 15.

DENTAL HOSPITAL OF LONDON, 32, SOHO-SQUARE.—Dental Surgeon; must be a Licentiate in Dental Surgery of the Royal College of Surgeons of England. Applications and testimonials to the Hon. Secretary on or before June 8.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Resident Clinical Assistant; must have a Medical qualification. Applications and testimonials to the Secretary, at the Hospital, Brompton, S.W., on or before June 5.

LANCASTER INFIRMARY.—House-Surgeon; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to the President, at the Institution, on or before June 1. Election on June 8.

LUNEDALE UNION.—Medical Officers required for three districts of this Union. Candidates must be legally qualified. Applications and testimonials to John Hoggarth, Esq., Clerk, Ullswater-road, Lancaster, on or before May 29, from whom further information can be obtained.

MIDDLESEX HOSPITAL.—Physician's Assistant; must hold some qualification, and be prepared to become a Medical pupil of the Hospital. Applications and testimonials to the Secretary, on or before the 28th inst. Candidates to attend the Medical Committee for examination on the 29th inst. at 2 o'clock p.m.

NEWCASTLE-UPON-TYNE INFIRMARY.—Senior House-Surgeon and Junior House-Surgeon. The Senior House-Surgeon must have both Medical and Surgical qualifications. The Junior House-Surgeon must be duly registered and have one qualification. Applications and testimonials to the Secretary on or before June 22. Election on July 1.

NORTH RIDING INFIRMARY, MIDDLESBOROUGH-ON-TEES.—House-Surgeon; must be unmarried, and be F. or M.R.C.S., and possess a Medical qualification recognised by the Medical Council. Applications and testimonials to the Secretary on or before June 1. Election on July 1.

NORTH RIDING ASYLUM, CLIFTON, YORK.—Assistant Medical Officer. Applications and testimonials to Dr. Christie, Medical Superintendent.

ST. GEORGE, HANOVER-SQUARE, DISPENSARY, 57, MOUNT-STREET.—Physician; must be M.R.C.P.L. Applications and testimonials to the Hon. Sec., on or before June 28. The election will take place on the next day at 5 o'clock p.m., when personal attendance will be required.

ST. MARY'S HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, MANCHESTER.—Resident Medical and Surgical Officer: must be M.R.C.S. and L.S.A., or M.R.C.P. Applications and testimonials to the Secretary, 41, John Dalton-street, Manchester, on or before June 10.

ST. PANCRAS, MIDDLESEX.—Medical Officer for the Workhouse Infirmary. Candidates must be registered and have the qualifications prescribed by the Poor-law Board, and be unmarried. Applications and testimonials to James Moore, Clerk's-office, Vestry-hall, St. Pancras, on or before the 31st inst. Election on June 3.

West Sussex, East Hants, and Chichester Infirmary and Dispensary. House-Surgeon and Secretary; must be M.R.C.S.E. and L.S.A., or L.R.C.P.L., and be registered. Applications and testimonials to the House-Surgeon and Secretary on or before June 1. Election on the 17th.

Worcester General Infirmary.—Resident House-Surgeon's Assistant and Dispenser; must be legally qualified. Applications and testimonials to the Secretary on or before June 5.

York County Hospital.—Non-resident Dispenser, to prepare drugs and dispense medicines. Applications and testimonials to Robert Holtby, Sec., on or before May 31.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Hay Union.—The Radnorshire District is vacant; area 16,264; population 3965; salary £45 per annum.

Newport (Salop) Union.—Mr. John Green has resigned the Fourth District; area 6136; population 3747; salary £35 per annum.

APPOINTMENTS.

Bangor and Beaumaris Union.—Lewis Jones, L.R.C.P. Edin., L.R.C.S. Edin., to the Second Anglesey District.

King's Norton Union.—George P. Dunn, M.R.C.S.E., L.S.A., to the Northfield District.

Ongar Union.—Joseph Foster, L.F.P. and S. Glas., L.S.A., to the Second District.

Uppingham Union.—Augustus D. C. Wulford, M.R.C.S.E., L.S.A., to the Uppingham District and the Workhouse.

The General Medical Council.—The English branch of the Council will meet on Friday, June 4. The General Council will hold its first meeting on Thursday, July 1. In order to expedite the proceedings of the General Council, and save expense, two meetings of the Executive Committee will be held on June 29 and 30. Various matters of importance will be discussed. The uncertain and unsatisfactory character of the Medical Act will come before the meeting, but it is doubtful whether any action will be taken upon it this session. The Council is expected to have a very short sitting.

Royal College of Surgeons.—The course of lectures for the present year will be resumed on Wednesday next, June 2, by Professor F. Le Gros Clark, who will deliver six lectures on the Principles of Surgical Diagnosis, especially in relation to Shock and Visceral Lesions, in continuation of his subject of last year. Mr. Hulke will also deliver three lectures on the Minute Anatomy of the Eye.

Surgical Examinations.—The half-yearly examination for the Fellowship of the Royal College of Surgeons of England, which was commenced on Saturday last and continued throughout the present week, has been characterised by extraordinary leniency. The readers of the *Medical Times and Gazette*, especially those who have gone through the ordeal, can judge whether the following questions submitted on the first day are not far below the standard heretofore required of candidates for this honourable distinction. It must be borne in mind that answers to only four out of the six questions might be sent in:—1. State the position which the heart and the arch of the aorta have in reference to the walls of the thorax and to the lung. 2. Describe the ossification of a long bone (the femur) from the earliest or primitive condition to its completion. 3. The process of the digestion of food consisting of bread and meat (lean and fat). State the changes which take place; and explain how they are effected. 4. State the views generally entertained respecting the mode or channels by which, and the direction in which, the sensory and motor impulses are respectively conveyed through the spinal cord to and from the brain. 5. Mention the structure common to secreting glands generally; and describe the modification the structure undergoes in different classes of glands. 6. Describe the physiological phenomena attending death from asphyxia, the order in which they occur, and the condition of the internal organs after death.

The Queen has contributed £100 towards the building fund of the National Sanatorium for Consumption and Diseases of the Chest, Bournemouth.

Mr. Francis Mason, F.R.C.S., has been appointed Lecturer on Anatomy and Teacher of Operative Surgery at the Westminister Hospital.

We are glad to hear that Mr. Startin has sufficiently recovered from the operation he has lately undergone to be able to resume his Professional duties.

Death from Aconite.—At Liverpool Martin Flannery, a herbalist, gave a woman some wolfsbane (aconite), to cure rheumatism, and ate a portion himself. Both were immediately taken ill; the woman was saved by the aid of an emetic, but the herbalist died.

Radcliffe Infirmary.—The governors of the Radcliffe Infirmary, Oxford, have decided upon providing accommodation in the Infirmary for sixteen fever cases.

The old students of King's College, London, propose to dine together at the Freemasons' Tavern on Friday, June 25, Professor W. A. Miller in the chair. Dr. Buzzard and Mr. Mason are the hon. secs.

Leeds Eye and Ear Infirmary.—The committee have postponed the appointment of a Surgeon, and have appointed a sub-committee to confer with the weekly board of the General Infirmary, with a view to an amalgamation.

The Ashbourne Board of Guardians have directed the relieving officer to take proceedings against all persons who have not had their children vaccinated, or who have not sent certificates to the registrars of births and deaths in conformity with the Vaccination Act, 1867.

Devonshire Hospital and Buxton Bath Charity.—The committee of management of the Devonshire Hospital, Buxton, gratefully acknowledge a bequest of £250, received during the past week from the executors of William Gibson, Esq., of Maul's Bank, Arbroath, who was for many years a kind friend and subscriber to the charity.

Deadly Nightshade.—A death from eating the root of a wild plant resembling a carrot is reported from the Isle of Man. The deceased was a miner. A few moments after eating the root he was seized with convulsions, and he died in the course of ten minutes. Two other men who tasted the root were made ill. The plant was no doubt *Atropa Belladonna*, although some of the papers state it to have been *Solanum Dulcamara*.

The Croydon Guardians and the Poor-law Board.—At the last meeting of the Board of Guardians, it was stated by one of them (Mr. Close) that two officers to act under the Vaccination Act had been appointed two months ago, but that the Poor-law Board had not sanctioned the appointments. Mr. Close therefore suggested that the Chairman should write to the Poor-law Board on the subject, and, if no notice was then taken, that the members for East Surrey should be requested to ask Mr. Goschen, in the House of Commons, why he had allowed the matter to remain so long unnoticed. The suggestion was immediately agreed to.

Disinfecting Establishments for Parishes.—At Wednesday's meeting of the St. Pancras Vestry, Dr. Stevenson, Medical Officer of Health, presented a report on the sanitary state of the parish, in which he says "the necessity which exists for the erection of a disinfecting establishment, where parishioners might have clothing, bedding, and other articles likely to harbour infected matters, disinfected, was urged upon the vestry by the late Dr. Hillier, Medical Officer of Health, and I can cordially re-echo all that he has said upon the subject. . . . The cost of such an establishment as one of those erected in Liverpool would, I doubt not, be soon saved to the parish by the saving of life that would be effected."

Remarkable Bequest to the General Hospital, Nottingham, by a Chelsea Pensioner.—Mr. Frederick Attenborough leaves to that institution the sum of £4209 consols. Mr. Attenborough had been an in-patient some fifty-three years since, and considered that to the skill and kindness shown to him on the occasion he owed his life; and to evince his gratitude he wished to leave to the Hospital all the savings of his many years. Mr. Attenborough, after leaving the Hospital as a patient, enlisted in the Third Dragoon Guards, and served in that regiment as a private for thirty-three years and six months. On his discharge, he was presented with a service of plate by the officers of the regiment as a mark of their approbation of his conduct and character. Since his discharge he has been living in Nottingham with a pension of 1s. 4½d. a day. The whole of this munificent legacy to the Hospital has been accumulated by careful saving during a period of fifty-three years.

Poor-law Medical Service.—*Lunesdale.*—The guardians of this newly-established Union, comprising twenty-three parishes, have divided it into three districts, and are about to appoint a Medical officer to each. *St. Pancras.*—Dr. Gibson, Medical officer of the Workhouse, has resigned his appointment in consequence of ill-health. The salary of the office has been £200 a year, with lodgings, rations, and washing, but the guardians have resolved to reduce the salary to £175. *Woolwich.*—The guardians approved of Dr. Burton, who had been nominated by Dr. W. H. Butler, Medical officer of the East Woolwich District, as his deputy. The plans for the new workhouse are being now forwarded to the Poor-law

Board for approval. *City of London Union.*—A reference was made to the out-relief committee of the non-residence of Mr. F. G. Brown in his district. *St. Luke's.*—The Poor-law Board have sanctioned the redistribution of Medical districts, the appointment of Medical officers, and the salaries to be paid.

THE VACCINATION ACT.—It will be remembered that Mr. Toulson, chemist, of Leeds, was recently fined 20s. and costs for neglecting to have his child vaccinated. He was again summoned last week under the 31st section, at the instance of the Board of Guardians, and their clerk, who appeared in support, asked for an order by the magistrates to cause the child to be vaccinated. The defendant's attorney contended that the jurisdiction of the magistrates was ended by the first conviction. They, however, thought otherwise, and made an order, but said that they would grant a "case" for the decision of a superior court, if requested. Two other cases were then heard: in one, an order was made for the child to be vaccinated; in the other a penalty of 1s. and costs was inflicted. The clerk to the guardians said that the board had no feeling against the defendants, and that, if the case for a superior court was proceeded with, they would arrange to have it heard in as inexpensive a manner as possible.

ANTHROPOLOGICAL SOCIETY OF LONDON.—At the meeting on the 18th inst., L. Owen Pike, M.A., V.P., in the chair, a paper, by Mr. Hodder Westropp, was read "On the Mythic Age," the aim of which was to adduce evidence of the intellectual unity of the human race from the universal prevalence of myths of similar—almost identical—character among early and uncivilised peoples in remote countries. The various myths, legends, fables, presented marked analogies among peoples, and they corresponded to the imaginative and youthful stage of the individual. They were rude attempts of uncivilised man to solve the unintelligible phenomena of nature. The early career of a nation was then traced by the author. In the early stage of his development the savage, like a child, extended his personality to all he saw; he invested the trees, the winds, the rocks, the rivers, with consciousness and will, and attributed life and intelligence to all nature. The sun, moon, stars, were beneficent deities; darkness, storms, thunder-clouds, and lightning, were his enemies. Those myths, due to ignorance of nature, were shown to have arisen independently in China, India, Egypt, Greece, Peru, Mexico, and Scandinavia. The argument was extended to later phases of man's development; and illustrations were drawn from the traditions and early histories of those countries. The philological argument was shown to be inadequate and unreliable, and illustrations were given in support of the author's view. The rise of ballad poetry in remote countries was sketched, its remarkable analogies and coincidences were pointed out, and the conclusion was that similar states of civilisation produced the counterpart of similar romance-narratives relating to persons whose existence was probably altogether fictitious. A paper by Peter Beveridge, Esq. (communicated by Sir Charles Nicholson, Bart., LL.D.), "On the Aboriginal Ovens of the Natives of Anstralia," was then read. These were described to be of a most elaborate description, indicating a high amount of culinary skill on the part of the natives.

SUCCESSFUL TREATMENT OF HYDROPHOBIA.—In a city, such as Joudpoor, where innumerable dogs run wild, hungry and diseased, among a crowded population, or otherwise wallow with children in the dirt of the public street, hydrophobia must occur. I have seen three instances of hydrophobia at Joudpoor, and one of which I believe to be bastard or spurious hydrophobia, or, as it has been termed, cynophobia. Of the former one recovered, and two died. The case terminating successfully was that of a lad of 14, bitten some six weeks previously by a rabid dog. When seen he had been suffering from the usual symptoms upwards of twelve hours, and the dread of liquids, the spasms on the approach of water, the secretion of viscid mucus, and the consequent hawking and spitting, were exceedingly well marked. This case was treated in the same manner as a successful one under my care at the Sanatorium of Mount Aboo, a detailed statement of which is published in the *Transactions of the Bombay Medical and Physical Society* for 1860-61. The remedies used were cold affusion and the inhalation of chloroform alternately, together with vesication over both throat and spine by lunar caustic. In consequence of the repeated failure of all treatment, I considered I was justified in adopting this plan in the first instance, and the fact of the man (a European soldier) recovering has induced me to pursue the system since, notwithstanding several failures.—*Marwar, the Land of Death, by W. J. Moore, of the Political Agency, Joudpoor.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Hughlings-Jackson's letter (On Localisation) shall appear next week.

A review of Professor Hoffman's work on the Anatomy of Typhoid Fever is in the printers' hands.

S. D.—The third edition of Dr. L. Beale's work, "The Microscope in Medicine," is the last edition published.

Sanitas.—Frankham and Wilson, of 12, Wilson-street, Gray's-inn, London, make a good thermometer for sanitary purposes—that is, for telling the temperature of apartments, public rooms, etc. The frame of the thermometer is of white porcelain; the spirit in the tube is coloured black; and three black lines are drawn across the frame at 50°, 60°, and 70°. Thus the eye can tell at a reasonable distance whether the temperature be above or below the desired medium.

ON THE USE OF THE BULBOUS (?) STEEL SOUND FOR STRICTURE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your journal of April 24 there is a letter from Mr. Crompton, of Birmingham, on the use of the bulbous steel sound in stricture of the urethra. The instrument recommended by Mr. Crompton was first introduced by myself, only made in lead, about three years ago, and has been in daily use at St. Peter's Hospital during all that period. Mr. Crompton has fallen into the mistake of calling the instrument a "bulbous sound." It is a solid "bougie olivaire," and he, like myself, derived the idea from the French elastic instrument of that name. There are three bougies in use amongst the French, named respectively "bougie olivaire," "bougie à boule," and "bougie à bulbe," and the instrument which Mr. Crompton calls a bulbous sound is simply the French "bougie olivaire" made in metal. Mr. Erichsen and Sir Henry Thompson are likewise in error in depicting and calling the "bougie olivaire" the "bulbous-ended bougie." If Mr. Crompton will send for a "bougie olivaire" to M. Lasserre, 5, Avenue Victoria, Paris, he will receive the instrument which Mr. Erichsen and Sir Henry Thompson call a bulbous-ended bougie.

10, Portman-square. I am, &c. W. F. TEEVAN.

Lex.—The law of the case is uncertain, but an action could be brought on the custom prevalent, and would probably be successful.

J. R.—At the offices, 32, Soho-square.

J. M. O.—The minimum fee is one shilling and sixpence.

A Dispensing Assistant.—If no specific contract was made, he could demand a month's notice or a month's salary.

A Poor Man.—The Fever Hospital is situated in Liverpool-road, Islington. The case would be received on application.

ASSISTANTS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Might an unqualified assistant be allowed the liberty of making a few remarks on the letter of "Inquisitor!" I am well aware mutual reflections profit nothing, or I could easily enumerate various cases of malpraxis and errors in diagnosis by not a few of the privileged qualified. As to this amateur in obstetrics to whom "Inquisitor" invites the attention of the public, one can hardly credit that a human being could be so careless or utterly ignorant of his business as he is said to be. Why, a man of such attainments could be of no use to any one. If all unqualified assistants were of this stamp, I do not know what many a hard-worked country Practitioner would be obliged to do. At all events, the best recipe for getting rid of the nuisance is to pay them better, and they will soon become qualified.

In conclusion, as to counter-practice, I am confident no gentleman would ever entertain the thought, much less endeavour to pilfer from his former employer the good will of those patients with whom he has been from time to time entrusted. I am, &c.

May 26. CANTAB.

J. M. C.—The lines are to be found in Cowper's poem on "Retirement," and are as follows:—

"Virtuous and faithful Heberden, whose skill
Attempts no task it cannot well fulfil,
Gives melancholy up to Nature's care,
And sends the patient into purer air."

J. M. (Lincoln.)—Taking for granted that the receipts in 1867 had amounted to £611, and they subsequently fell off, then A could successfully resist any further payment on the ground that B had not fulfilled his contract. This of itself would be a sufficient answer to an action brought by B for the recovery of the instalments due. The judge would probably order the arbitration to be carried out as specified in the deed, and would saddle B. with the costs. But, if it could be proved that the receipts were smaller than represented, it is probable an action would lie against B. for misrepresentation. It is to be regretted that the matter cannot be amicably settled by means of the interference of arbitrators. But these gentlemen should undoubtedly be members of the Medical Profession. B. is ill-advised if he does not consent to a proper arbitration.

ON THE NATURE AND USES OF COLOSTRUM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—When examining some milk I was struck by the resemblance of the colostrum cell to the compound granular corpuscle, and it occurred to me that the colostrum may really be formed from the degenerating tissue of the uterus, and thus be serving the double purpose of ministering to the wants of the child and of excreting from the maternal system effete matter. That this is the case seems probable from the fact that generally when the child dies, even some weeks before labour, milk is plentifully secreted at the usual time. If the milk were not an excretion as well as a secretion, there would be no use for it in such cases. Again, if the milk serves to eliminate the tissue of the uterus which, during the first few weeks after

pregnancy, is undergoing fatty degeneration and absorption, it would clearly be important that lactation should continue for at least a few weeks, and this is the practical bearing of my remarks, to which I wish to draw attention. I have lately had a case in which the secretion of milk was suddenly arrested on the fifth day after labour by a mental shock, and in this instance the uterus did not recover its normal size, but remained large and tender and evidently congested for some time. In looking back I remember cases in which I think the same thing has occurred. Often when milk is not secreted no harm results, because, probably, the elimination of tissue takes place through other channels, but I am inclined to think that if the matter is inquired into defective involution of the uterus as a consequence will be oftener found than hitherto. I should be glad if some of our leading obstetricians would publish their opinion on this subject.

I am, &c. E. Wynne Thomas, M.B.

33, Paradise-street, Birmingham.

A.—Dr. Girdwood, whose death was announced in the papers last week, was for many years in practice at Paddington. He gained considerable reputation for the manner in which he conducted the examination of the head of Hannah Brown, Greenacre's victim, and the mode in which he gave his evidence. He was the author of some valuable papers on "Menstruation," which appeared some years since in the pages of a contemporary.

Anti-Weed.—There is a good deal of exaggeration on both sides. The truth lies about midway between the two. Tobacco, if used in excess, is unquestionably very injurious; it depresses the physical and mental powers, and brings on premature old age; but used in moderation and at certain times, tobacco may not only be borne with impunity, but be useful. It has a remarkably soothing effect on some. When it produces nausea or depression of any kind, it is to be avoided. The articles alluded to by our correspondent were all on one side, and were written by a person evidently prejudiced against the weed, and ignorant in many respects of the question he was discussing. In fact, they were merely "sensational articles," and were written to order.

COMMUNICATIONS have been received from—

Dr. John Lloyd; Dr. E. Wynne Thomas; Mr. E. D. Gribbin; Dr. A. N. Kidd; Mr. Teevan; Dr. Whitmore; Dr. J. Russell; Mr. Grinling; J. M. H.; Mr. G. Rowe; Mr. R. Walker; Mr. Grove; Dr. Downie; Dr. J. Ross; Cantab.; Mr. Moore; Dr. Baeumler; Mr. J. Barber; Mr. Wathen; Dr. F. P. Weaver; Mr. T. G. Horder; Mr. Blaker; Mr. C. M. Tidy; Dr. Gervis; Mr. T. Holmes; Dr. T. H. Green; Mr. Spencer Watson; Mr. J. Hutchinson; Dr. Robert Barnes; Dr. Day; Mr. J. Chatto; Mr. Wanklyn; Dr. Jas. Russell; Dr. Clifford Allbutt; Dr. Lionel S. Beale; Dr. Adriani; Mr. T. M. Stone.

BOOKS RECEIVED—

Ross on Counter-irritation—Middlesex Hospital Reports—Bigg's Manual of Orthopraxy—St. Andrews Medical Graduates' Transactions, vol. ii.—Chicago Medical Investigator, No. 68—New York Medical Journal, No. 50—Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, vol. v.—American Journal of Obstetrics, vol. ii. No. 1—American Journal of Insanity, vol. xxv. No. 4—Berncastle on the Treatment of Snake-bites—General Hospitals, their Uses and Abuses, by J. G. Wilkinson—British Journal of Dental Science, No. 151.

NEWSPAPERS RECEIVED—

Nottingham Daily Guardian—New York Medical Gazette—California Medical Gazette—The Adelaide Express and Telegraph—Australian Medical Gazette—Western Mail—Leeds Evening Express—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 22, 1869.

BIRTHS.

Births of Boys, 950; Girls, 961; Total, 1911.
Average of 10 corresponding weeks, 1858-67, 1946·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	677	604	1281
Average of the ten years 1858-67	648·1	580·3	1228·4
Average corrected to increased population	...	...	1351
Deaths of people above 90	...	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	...	1	3	1	11	5	1	...
North	618210	1	1	8	3	23	5	3	...
Central	378058	...	7	7	...	14	4	2	...
East	571158	...	3	15	1	23	6	5	...
South	773175	2	10	12	...	26	3	4	...
Total	2803989	3	22	45	5	97	23	15	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·530 in.
Mean temperature	50·0
Highest point of thermometer	66·5
Lowest point of thermometer	37·6
Mean dew-point temperature	46·0
General direction of wind	Variable.
Whole amount of rain in the week	0·68

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 22, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending May 22.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending May 22.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3170754	40·7	1911	1462	1281	66·5	37·6	50·0	0·68	69
Bristol (City)	169423	36·1	93	76	*66	63·5	37·3	50·1	1·47	148
Birmingham (Boro')	360846	46·1	227	175	120	58·3	40·8	48·1	0·72	73
Liverpool (Boro')	509052	99·7	348	295	266	59·8	43·1	48·9	1·76	178
Manchester (City)	370892	82·7	172	210	*170	63·7	41·0	49·1	0·78	79
Salford (Borough)	119350	23·1	54	60	50	61·4	39·6	47·5	0·72	73
Sheffield (Borough)	239752	10·5	129	126	119	59·0	39·0	47·5	1·16	117
Bradford (Borough)	138522	21·0	95	71	67	55·5	40·1	46·7	1·00	101
Leeds (Borough)	253110	11·7	147	129	97	59·0	41·0	47·5	0·80	81
Hull (Borough)	126682	35·6	70	59	54	...	...	...	...	...
Newctl-on-Tyne, do.	130503	24·5	79	69	46	51·0	35·0	44·3	0·73	74
Edinburgh (City)	178002	40·2	119	86	91	58·7	38·0	47·6	0·20	20
Glasgow (City)	458937	90·6	367	268	307	59·8	36·5	47·9	0·15	15
Dublin (City and some suburbs)	320762	32·9	142	158	146	61·0	34·6	47·5	0·97	98
Total of 14 large Towns	6546587	35·5	3953	3244	2880 Week ending May 15.	66·5	34·6	47·9	0·86	87
Vienna (City)	(1863) 560000	...	...	...	410	...	...	Week ending May 15. 65·5	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·530 in. The barometrical reading increased from 29·29 in. on Wednesday, May 19, to 29·93 in. by the end of the week.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

May 29. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Royal Institution, 3 p.m. Mr. Emanuel Deutsch, "On Semitic Culture."

31. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

June 1. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Anthropological Society, 8 p.m. Mr. George Harris, F.S.A., "On the Mental and Moral Distinctions of Sex." Mr. J. McGrigor Allan, "On the real Difference in the Minds of Men and Women."

Royal Institution, 3 p.m. Prof. Grant, "On Stellar Astronomy."

2. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Obstetrical Society. 7½ p.m.: Council Meeting. 8 p.m.: Report of the Infant Mortality Committee. Dr. Lawson Tait, "Case of Reduction of Chronic Inversion of the Uterus." Dr. Barnes, "A Demonstration of a New Method of Embryotomy, showing how a Mature Fœtus can be extracted through a Pelvis having one Inch in the Conjugate Diameter." And other Papers.

3. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.: Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

Royal Institution, 3 p.m. Prof. Tyndall, "On Light."

4. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

Royal Institution, 8 p.m. Prof. Odling, "Simplest Organic Compounds."

Western Medical and Surgical Society, 8 p.m. Annual Meeting. Reports of Council and Treasurer. Election of Officers for the ensuing Session. Narration of Cases.

ORIGINAL LECTURES.

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

ON FURTHER RESEARCH WITH THE LARGE INDUCTION COIL OF THE ROYAL POLYTECHNIC INSTITUTION.(a)

THE FIRST ELECTRICIAN, DR. WILLIAM GILBERT.

GENTLEMEN,—I doubt not when you have thought on the wonderful practical applications of electricity to the wants of man, on the true miracles that have been wrought in these latter days by its agency, it has often occurred to you to inquire—To whom are we indebted for the first steps of experimental research towards the discovery of electrical power as a force which may be collected, restrained, liberated, and applied by human intellects and human hands? What living genius advanced beyond the mere child's trick of rubbing amber and making it attract; or beyond that, for a long time the height of the science, the poising a natural magnetic bar so that it might guide the watchful mariner in his stormy course more surely than the inconstant stars? Well, I could seize no better opportunity than the present, when nearly all who are assembled are members of one profession, to answer these questions. The name of this man of true genius was William Gilbert. He was of the same calling as ourselves; he was a Physician. He lived in the reign of Queen Elizabeth, resided and practised in this city, attended her Virgin Majesty as Physician, added to his ordinary labours the grandly original work of laying the foundations of electrical science, and did this last business so well that honest, and great as honest, Priestley says of him "he may justly be considered the father of modern electricity."

William Gilbert was born at Colchester in the year 1540. He studied at Cambridge, and in time was elected a Fellow of St. John's College. He took his Doctor's degree in Medicine in 1569, and proceeded to London, in order to commence practice, in 1573. He soon became a Fellow of the Royal College of Physicians, was nominated Physician to the Queen, and must have been a favourite of her Majesty, since she gave him a pension—first-rate thing for a Queen to do, by the way, and in this case fine historical generosity, for it makes the royal donor the original patron of the most wonderful series of inventions—to enable him to pursue his scientific researches. He toiled on until the year 1603, when, after leaving all his books, instruments, and minerals to the Royal College of Physicians, he found the eternal rest he had so nobly earned. His body was buried at Colchester, in the Church of the Holy Trinity. For other facts respecting William Gilbert's career, I refer you to the work "The Roll of the College of Physicians," by the learned and indefatigable biographer, Dr. Munk.

And now as to the works of Gilbert. These are left us in two volumes. One volume was published during his lifetime, and was entitled "De Magnete, Magneticisque Corporibus, et de Magno Magnete, de Tellure Physiologia nova, plurimis et argumentis et experimentis demonstrata." It is in this volume, of which I hand round a copy, he enters on the field of experimental research in relation to magnetism and electricity. The second volume was posthumous, and was not published till many years after the death of its author. It consists of a series of separate essays on Medical and philosophical subjects, collated in two manuscript volumes by the brother of the author, and deposited in the museum of Sir William Boswell, with a dedicatory letter by the collator, addressed to that unhappy and learned son of James the First, around whose shadowy life such mystery still hangs, the Prince Henry. This work is entitled "De Mundo nostro Sublunari Philosophia nova."

In the brief time since I became acquainted with the labours of our Gilbert I have studied as carefully as was possible his volumes, and I wonder not that Priestley should have spoken in the terms he spoke respecting "the father of modern electricity;" for the volumes are astounding studies. In the volume "De Magnete," the chapters entitled respectively "Vis Magnetica animata est, aut Animam imitatur;" "De Telluris Globo Magno Magnete;" "Magneticus Axis Telluris invariabilis permanet;" "Terram circulariter moveri;" "De Axi et Polis Magneticis;" and "Magnetica Vis motum facit ad unitatem et unita firmiter connectit," are full of such knowledge, such insight, that an enthusiastic admirer might, without strain, claim for Gilbert some half-dozen of the grand discoveries in science which have been announced since his time. I make no such claim, but I see projected in his writing the perfection of experimental thought and action. What is theoretical in Bacon, I see as practical in Gilbert. He teaches the law of polarity; he infers currents; he connects magnetism with other forms of force, and contemplates unity of force; he conceives that other bodies—bodies which by friction become endowed with the property of attraction—are kindred to the magnet in principle of action; he holds a theory about a subtle medium or ether filling space and permeating all bodies; he compares the magnetic force with the force of life; and, to crown the whole, he looks on the great globe itself as a magnet.

In the second volume to which I have referred, Gilbert gives us a book rich in various ways, but especially in the study of meteorological phenomena. "Nova Meteorologica" is the title of this book, and truly it was a new book in science. I doubt, indeed, whether we may not say of Gilbert that he was father of modern meteorology as well as of modern electricity.

I make no apology for opening a practical lecture on electricity with this brief notice of a forgotten countryman—the pioneer in the scientific investigation of electrical phenomena. To us, as Englishmen, the work of Gilbert strikes us as adding fresh lustre to that marvellous Elizabethan age of natural thought, when, to advance poetry, philosophy, science, literature, such a spirit descended to fill the minds of men that the classical ancients would have declared it the era of the birth of a new divinity. To us, as English Doctors, the work of Gilbert strikes us as adding fresh lustre to a Profession which has given to the world more great and original scholars in pure physics than all the other professions and callings put together. To our Kepler and Young; our Theophrast, Mayow, Black, and Boerhaave; our Harvey, Hunter, Darwin, Cuvier, and Owen; our Linnæus and De Candolle; our Vesalius, Fabricius, and Morgagni; our Haller and Hoffman, let us add the name of William Gilbert, "father of modern electricity." Let us recall him to our minds, going as we go, from day to day and hour to hour, ministering to the sick; let us recall him, his day's work of healing over, experimenting, in his laboratory or workshop, with his magnets and needles, studying the repulsions and attractions, seeing the wealth of that domain on which he had set his foot, but over which he could only cast his wistful, wandering, penetrating glance, and asking himself what shall be revealed there; and let us, as we leave him in the glimmering light and grey dawn of knowledge, with his primitive instruments around him, and as we cross, mentally, the great gulf of time which separates him from us, to behold now what, from those simple beginnings, electrical science has become—let us take to heart this truth, never too often told, that the study of the simplest thing in nature, while it must always tend to bring something useful, may be the germ of a veritable new world of thought, invention, action, usefulness.

I am only a poor word-painter, and want that magic skill which should bring William Gilbert before you through the windows of your souls. But had I the skill of a Millais, a Richmond, a Frith, an O'Neil, this first electrician, musing on the future of his infant science, should adorn the walls of the next Royal Academy Exhibition with a splendour worthy of his immortal dream.

ON A FOURTH FORM OF ELECTRICAL DISCHARGE.

Proceeding now to those subjects which we may call the subjects proper of our lecture of to-day, I would, in the first place, refer to the physiological action of a fourth kind of discharge which we are able to produce with this coil. Those of you who did me the honour of being present at the last lecture will remember that we studied the effects of three kinds of discharge:—

(*a*) A discharge produced by the simple act of charging the

(a) Delivered at the Royal Polytechnic Institution on Tuesday, June 1.

150 miles of secondary wire from the battery, and discharging. We called this the first discharge, and saw it, as we see it again, to be made up of two parts, of a thin blue intense flash, and a flaming flash which can be blown aside.

(*b*) The same discharge broken by the vibrating or mechanical break.

(*c*) The discharge from a Leyden battery presenting forty square feet of surface, and charged by three full discharges from the coil.

The fourth discharge, to which I would now direct your attention, is produced in the following way:—The jars which form the Leyden battery are removed from their box, and are placed in a line in front of the coil. They are carefully insulated, by being made to stand on a vulcanite plate. Then the outer metallic surface of the first jar is made to communicate with the inner metallic surface of the next jar, and so on through the series. We then connect the inside of the first jar with the positive, and the outside of the last jar with the negative pole of the coil. We charge in the usual way.

The physiological effects of this electrical discharge are of great interest. We see in the discharge the effect of intensity. The spark is not flaming, and not burning as it falls on the animal body; it is not carried harmlessly over the surface of the body, but it penetrates and always kills. It kills more quickly than the discharge from the Leyden battery when the jars were placed in the ordinary way, and are charged by four charges from the coil. In fact, this discharge presents to us the most fatal form of lightning stroke. I shall, in a few minutes, have occasion for another purpose to subject an animal to a fatal shock, and this shall be the shock administered. You will see then how singular are the phenomena. The animal, a pigeon, will receive the shock without a movement. It will remain afterwards precisely as it was in life; its head will be upraised, its eye bright, and its appearance perfectly, livingly, natural, and yet it will be dead. No mark will be left on its body.

On Effects of Shock from Lightning, simulating Death.

At my last lecture I demonstrated by direct experiment that an animal might be so struck with some forms of electrical discharge as to be rendered insensible to pain, unconscious, and, to common observation, dead. I showed further, however, that the animal would often recover, even after a lapse of long intervals of time, and, in demonstration, a toad was reduced to such extreme insensiblity that several who examined it came to the conclusion its life must be extinct. The toad, nevertheless, gradually recovered, and next day was well. You will see it here again quite well. A pigeon also was struck in a similar manner, and it recovered. This same fact was observed by Priestley, as well as by the first man who made experiments with the electrical discharge on living animals, the Abbé Nollet. Let me explain, at the same time, that the animal thus struck insensible is not always restored directly to health. In some cases, although the animal recovers from the immediate shock, there is lassitude, muscular wasting, great susceptibility to external motions, irregularity of movement, and slow convalescence.

I dwell on these facts because they are peculiarly valuable as explaining certain phenomena observed in the human subject after lightning stroke. Thus, the immediate unconsciousness following upon lightning stroke has been observed in several instances where human beings have been the subjects of the accident. My learned friend, Mr. Erasmus Wilson, has supplied me with the reference to a case in which a man struck with lightning was rendered unconscious for four hours, and who, on recovery from the unconsciousness, found he had lost the use of his legs and could not articulate, the paralytic condition lasting nine days.

Connected with the history of cases such as these, and with the effects on the lower animals which we have ourselves witnessed, there are two or three points deserving of special comment.

It is worthy of remark that the reception of the shock which renders the body insensible seems to be unknown to the person injured. The concurrent testimony of those who have been thus struck down, and who have given evidence on the event, is that they were not conscious of what had occurred until the commencement of recovery, the first symptom of recovery being resteration of consciousness. I am indebted again to Mr. Wilson for the reference to a case in which a woman, who was struck by lightning and severely burned, was perfectly unconscious for twenty minutes, and, when consciousness returned, explained that she had felt nothing at the time of the accident, but complained of nausea and oppression about the chest on return to consciousness. Her skin was cold and clammy from perspiration, and her pulse was extremely weak. Most of these phenomena have been observed in our experiments on animals. When an animal is struck so as to be completely prostrated, there is never any scream nor other indication of suffering. Send even a slight shock simply through the ear of a rabbit, and there is clear and obvious indication of pain; send a shock through the body that shall kill, or shall stun, and there seems no such interval between the conscious condition and the unconscious as shall be appreciable. Again, when an animal is struck down by an electrical discharge, and yet is not killed, the symptoms are the same as have been seen in the human subject. The breathing power is reduced, the pulsation of the heart is reduced, the body is lowered in temperature, and there is often, for some hours, depression of muscular power.

Again, it is deserving of particular regard that the phenomena of simulated death from electrical stroke are often determined by the character of the stroke itself. The shock from the flaming discharge—that which is got by simply charging the 150 miles of secondary wire in the coil—either simply burns, or stuns and burns. The accumulated discharge from the large Leyden battery stuns or kills, according to the force of the discharge, with convulsive movements, and sometimes with bruising. The tense, penetrating discharge we have seen to-day kills straightway, exciting scarcely any motion, and leaving the body lifelike, to a degree which must be seen to be accredited.

These facts, one and all, connect themselves with death by lightning stroke in the human subject. Every one of the phenomena which we have traced here has its natural counterpart in the grander phenomena of nature, and we may from henceforth, when we see a person who has been struck by lightning, know accurately from the effects produced the character of the shock to which he has been subjected. Has he been scorched and stunned, he has received a discharge the analogue of which is in the flaming spark of our coil. Has he been struck and left distorted, rigid in parts, or bruised, he has received from the cloud the discharge the analogue of which is in our Leyden battery. Has he been struck and left free of all mark of burn or distortion—left in such serenity of death, with such persistent brightness of eye, calmness of expression, and ease of limb (and this is by no means uncommon), that you could almost accost him as though he were in life, and could deceive yourself that he did yet breathe—he has received from the cloud that tense, penetrating discharge the analogue of which has just been illustrated.

Another point also worthy of note is, that cold-blooded animals, such as frogs and toads, while they are as easily subjected to the influences of these discharges as other animals, recover much more readily. I shall dwell on this important fact at some length at another period.

You will naturally ask, as you recall the various facts that have been before us—What is the reason why in some instances there is recovery from an electrical shock, which shock yet acts so determinately that it destroys common sensibility, muscular motion, and consciousness? Well, I have looked at this subject very carefully, and I am prepared to say this much is demonstrable, and to an extent is an explanation of the facts—that, under all forms of electrical discharge, the heart is the last organ to be brought into a condition of rest by the shock. When all other parts fail, the heart retains, and often for a long time maintains, its action. At the same time the blood has no undue tendency to coagulate, and thus after the shock there are two conditions for recovery so favourable that the merest effort of respiration may be sufficient to lead to recovery. I will proceed to prove to you this vital truth by direct experiment.

Observe that at the present moment we have kept up that form of battery from the discharge of which there is obtained the intense penetrating stroke which we produced a short time ago. We take then a pigeon, place it on a stand, pass the negative pole to one of its feet, and direct the point of the opposite pole towards the back, giving a discharge of say six inches in length. The discharge is made, and the animal, lifelike as it seems, untouched as it seems, is fatally struck. It sits as it did—its head is erect, its eyes are open, and its feathers are smooth; but it is actually dead. The experiment illustrates that peculiarly fatal lightning-shock which I have described above; but the most striking phenomenon is this, and those of you who are near will confirm the demonstration—the heart, in the midst of this perfect inertia of all the rest of the body, is playing on faintly and steadily; its sounds are clear, its action regular. It will continue thus audibly to play probably for five minutes of time.

And this is not all; for even when the motion of the heart ceases to be heard it still continues. We can prove this fact

by another proceeding. When the action of the heart is no longer heard, if we lay open the chest leisurely, we often see that for a quarter of an hour or a longer time after death the heart retains its contractile power. I once observed the organ contracting for one hour and ten minutes, both on the right and the left sides, in the ventricles and in the auricles alike. Nay, singularly enough and paradoxically enough as it may seem, Dr. Sedgwick and I have re-excited the action of the heart when it has ceased after death from intense shock, by sending through the body the long flaming spark.

SIGNS OF DEATH AFTER LIGHTNING-STROKE.

You will ask, on seeing these facts:—What, then, are the positive signs of death after shock by lightning? The question is momentous, for of this I am sure—that it would be the easiest mistake in the world to look on a man struck by lightning as dead, when in truth he was not dead. I am free to confess, and it is right to confess, I have seen an animal so seemingly dead after electrical discharge that at first I adjudged it dead, and yet it has spontaneously recovered. If then I, who am somewhat conversant with the effects of these shocks on living organisms, might, by too hasty an examination, be deceived, how much more so those who by mere accident first approach the victims to the lightning discharge; and how shall all men be guided towards a more correct knowledge as to the positive signs of death? I answer on this point with much less of knowledge than I could wish, but I may perhaps so answer as to prevent one of the most serious of errors. The positive signs of death after lightning stroke, as far as I know them up to this time, are—

(*a*) *Absence of all Indication of Motion of the Heart.*—This sign must be accepted with the understanding that there may be action of the heart which does not declare itself by audible sound or sensible motion detectable through the walls of the chest.

(*b*) *Absence of Reflex Action.*—As a rule, an animal which has been stunned simply by the electrical shock shows signs of reflex motion, so called, when an irritant is applied to the eye or when the skin is pricked over a muscle. Whenever there is an exhibition of reflex action, the evidence is almost certain that living action is not absolutely suspended. But it must also be accepted with this understanding, that in batrachians, at all events, its absence does not of necessity denote death. We give a shock to a frog, for instance, and we see, on applying an irritant, that the animal shows no reflex action. Yet the probabilities are that the animal will be restored to life.

(*c*) *Decrease of Animal Temperature, in the Cavities, to the Temperature of Water left exposed to the surrounding Air.*—This, in our present state of knowledge, is a fair proof of actual death in warm-blooded animals. It does not prove the impossibility of recovery.

(*d*) *Absence of Colour in Semi-transparent Structures.*—The passing of a strong light through the hand, or other semi-transparent structure, and observing if the red colour which is seen in the living parts is absent, is a good sign of death, but is not, I think, absolutely reliable, inasmuch as there may be so much resistance to conveyance of blood through the vessels that coloration due to the presence of blood in them may be absent in the hands, or even in the cheeks, while yet there may be motion of the heart.

(*e*) *Rigidity of Muscles.*—If muscular rigidity be general, and the muscles of the chest be rigid, the evidence of absolute death is sufficient. But a partial or local rigidity of muscle is not of sufficient evidence. Rigidity may occur in one limb, as we saw at the last demonstration, in the line in which the electrical current has coursed through the body, and may not designate total extinction of living action.

(*f*) *Coagulation of the Blood in the Veins.*—This is at once a ready and good sign of death. In the human subject the largest vein that can be found immediately under the skin should be laid freely open, a fillet being first applied above the place for the opening. If, then, in the vein there be found a coagulum, the inference is fair that the process of coagulation is complete, and that restoration of life is impossible.

(*g*) *Decomposition.*—Lastly, the occurrence of decomposition of the body is the final proof of actual death; and although when the blood in the venous system is distinctly coagulated, and there is general rigor mortis, it may not be necessary to wait for decomposition of the body before committing it to the earth, in the absence of the two changes just named—coagulation and rigidity—evidence of decomposition ought always to precede the act of burial.

ON MARKS LEFT UPON THE BODY AFTER ELECTRICAL SHOCK OR LIGHTNING STROKE.

Several kinds of injuries to the external parts of the body have been described as following upon the reception of severe shocks from lightning electricity. Some of these have been considered by excellent authorities as chimerical or as vulgarly exaggerated descriptions of observed, or presumedly observed, facts; they have been left up to this time in singular doubt and obscurity. I have, therefore, now that the means of research are at command, investigated this subject with some care, and have, I think, been able, by a few simple experiments, to place what has been doubtful in a sound and scientific position. The following marks of injuries have been recorded:—

1. Marks of burning of the skin and hair.
2. Impressions on the body of metallic substances, such as coins, ornaments, beads, crosses.
3. Ecchymoses, or vivid blue spots, sometimes accompanied with exudations of blood.
4. Impressions on the body of an arborescent kind, supposed to be impressions of trees or fences near or beneath which the person stood when struck by lightning.
5. Loss of hair.

Burns.—Burns on the body from lightning or electrical shock are more likely to happen in cases when the person is not destroyed than when the shock is fatal. The reason of this probably is that the burning shock itself is of the flaming rather than of the penetrating kind. The burnings differ in degree; they may be mere singeings of the hair, with superficial scorchings or blisterings of the skin; or they may be extensive cauterisations leading to surrounding inflammatory action. Metallic substances in the dress, such as pins, stay-busks, buckles, and the like, while they may, in one sense, have their use in directing the shock from point to point over the body to the earth by a superficial route, lead often to severe local injury. In these cases the parts which are burned are those which lie between the metallic points. We may illustrate this by a simple experiment with our flaming spark.

We take for this purpose a long strip of white paper mounted on a light frame. Along the paper we interpose at distances of three inches apart a line of safety pins. Then we place the strip of paper horizontally on a rest, so as to bring it between the two poles of the coil, and pass the spark in the line. As the spark leaps from needle to needle you will see that at the point of each needle and between the needles the paper is burned. In the line of the needles the flame is confined to the metal, and, the conductor being good, the paper escapes for the length of each needle.

This occurrence is sometimes met with in the human subject in a singularly perfect way, as will be seen from the following example, again supplied to me by my friend Mr. Erasmus Wilson, who records the facts from his own personal observation, and has blended them with others in a critique on these lectures to be published in the *Journal of Cutaneous Medicine* for July:—

A young woman stood under one of the high trees in Richmond Park during a thunderstorm. A shaft of lightning descended the tree to within a few feet of her head, tearing up a deep rut in the bark of the tree in its course. Attracted by an iron wire in the frame of the young woman's bonnet, the lightning glanced from the tree to her head-dress and followed the wire to beneath her chin. From this point it darted to the steel busk of her stays, and from the latter to the small iron nails in her boots, whence it dispersed itself harmlessly in the ground. She was unconscious for a while, and, upon being removed to her home, it was found that her bosom was much burnt, as was her abdomen below the steel busk, the latter being partially melted at the top. The seat of the burning of the skin corresponded with the break in the conducting medium, and, but for that, she might have escaped without injury. She made a very favourable recovery.

Impressions of Metallic Substances.—The statement that impressions of metallic substances may be left on the bodies of persons struck by lightning has been often made, but has had little belief attached to it by the masters of electrical science. Some years ago an eminent meteorologist of this country forwarded to one of the learned societies the particulars of a case which had been sent to him by a Medical man residing in the West Indies. In this case, in which a man was subjected to lightning shock, it was said that impressions of various ornaments were most distinctly left on the body, and, from the manner in which the report was drawn up, it carried with it an air of the strictest probity. The marks, it was said, were of a dark bronze colour, and the impressions were so distinct that they could not be doubted. A bracelet or chain was, I believe, stated to be impressed, a coin, and a cross, or similar ornament. On hearing this description, I drew up a short leader upon it, and forwarded the article to the editor of the *Medical Times and Gazette*, who took it at once to Professor Faraday, soliciting his

opinion as to the probability of the occurrences described in the report. Faraday listened with much attention, and then observed that although he would not like to say the phenomena were impossible, he could see no explanation of them, and, indeed, could scarcely admit the validity of the observation. On this, such was my admiration of the great physicist, I withdrew the essay. In these new researches, however, I have recurred to this subject, and have put the question experimentally in different ways, and now I am bound to say that impressions such as have been referred to may be faintly struck on the body. Thus, by placing a thin ring of twisted wire on the ear of a white rabbit, and on discharging through the ring from the large Leyden battery, there was unquestionably left on the ear a faint blue line showing the position of the wire, the irregularities caused by the twisting of the wire being also distinctly traceable. In the living animal the appearance quickly fades; in the dead it would of course be left until the organic changes of decomposition removed it. The nature of the mark is very simple; it is an ecchymosis taking the line of the metal, and so presenting a rough outline of the form of the metal. The shock must be received on a firm surface, such as bone.

Ecchymoses.—Simple ecchymoses and livid spots, having no reference to metallic or other bodies in contact with the body, are sometimes presented on the surface of the body in a very marked degree. They are dwelt upon with great care in the report of the death of the first experimentalist who lost his life by receiving a shock in his laboratory while drawing electricity from the clouds. This martyr to science was Professor Richman, of St. Petersburg. On August 6, 1753, he was measuring the strength of electricity from the clouds with an instrument which he called a gnomon; unfortunately he brought his head into too close contact with his instrument, and was struck with what his assistant described as a globe of blue fire and was killed instantly. On his forehead there was a red spot from which issued some drops of blood from the pores, without wound of the skin. On the heel of the left foot there was a blue mark at a point where the shoe was torn open, and on the left side of the body were several blue spots resembling, says Priestley, who is our safe historian, leather shrunk by being burnt. The spot on the forehead changed to brownish red, but the hair was not singed although some of it touched the spot. In my experiments I have seen these same spots on animals. They appear most distinctly over bone, being, in fact, like to a bruise produced by a mechanical blow.

Arborescent Marks.—Marks on the bodies of persons struck by lightning—marks of an arborescent kind—have been noticed, and have naturally, though wrongly, been supposed to be representations of the figures of trees. To the unlearned such a suspicion is easily conveyed, for the arborescence is described as very perfect, the stem, the larger branches, and smaller branches, as of a tree, being marked out with much refinement. To the learned the suspicion has seemed an absurdity, there being no known physical law by which the picture of a tree could be fixed on the body, in miniature, by lightning. The truth, when explained, is very simple. The arborescent appearance may be fully accepted as a fact, and as having been observed in cases of lightning shock; but the arborescence is not the figure of a tree; it is an anatomical outline of the trunk and branches of superficial veins of the body of the subject. More than one hundred and ten years ago, the fact that the veins could thus be pencilled out by lightning discharge was fully described by the illustrious Beccaria, who states minutely that a man struck dead by lightning in a storm was left generally rigid, and exhibited this added and curious phenomenon. The lightning, choosing the best conductor, having struck a vein in the neck, and followed it out to its minutest ramifications, the figure of the vein appeared through the skin finer than any pencil could have drawn it.

I have been able to put to the test this explanation of the arborescent appearance. Through the ear of a white rabbit we directed the charge of the Leyden battery, from a large trunk of a vein at the base, and in the line of the centre of the ear, to the extremity of the organ. One discharge was in this experiment quite sufficient to bring out the figures of two large veins, which appeared like pen marks, on the surface. The blood in these cases undergoes arrest of its motion, expansion, and possibly decomposition, by which some of the colouring matter is liberated. Thus, the vulgar observation of arborescent marks on the dead after lightning shock admits of recognition by the most critical, and of explanation by the most simple of scholars. It is often thus that the illiterate, correct in what they have seen in nature, appeal in vain to science, because, impelled by the strongest of all instincts, reason, they connect their facts with some theory of cause which science proclaims to be untenable, and dismisses alike fact and theory with hasty contempt.

Loss of Hair.—In some cases where the nervous centres have been specially involved after lightning shock, and where paralysis has occurred, the life of one of the least vital parts of the body—I mean the hair—has been destroyed. Once more I am indebted to Mr. Wilson for reference to a case in which this fact was strikingly evidenced. The case is recorded originally in the *Giornale Italiano delle Malattie Veneree e della Pelle* for February of the present year, and is translated by Mr. Wilson, for his journal, as follows:—

"At Moussy, in the Vosges, on June 1, 1864, at ten o'clock in the morning, a mason, aged 59, while on the mountain, was caught in the rain, and took refuge under a tree, where he was struck by lightning. He immediately became unconscious, and it appeared to him to be at least four hours before he recovered himself. He then found that he had lost the use of his legs, and could not articulate. It was not until after nine days that the paralytic condition ceased. The electric fluid had come in contact with the back part of his neck, had followed the course of the spine between the shirt and the waistcoat, destroying the shirt, drawers, and the hinder part of the pantaloons. There it divided, ran down the two extremities, and on escaping hurled the shoes to a considerable distance. Soon after the event the mason perceived that all his hair fell off. Eyebrows, eyelashes, beard, hairs of the axilla, chest, and pubes all disappeared, and he became completely hairless, and remains so still."

These are the external evidences of lightning shock. With the recollection of them, let us bear in mind also that the most fatal of strokes may kill, as we have seen to-day, and leave no external sign.

On the Conduction of Electrical Discharge through the Body.

The last question on which I touch to-day relates to the conduction of the electrical or lightning current through its structures when the body lies in its course. If the body be wet, or if there be on it any conducting points, the current may, as we have seen, be over surface only; but when the spark penetrates, and when it kills so rapidly as we killed to-day, what parts of the body convey it? This inquiry opens up the whole subject of the relative value of the structures of the organism as conductors, an inquiry which Priestley commenced, and which has remained up to this time but imperfectly worked out. For fifteen years at least I, for one, have been trying by experiment to get at precise facts, and many others have been similarly occupied. Last year, aided by Mr. Becker, of the firm of Elliott Brothers, I hoped to arrive at some exact results, by testing the conductibility of nerve, muscle, blood, and membrane by a given standard of electrical resistance. In this research I had the most perfect of devised instruments, but so easy was the decomposition of the animal structures I could get no two correctly corresponding series of results. This reward did nevertheless follow the labour: I found, as a general truth, that blood was the best conductor of all the animal fluids; was better than water, better than muscle, and better than nervous matter, grey or white. Our present researches sustain this same rule. All the evidence we have obtained from animals struck fatally with electricity is to the effect that the blood is the prime conductor of electrical currents, and that even the nervous centres themselves are reached through the blood. I have been very anxious to show you the preferential conducting power of blood by an experiment which should appeal visibly to the mind, and I have succeeded by the following method:—I place in glass tubes, a foot long and of equal diameter, portions of animal substance—blood, muscular fibre, brain matter, spinal cord, gelatine, water, fat; I arrange that the mass of each substance shall be the same. I pass a metal conductor the same distance into each, and I carefully insulate the tubes at both ends. I now make these tubes form part of the circuit of the coil, and, acting on the very happy suggestion of Mr. Tobin, I interpose between the poles two of Gassiott's electric fountains or cascades. When the room is darkened, see how beautiful is the light as it streams over the glass within the globe; we are using at this moment a metallic conductor. See, now, the light is decreased, and the current from the coil, instead of making its way silently, flies across from a point to a point; we have interposed our tube containing fat, and the current, resisted by that, strikes across. See, again, the fountain is nearly as beautiful as at first; we have removed our tube holding fat, and interposed blood. See, again, the light is less; we have changed blood for distilled water. Lastly, see a difference between blood and spinal cord. We take two cas-

cade apparatus, and connect both with the negative pole of the coil; we take blood, and connect that with the positive pole, and also with one of the cascades; we take spinal cord, and connect that also with the positive pole and with the second cascade. By this plan you will observe we allow the electric current to take which course it prefers—blood or nerve—and we discover the preference by the light in the globes. The result is perfect: the blood, we may say, takes all the current; the cascade of light in the circuit of the blood is brilliant as before; the cascade in the circuit of the nerve is not developed.

I shall many times again, I hope, return to this subject of conduction, and I beg you to accept the experiment we have witnessed at this moment as indicative merely of a general fact—as, in short, purely an approximation to the truth. Meanwhile we are bound, I think, to learn from the experiment, however much the learning may oppose what we have up to this time believed, that lightning, passing through the animal body, will take the best conductor, and that the best conductor is the metallic chain of blood.

Conclusions.

1. The fatality of electrical or lightning shock is in proportion to the intensity of the shock.

2. A lightning shock which lays the body prostrate acts with such instantaneousness on the nervous centres that, on returning consciousness, in those who are not killed by it, the reception of the shock is not remembered. It may be inferred, therefore, that death by the electrical discharge or by lightning is, as Franklin taught, the most painless of deaths.

3. Those discharges which by their intensity kill most readily, leave least mark of distortion or external injury.

4. In cases of prostration from electrical or lightning shock, the action of the heart may continue for several minutes after what appears to be general death.

5. There are three positive signs of death after lightning stroke:—Coagulation of the blood; general rigidity of the muscles; decomposition of the tissues.

6. The external injuries inflicted on a body struck by lightning are:—Superficial burnings; outline impressions of hard substances worn on the body; ecchymosed spots; arborescent pencillings of veins; loss of hair.

7. The course of lightning and of electrical force through an animal body is, preferentially, by the blood.

ORIGINAL COMMUNICATIONS.

ON THE DISTRIBUTION OF SMALL-POX ACCORDING TO AGE DURING THE EPIDEMIC OF 1862-8 AS IT AFFECTED ISLINGTON.

By EDWARD BALLARD, M.D.,
Medical Officer of Health for Islington.

There are not too many tables to be met with showing the proclivities of various ages to suffer from small-pox. Those of the Registrar-General only indicate the mortality from the disease; those published by Mr. Marson, being derived from the records kept by him at the Small-pox Hospital, do not exhibit a fair proportion of children. The following table refers to 1359 cases, out of 1744, occurring in the public practice here during the epidemic period 1862-8. I have stated the ages of those cases year by year, because it will be observed that the proportion of children attacked was very different in different years. In addition to these there was of course a large number of private cases, of which I receive, in my official capacity, no information.

	Total cases.	Under 1 year.	1 year.	2 years.	3 years.	4 years.	Under 5 years.	5 years.	10 years.	15 years.	20 years.	25 years.	30 years.	35 years.	40 years.	50 years.	60 and upwards.
In 1862	61	—	1	3	1	6	11	8	5	13	9	7	3	3	2		...
1863	393	19	11	16	14	14	65	60	59	67	60	43	14	11	10	1	3 ...
1864	76	4	2	3	1	7	17	12	9	14	6	7	4	3	4	...	...
1865	167	3	3	3	3	...	12	16	32	33	36	14	9	6	8	..	1 ...
1866	246	10	7	10	4	8	39	30	27	41	69	39	10	12	8	1	.. ..
1867	255	11	9	10	8	10	48	37	23	37	51	22	17	7	8	4	... 1
1868	131	3	1	2	4	3	13	16	17	24	24	20	6	7	3	1	.. ...
Totals	1359	41	34	47	35	48	205	179	172	229	255	152	63	49	43	7	4 1

Of those attacked in the first year of life there were, aged

Under 3 months	10	Under 9 months	10
„ 6 „	11	„ 12 „	10

The following table represents the ages at which 390 persons died from small-pox during the epidemic. These are all that died in my district:—

	Total deaths.	Under 1 year.	1 year.	2 years.	3 years.	4 years.	Under 5 years.	5 years.	10 years.	15 years.	20 years.	40 years.	60 and upwards.
In 1862 ...	15	3	1	3	1	1	9	...	...	5	1	...	...
1863 ...	198	20	10	6	6	4	46	9	4	6	33	9	1
1864 ...	26	5	3	...	1	5	14	2	1	2	4	3	...
1865 ...	58	11	6	1	1	2	21	6	3	5	18	3	2
1866 ...	67	14	6	3	3	4	30	7	4	3	20	3	.
1867 ...	71	17	1	4	4	3	29	5	3	7	20	6	1
1868 ...	45	8	4	3	7	3	25	4	1	5	7	3	...
Totals ...	390	78	31	20	23	22	174	33	16	33	103	27	4

But numbers given in this manner do not fairly represent the proclivities of the different ages, inasmuch as the numbers living at the different ages are unlike. It is easy to calculate from the Census Table of 1861 what they would have been had the numbers living been alike, and the following table gives the result of such a calculation for the entire period of the seven years:—

	Cases.			Actual Deaths throughout the Parish per 10,000 living 1861).
Under 5 years	... 196	...	...	84
5 years, and under 10 years...	... 210	...	...	19
10 „ „ 15 „ ..	... 242	...	...	11
15 „ „ 20 „ ...	... 346	...	...	22
20 „ „ 25 „ ...	... 320			
25 „ „ 30 „ ...	... 212	194	...	19
30 „ „ 35 „ ...	... 102			
35 „ „ 40 „ ...	... 92			
40 „ „ 50 „ ...	... 52	88	...	10
50 „ „ 60 „ ...	... 14			
60 „ „ 70 „ ...	... 14	12	...	4
70 „ and upwards...	... 4			

In considering these tables, it is to be kept in mind that they relate to a population which is, on the whole, a vaccinated population, but of whom about one in ten has not been thus protected—at least, among the poor, to whom the first column relates; and they indicate apparently the following facts:—

1st. That the proclivity to take small-pox was high up to about the 30th year of life, but after this age that it rapidly lessened. 2nd. That the period of life most endangered was that of puberty and early manhood or womanhood, the proclivity increasing from childhood towards puberty, and lessening again as manhood or womanhood advanced towards middle age. 3rd. That, taking into consideration the large number of infants under 1 year of age, in this and other town populations, and the rapid lessening in numbers as 5 years are approached, we must regard the proclivity to small-pox as very small comparatively under 1 year, and as increasing during the subsequent years of early childhood. 4th. That taking into consideration the fact now abundantly proved—that infant vaccination is protective almost absolutely up to the period of puberty, and only relatively less protective after puberty in a minority of instances, there can be little question that all or nearly all of the cases which occurred in the first five years of life were in unvaccinated children, and probably also many of those after this period. 5th. That the very high mortality from small-pox under the age of 5 years, as deducible from the different ratio of deaths at different ages from the ratio of cases at different ages, appears to confirm this inference. 6th. That the fatality of small-pox was incomparably highest in infants attacked under 1 year of age. 7th That after the first year of life was passed the fatality of the attacks was greatly lessened year by year up to 5 years. 8th. That up to about 15 years, or the period of puberty, the fatality of the attacks continued to lessen. 9th. That from the time when, both in vaccinated and unvaccinated populations, there is observable a renewed proclivity to take small-pox—namely, about the period of puberty—small-pox began to become not only more common, but more fatal also, and that this tendency to die from it increased steadily to the period of advanced age. The practical inference is an old one—namely, that those who would be absolutely safe in an epidemic period should renew their vaccination at puberty.

There is nothing very new in all this; but it occurred to me that the publication of these figures relating to a population of over 200,000 persons, most of whom are vaccinated, might be useful to some inquirers. The variation from year to year in the ages attacked and dying may have resulted in part from the stimulus given in certain years to infant vaccination by the dread of an existent epidemic extension. Among the poor

revaccination is rarely if ever sought, and no encouragement or facilities are afforded to its performance either as respects public vaccinators or the labouring classes. The male labouring population cannot afford the loss of time which it would involve, and I do not see how they could be reached effectually; but it is otherwise with the young women of the same class, who, being in service or occupied in light trades, would not suffer so much inconvenience, and only require to be met by energy on the part of public vaccinators or local vaccine inspectors, and the appointment of a time of day for revaccinations at which they could attend at a vaccinating station.

NOTES ON THE

PHYSIOLOGY AND PATHOLOGY OF THE NERVOUS SYSTEM.

By J. HUGHLINGS-JACKSON, M.D., F.R.C.P.,
Physician to the Hospital for the Epileptic and Paralysed, and Assistant-Physician to the London Hospital.

ON LOCALISATION.

In a footnote to the first part of Dr. Bateman's most valuable paper, p. 488, reference is made to an article of mine which appeared in the *London Hospital Reports*, 1864, entitled "Loss of Speech: its Association with Valvular Disease of the Heart, etc." The observation in the part of that article to which Dr. Bateman refers was merely intended to point out the priority of M. Broca in the kind of work I was about, and not to express an agreement with him in the special doctrine of localisation which he holds. I mention in the same connexion, and with the same object, Kirkes' researches on plugging of cerebral arteries, and also the direct teaching I had received from Brown-Séquard on varieties of defect of speech. I then say "*I have premised the above as to priority simply to have done with it, etc.*" The "general" support my observations gave to M. Broca's views was that the lesion which causes loss of speech was usually (as I then thought) the result of plugging of the artery which supplies the part he supposes to be the seat of articulate language *and much more*. Perhaps I did not put the matter very clearly; but that such was my notion at the time is evident by the following quotation from a letter in the *British Medical Journal*, May 21, 1864:—"M. Broca points out a particular part of the brain where, he believes, the faculty of speech resides; but I can only surmise *that it is in some part of the brain supplied by the middle cerebral artery.*" Indeed, I still think that the *damage* which causes loss or defect of speech is usually—it has been always so in my experience—in the region of the middle cerebral artery; and thus my observations may still be said to support M. Broca's views in the sense in which they did so in 1864. But I have ceased to use the words "faculty" and "reside" in the arbitrary manner in which I used these terms in the article in the *Reports*. Since the quasi-mental defects which occur with hemiplegia vary greatly, I adopted (*Lancet*, November 26, 1864), in order to cover them, the most general term I could find—"Expression;" and as in all but the very worst cases emotional language remains intact, the term was afterwards qualified by the adjective "intellectual." In the *Lancet* of the date referred to I am correctly reported as follows:—"From different 'quantities' of brain damage we have different degrees of loss of the power of expression. In some, the supply of blood is cut off from so large a quantity of brain *round about the highest part of the motor tract, the corpus striatum*—the point of emission of the orders of the 'will' to the muscles—that the patient seems to have lost the power of intellectual expression altogether. In others, so small a part is damaged that he has little more than a difficulty in the executive of articulation—*i.e.*, in getting out his words." This view, although to some extent parallel to the one expressed in the article in the *Reports*, involves a different idea. It does not narrow investigation to the determination of the alternative whether or not a "faculty of language" resides in this or in that convolution or vascular region, but guides investigation to the determination, case by case, first, of the different *quantities* of the damage to the brain, and, secondly, of the different relations of the damaged part to the motor tract. We have also to consider how variations in the defect of expression we observe during the lives of our patients correspond to variations of the two factors—quantity of damage, and relation of damaged part to the motor tract. We must observe the presence or note the absence of defects of mind and talking whenever we infer the brain to be damaged in any part, and must not limit our studies to cases of aphasia. I have endeavoured to work on this plan, and in the fourth volume of the *London Hospital Reports* I have recorded cases of "aphasia," with reports of autopsies, and also cases of disease of parts of the hemisphere (right and left) without defect of speech. I would particularly refer to the report of a case (obligingly communicated to me by Dr. Long Fox) of disease of Broca's region on the left side without defect of speech.

But since speech or words enter into thought, it seems incredible that "speech" can "reside" in any limited spot. This is not contradictory to the statement that *damage* to the brain in the region of the corpus striatum only causes loss of speech. To the corpus striatum will *converge* those motor processes which serve in speech, and thus a small quantity of damage in its neighbourhood will, at least does, produce a greater defect of speech than a larger quantity at a distance.

It is, I conceive, unlikely that we shall arrive at any clear notions on localisation unless we work at many diseases of different parts of the nervous system. It is not a question of the localisation of one "faculty."

In papers in this Journal—December 14 and 21, 1867, August 15, 1868, etc.—I have tried to show how the facts we can gather from cases of optic neuritis, chorea, certain convulsions, hemiplegia, and from the seemingly strange cases where extensive destruction of parts of the cerebral hemisphere occurs without obvious symptoms, supply us with materials towards determining *the plan of structure of nervous organs.*

The doctrine of Localisation I have accepted is stated in these papers. It is, I believe, in all essential respects the one Herbert Spencer has put forward. I would refer to chap. viii. part iv. of the first edition of his "Principles of Psychology," and to quotations therefrom in a footnote to the article in this Journal, December 21, 1867, p. 669.

COMPLETE DISARTICULATION OF THE UPPER MAXILLARY BONES.

By J. H. SALTER, M.R.C.S., L.S.A., L.M., A.K.C., etc.

So complicated are the injuries which usually happen to the bones of the upper jaw that no attempt has ever been made, as far as I am aware, to establish a systematic classification of them, or special rules for their treatment. Feeling, therefore, that any addition to the instances already recorded would be acceptable to those who are interested in this subject, I venture to give a short account of a case which recently occurred in my own practice, which, to the best of my belief, is unprecedented in the extent of its injury and subsequent result in the annals of Surgery.

In August last, W. S., a labourer, aged 30, was driving a wagon when one of the horses suddenly fell and knocked him down, with his head under the animal. The ground was very hard from the previous drought. When first seen he was sensible, though unable to articulate distinctly; his face was bruised and swelled; his lips and teeth slightly apart, the upper jaw projecting somewhat over the lower, and unable by any effort to be closed upon it. There was no great deformity of the general expression of the face. On touching the cheeks, they appeared to contain a quantity of "loose bones;" on both sides the malar bones were displaced and movable. On laying hold of the upper incisors, the wedge-shape portion of bone corresponding to the position of the superior maxillæ and malars was so movable that the impression conveyed to myself and my assistants was that, by a forcible twist, the whole could have been brought away but for the attachments to the soft parts. At the articulation of the nasal bones with the frontal and lacrymal there was a very distinct separation. The floor of each orbit was depressed and freely movable, the left rather more than the right. The entire jaw seemed to be protruded forward, the teeth being abnormally prominent and overhanging. The alveolar ridges and other portions of the bones were unbroken. The horizontal plates of the palate bones were severed from their connexion with the vertical, and with their articulation with the internal pterygoid processes of the sphenoid, which could be ascertained, on passing the finger along the roof of the mouth, by their extreme mobility. There were no external wounds beyond bruises and abrasions, though the œdema and ecchymosis were subsequently considerable.

The appearances above described were clearly made out and recognised by all present, Professional and otherwise, and the disarticulation was beyond a doubt, inasmuch as the bones, in

their wedge-shape entirety, could be freely moved backwards, forwards, upwards, downwards, and from side to side. The separation of the malar bones from their articulation was no less distinct. For a considerable time sense of smell was absent, and the tears, by reason of a slight displacement of the puncta, coursed over the cheeks. At first hæmorrhage from the nostrils was severe. At no time was there any great pain.

With much time and trouble, I carefully adjusted a gutta-percha casing to the parts. A horizontal slip passed across the upper lip, and exerted backward pressure on the alveolar ridge, to obviate its tendency to eversion. This was joined by two lateral flaps brought from the top of the head (corresponding with the coronal suture) beside the cheeks, and united with another horizontal slip passing from the back of the head below the occiput to either side, to steady and keep in position the two malar bones. These were carefully padded with strips of spongio-piline, which readily adhered to the gutta-percha when hot. Over all, a bandage was put, fixing firmly the lower jaw on the upper by exerting upward pressure. He was fed through an opening of his teeth with fluid food.

In the course of five or six weeks I removed the gutta-percha apparatus, and put on a starch bandage for another fortnight. It was several months before he could bite solid food. He is now quite convalescent, and very little the worse for his accident, though, as if to bear testimony to the curious nature of the injury, the upper jaw appears to be set slightly askew, and the depressions between it and its articulations are abnormally wide.

Tolleshunt D'Arcy, Essex.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

PROVINCIAL HOSPITAL REPORTS.

THE NORTHERN HOSPITAL, LIVERPOOL.

Continuing our accounts from time to time published of what is going on in our provincial Hospitals, we would this week say something of the Liverpool Northern Hospital.

This institution is situated in Great Howard-street, a part of one of the most important thoroughfares, leading towards the north end of the town. It is in close vicinity to the docks and the Lancashire and Yorkshire Railway, and the surrounding neighbourhood is densely populated. The building presents rather a striking appearance externally, the frontage being of red sandstone, and of the Elizabethan style of architecture. It is placed somewhat back from the road. Immediately within the door is a vestibule which communicates with the out-patient room. The Hospital itself is three stories high, and on each floor is a broad lofty corridor, running along the centre of the building, which is crossed at its front part by another equally spacious, and along these the wards and officers' rooms are arranged, the whole being very compact, convenient, and regular. It thus presents, as a whole, the appearance of a central portion from which two lateral portions branch out in front. The wards are not large, containing only from eight to eleven or twelve beds, but they are tolerably high and well ventilated. Some of them, from the style of building, have small angular recesses, corresponding to projections seen externally, which are by no means convenient or advantageous. The wards are kept very neat and clean, and every effort is made to render them as cheerful as possible, by decorating the walls with engravings, prints, etc., and supplying flowers and ferneries. Each ward is provided with a library, containing an abundant supply of good books, and the patients are also furnished with the daily papers, the Lancashire and Yorkshire Railway Company having kindly allowed a receptacle to be placed at their station where these may be deposited by passengers after they have done with them. At the end of the corridor on the ground floor is the operating and lecture theatre, which is not very large, but is convenient and well lighted. A very good dead-house and post-mortem room are connected with the Hospital. The staircases are broad, and the ascent a gradual one, so that patients are carried upstairs without much difficulty. On each floor is an apparatus for extinguishing fire, which has recently been placed in a most complete state of efficiency, so that, should a fire occur at any time, there would be every probability of its being immediately subdued. A small additional wing is at present being built to contain some small wards, where patients may be placed singly when circumstances require it, such as after a serious operation, and this will supply a want which has been long felt.

On the northern side of the Hospital, and communicating with it, is a church, which was built a short time since through the liberality of the patron, Mr. Heywood. It is well arranged inside, and will seat about 100 persons. Service is held here once every Sunday, which is always well attended. Considerable changes have recently been made with regard to the internal management of the Hospital. Instead of merely having a matron to superintend every department, a lady superintendent has been appointed, one of her principal duties being to look after the nursing, and see that it is kept in an efficient state; while a housekeeper has charge of the cooking department, etc. The nursing is at present in a highly satisfactory condition, the head nurses and most of the under-nurses having undergone a previous course of training. The Medical staff at the present time consists of two Consulting-Surgeons, two Physicians, three Surgeons, a junior Surgeon, and two House-Surgeons. Several students attend the practice of the Hospital, and there is usually a resident pupil. The Hospital contains over 130 beds, the majority of which are devoted to Surgical cases; these are principally of the nature of accidents, and certainly few institutions afford such an extensive field for the observation of injuries of every kind, which are abundantly supplied from the docks, warehouses, etc., many of them being of an exceedingly severe character. During the year 1868 nearly 3000 cases of accident were treated, over 800 of these being so severe as to require admission into the Hospital. Among these there were 662 fractures and 53 dislocations, most of the latter being at the shoulder-joint. These are generally very readily reduced by the heel in the axilla, especially with the aid of chloroform. The fractures are treated by the ordinary methods, and are put up as soon as possible in gum and chalk. Injuries to the head are of very frequent occurrence, the skull being fractured in many instances. These are generally treated on the principle of absolute rest, mental and bodily, and it is astonishing after what severe injuries to the head patients sometimes recover. It is only very rarely that operative interference is had recourse to in these cases. Wounds, of course, are very common; last year they numbered over 1200, and not a few of them are the result of the use of the knife, which is frequently had recourse to by sailors and others during their drunken quarrels. Burns and scalds rank tolerably high, there having been 74 under treatment during 1868. An application which has been found very useful in these cases is a mixture of chalk, glycerine, and carbolic acid, which is painted over, and then the whole is covered with cotton wool.

Operations are of tolerably frequent occurrence. They are chiefly of the nature of primary amputations for injury, and though they include many amputations of the thigh, at the shoulder-joint, etc., and are necessarily often performed under disadvantageous circumstances, yet a large percentage of them recover. Acupressure was at one time extensively employed for the occlusion of the arteries, but, after a prolonged trial, it was relinquished, as affording less satisfactory results than ligature. There is no lack of other operations, such as excisions of joints, etc., but it is very rarely that an operation for strangulated hernia is required.

As illustrations of the nature of some of the accidents which come under treatment, the following cases may be mentioned:

A man was admitted apparently in a state of drunkenness, but said to have been knocked down by a cab. He was quite insensible, and breathed stertorously: the pupils were equal. He remained in this condition until his death, which took place about twenty hours after admission. On making a post-mortem examination, it was found that there was a fracture four inches long at the base of the skull, with great extravasation of blood between the brain and dura mater. The scalp was much bruised, especially on the right side.

A man was brought in suffering from a severe injury above the right orbit, caused by a ship-scraper. He was sensible on admission, but soon afterwards became insensible. The right pupil was rather larger than the left. A few days after he moaned, and put his hand to his head, as if in pain. A blister was applied over the scalp. On the sixth day, Mr. Lowndes, under whose care the patient was, trephined, and pus was discovered and evacuated, but the patient never rallied, and died two days after. At the post-mortem examination a fracture was found extending from one orbit to the other, and through the roof of the left orbit. There was a collection of pus between the skull and dura mater.

A patient has been recently discharged who was admitted into the Hospital in September last, under Mr. Nash's care, on account of a severe injury to the spine and head. He fell about 25 feet on his head and left shoulder, it was supposed whilst in a fit. He was nearly insensible, but could speak a little when roused. Two days after this he had slight priapism, and could not pass his urine; he lay with his feet everted, and there was total loss of sensation and motion in the legs, partial loss in the arms. He subsequently passed fæces involuntarily, and had slight delirium. The priapism ceased, and sensation partially returned in the legs, and improved in the arms. The temperature was found to be only 96° at the upper part of the thigh, 2° lower than in the axilla. On examining the spine a projection of one of the lower dorsal vertebræ was discovered. The patient improved somewhat, but remained powerless. Before his discharge the spine felt firm, and there was no tenderness on pressure over the seat of injury.

A short time since Mr. Manifold performed amputation at the lower third of the thigh in a case where the upper part of the tibia had been smashed, the fibula being left entire, but having been dislocated at its upper articulation. A large mass of muscle protruded through a wound five or six inches long. A few days after the operation the patient became very restless and delirious, though the stump continued quite healthy. A considerable quantity of morphia and liq. opii sedat. had to be administered, both by the mouth and by subcutaneous injection, before he could be calmed and got to sleep. Ultimately he slept nearly a whole day, and afterwards made a very favourable recovery.

A curious case occurred recently, which was under the care of Mr. Bradley. The patient had his foot crushed, and this was removed by Syme's amputation. The stump progressed very satisfactorily, but about a month after the operation the patient became suddenly and completely insensible, and remained in that condition about six hours. The urine was drawn off and examined, but did not contain any albumen. The same thing occurred on several occasions, and sometimes the patient was delirious. Ultimately these attacks quite ceased, and the patient made a good recovery.

Passing on now to the Medical wards, these present a considerable number of acute cases, pneumonia and acute rheumatism ranking high among them. In the treatment of the former no routine plan is adopted, tartar emetic, with other lowering measures, on the one hand, and various degrees of stimulation on the other, being had recourse to in appropriate cases. As a rule, it is found that the moderate stimulant plan is attended with much success. Venesection is never employed in this disease, and hardly ever in any other. Acute rheumatism is treated by alkalies and opium, the joints being wrapped up in cotton wool, and there is every reason to be satisfied with the results of this treatment. As there are a great many seamen admitted into this Hospital, the diseases prevalent among that class, such as scurvy, dysentery, ague, etc., are proportionately frequently met with. Scurvy was a few years ago exceedingly common, but lately the number of cases has markedly diminished. Thus, whereas in 1866 there were 34 cases admitted, in 1867 they only amounted to 14, and in 1868 to 12, which include 5 cases where the characteristic symptoms of the disease were hardly to be seen. It is rarely now that the exceedingly severe cases which were formerly so frequent are met with, where the patients were admitted almost dying from exhaustion, and with their mouths in a fearful state. Fortunately even the worst cases can be very rapidly cured, and there is hardly any disease which shows such satisfactory effects of treatment as the one under consideration. This treatment merely consists in the free use of lime-juice, with nourishing and supporting diet, including vegetables as soon as they can be taken. Stimulants are often required in severe cases. A wash containing a little Condy's fluid, and subsequently chlorate of potash with decoction of bark, is found to improve the condition of the mouth very much. Cases of ague generally get well soon under the use of quinine in moderate doses; about three grains every four or six hours is what is generally given, and this is found quite sufficient even in the worst cases. Dysentery is often an exceedingly troublesome affection, as it has in many cases become chronic before the patient is admitted. Dover's powder in small doses has proved very useful in this disease, and occasional enemata of starch and laudanum also afford considerable relief.

Among the urgent Medical cases admitted into the Hospital during the year, there are several of acute alcoholic poisoning, which during 1868 numbered thirty-six. This generally results from the practice of sucking new rum from the casks at the docks, and not infrequently very young boys are the subjects of it. The patients are generally completely insensible, exhibit no feeling when the eyeballs are touched, while the pupils are insensible to light; and the breathing is often stertorous. They sometimes remain in this condition for several hours. The treatment adopted is to pass the stomach-pump immediately, wash out the stomach with lukewarm water, to use galvanism, to apply sinapisms to various parts, and to keep the extremities warm. Almost every case recovers under this treatment, but sometimes it is found necessary to have recourse to artificial respiration, the administration of stimulant enemata, etc.; occasionally a case terminates fatally, but this very rarely happens.

The following are some of the cases of interest which have recently occurred in the Medical wards:—

A woman, aged 46, was admitted under Dr. Waters, suffering from complete right hemiplegia. She improved somewhat, but in a few days had a series of "fits," after which she again made some progress, but in about a month she suddenly became unconscious, and remained in that condition until her death. On making a post-mortem examination, the remains of a clot were found in the white substance of the left hemisphere of the brain, and the brain-substance around the clot was softened.

Another case under Dr. Waters was that of a woman who was admitted on account of intense dyspnœa. On making an examination, a loud systolic bruit was heard at the apex of the heart, and there were evidences of this organ being hypertrophied. She was ordered some sulphuric ether and tinct. digitalis, with a tablespoonful of brandy every three hours, and croton-oil liniment to be applied over the front of the chest. The urine was found to be slightly albuminous. A short time afterwards a severe attack of hæmoptysis came on on the day when the menses ought to have appeared, but they did not. The external genital organs were greatly discoloured from venous congestion. Her legs became very œdematous, and punctures had to be made to relieve them. She gradually sank and died in a few days. No post-mortem was allowed.

Dr. Waters has at present under treatment a lad, aged 12, in whom a loud pre-systolic bruit is heard at the apex of the heart, the result of rheumatism. He keeps in very good health, the only thing he suffers from being occasional slight palpitation.

A seaman, aged 44, was brought in a short time since, under the care of Dr. Roberts; he was said to have been suffering for a long time from dysentery. He was extremely emaciated and weak, had some diarrhœa, which was checked without much difficulty, and the stools did not appear to be at all dysenteric in their characters. He complained of a good deal of pain over the abdomen, and suffered much from flatulency. The abdomen then began to enlarge, and it became evident that fluid was collecting in the peritoneal cavity. Ultimately the ascites became very great. There was also some anasarca of the lower extremities. There was no appearance of jaundice. The urine was free from albumen. He continued in much the same condition for some time, the bowels, however, becoming very much constipated and hard to relieve. Ultimately death took place rather suddenly. At the post-mortem examination an enormous quantity of fluid was found in the peritoneum, on the surface of which floated the small intestines, closely in contact with the abdominal wall, so that, had paracentesis been performed, they would certainly have been injured. The liver was somewhat contracted and granular, and embedded in its substance were some white cancerous masses, one being about the size of a large orange; but this was evidently made up of smaller masses agglomerated together. These gave no indication of their existence on the surface; they felt hard, but broke down readily under pressure. The large intestines contained a considerable quantity of hardened fæces, but there was no appearance of any dysenteric ulceration.

A negro, aged 31, was admitted lately, under Dr. Roberts, with extreme anasarca of the lower extremities, and evidences of fluid also in the abdomen and chest. He had been a cook on board ship, and attributed his illness to cold, there being no history of any previous serious illness, while he stated that the dropsy had only been coming on for about two months. He had intense dyspnœa and cough, and was in a very low condition. On examination, it was found that the heart was greatly hypertrophied and dilated, but no murmur could be detected. The liver was much enlarged; the urine was albuminous. He became gradually worse, and died about a month after admission. At the post-mortem examination, the heart was found much hypertrophied and dilated, especially on the left side, and weighed twenty-six ounces. The valves were almost healthy, except some slight thickening of the aortic valves. There was extensive atheroma of the aorta. A great deal of fluid existed in the cavities of the pleuræ and peritoneum, and the lungs

were œdematous and congested at the base. The liver was fatty, and weighed ninety ounces. The kidneys were also enlarged and fatty.

There are some very interesting cases of cerebral disease in the Hospital at present. One is that of a man who is totally blind, and is partially paralysed on the left side. He complains of a heavy pain in the front of the head, but the intellect seems quite unaffected. He has had syphilis, and some time since suffered from nodes in the skull. He is at present being treated with large doses of iodide of potassium and counter-irritation to the back of the neck, but no improvement is taking place.

Another case is that of a man also partially paralysed on the left side, the paralysis having come on suddenly. His speech is very thick and indistinct. He has no marked head symptoms. A few days ago he had several epileptiform fits, with foaming at the mouth, etc., and afterwards complained of much pain, with numbness along the left arm. He has improved somewhat since his admission.

There is a third case in which the left side is also paralysed, and the speech much affected. In this case there is albuminuria. These three patients are all middle-aged men.

Before concluding, there are two other cases which have lately occupied the Surgical wards that are deserving of notice.

Mr. Bradley had under his charge a case of tetanus which came on a few days after a fall, which produced some injury of the nose, wrist, and knee. The patient was a man aged 39, and stated that after he first felt stiffness about the jaw, he went out and caught cold. The stiffness increased, and he was brought to the Hospital on April 4. He presented an anxious expression; the jaw was nearly fixed, and any attempt at swallowing brought on a spasm. Solution of morphia (gr. $\frac{1}{4}$) was injected into the cheek, and this repeated several times, affording considerable ease. The bowels were opened by croton oil, and poultices were applied round the jaw. Afterwards a mixture containing tincture of opium and sulphuric ether was given. On April 6 he again suffered great pain, difficulty of breathing came on, and opisthotonos. Injections were continued every four hours, but the patient died early on the morning of the 8th. A post-mortem examination was made, and the spinal cord carefully examined, but the only thing observed was congestion of the inner surface of the anterior portion of the membrane in the cervical region.

A man has just left the Hospital who came in, under Mr. Nash, on account of a large tumour on the left side of the neck. It had a semi-elastic feel, and was diagnosed to be of a malignant nature. There was ptosis of the left eyelid, a greatly dilated and immovable pupil, no strabismus, but the eyeball was fixed, and sight was completely lost on that side. The patient also complained of a feeling of numbness on the left side of the face, and a difficulty in moving the jaw. He had a slight feeling of fulness and pain over the left temple. He did not sleep well, and had lost some flesh, but in other respects he felt very well. As it was evident that there was some intracranial mischief, it was determined that it would not be advisable to operate, and the patient therefore left the Hospital.

In conclusion, we must beg leave to return our especial thanks to Dr. Roberts and to the other officials for their kindness and courtesy, as well as for the information they have given us.

French Medical Examinations.—The French Medical students do not, like our brave youth, resort to the grinders to get them through their examinations, but have a plan of their own. "It is notorious," says a writer in the *Lyon Médical*, "that the best preparation for examination is not to pore over books or to attend the clinics, but to industriously attend the examinations (which our readers will recollect are public in France). The frequenters of the examination hall soon learn to know all the questions, for they are continually being repeated, most of the judges moving within a circle of subjects from whence they rarely depart. The essential thing is to get to know these, and most especially to remember the reply desired by the examiner. By repeating the consecrated phrase, one is saved from a bad fate; or if by chance, quitting the ordinary route, we have passed into some unknown region, the reply which we have succeeded in neatly planting serves as our safeguard, for the judge, retaining a favourable remembrance of it, gives us his protection when the votes are taken."

Cysticercus Cellulosus in the Palm of the Hand.—In the *Union Médicale*, May 27, M. Lafitte relates a very interesting and, as regards its site, probably unique case of cysticercus cellulosus, which was found in an encysted tumour the size of a pigeon's egg in the palm of the hand. A woodcut is given.

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Medical Times and Gazette.

SATURDAY, JUNE 5, 1869.

THE SOCIETY FOR AIDING THE SICK AND WOUNDED IN WAR.

The projected International Conference of this Society was opened in the hall of the Chamber of Deputies in Berlin on April 22. The several foreign delegates were treated by their Prussian Majesties and the Prussian Royal Family with the utmost courtesy and attention. Her Majesty the Queen and her Royal Highness the Crown Princess were present, and remained till the close of the first sitting, and they attended on the following days. The assembly consisted of 160 delegates, seven of whom were ladies. Messrs. Farley and Burgess were deputed to attend the Conference on behalf of the Society of the Knights of St. John in London. Professor Longmore attended as the representative of our Secretary of State for War, for whose information he will furnish a report of the proceedings. It was a general cause of regret that Mr. Longmore had not for so far taken any part in the discussions; this may probably be owing to the fact of his having only recently been pronounced convalescent from a serious illness. We have no doubt that the opinion which we have already expressed, that his lately published work on Army Hospital transport would be a most important contribution in furtherance of the objects of the Society, has been fully concurred in by the members of the Conference, and that their high estimation of its value must have increased their regret that Professor Longmore should not have been able to take a more actively personal share in their proceedings.

At the close of their first sitting the delegates were introduced to his Majesty the King at 4 o'clock, and dined together in the Hôtel du Nord at 5 o'clock. On the evening of April 23 the members of the Conference were invited by his Majesty to a representation in the Opera House. On the 24th they visited the Barrack Hospital, the Charité, and the new buildings of the Women's Hospital Society, and went to Bernau by an extra train with the new carriages for the transport of the sick. On the 25th they partook of a *déjeûner* in the new palace at Potsdam on the invitation of his Majesty, and then drove through the royal gardens, and on the following Monday and Tuesday they examined the Bethany and St. Hedwig's Hospitals.

At the election of the Presidential Board the choice fell on Herr v. Sydow as President, and on Count Moynnier and Count Serrurier (France) as Vice-Presidents.

Two commissions having been appointed, a discussion began on the first day about par. 2 of the programme determining the

mode and fixing the limits of the Society's sphere of operations in a land campaign. Dr. Löffler defended the propositions of the Prussian Central Committee, of which we have on a former occasion given an abstract. The proposal that the members be present at an actual battle, and aid in removing the wounded in special ambulances of the Society, is to be abandoned.

President Moynnier supported the Geneva proposals as to the relations between the Societies and the military authorities. The decision was in favour of the Prussian plan, that, in procuring technical aid of any kind, the official models of each country, so far as it can be done, are to be followed, and that the operations of the Society shall be conformable in every respect to the official dispositions. The assembly expressed its approval of the French wish that the railway tariff might be lowered for the persons and effects of the Society. France wished to meet the question whether the sanitary officers of the Society should bear arms with a direct negative, but the Congress left it to the various Governments to decide this.

The Government of the United States, not having as yet given in its adherence to the Convention, was not represented at the Conference at Berlin. The hope that it might be otherwise not having been fulfilled, Dr. Hepké, a delegate of the Central Prussian Committee, on the last day of the meeting, proposed the following motion, which was unanimously carried:—

"The International Conference, having arrived at the close of its labours, expresses its lively regret at having been deprived of the valuable assistance of delegates from the United States of North America. Convinced that this grand and noble noble nation, one of the first in the world, having rendered eminent services to our great labour of humanity, will receive with sympathy the result of its labours, the Conference charges its board to communicate with the Government of the United States of North America, and to the different associations for the aid of wounded soldiers, the reports and abstracts of its meetings."

It was decided that the next international conference shall be held at Vienna in 1871, for which the Austrian delegate returned thanks to the assembly on the part of his Government.

M. de Sydow again informed the delegates before their separation that the Central Prussian Committee has offered a prize of 100 *frederics d'or* for the best treatise in German, French, or English, to be sent in before May 1, 1870, on the following subjects:—

"In what circumstances, under what form, and with what amount of success the humanity of individuals has up to the present day seconded the efforts made during naval warfare to save the shipwrecked, and to take care of the wounded and sick of belligerent fleets?

"In what measure and conditions could the aid societies with any probability of success labour to attain that end?

"What steps should be taken in time of peace to obtain a result in accordance with the ideas of humanity on the matter?

"Would the realisation of these ideas be advanced or assured if the permanent committees of succour, whose duty it should be in time of war to aid the sanitary service of armies, were to put themselves in communication with the already existing societies for the saving of life from shipwreck?"

THE WEEK.

TOPICS OF THE DAY.

THE *Gazette* of Tuesday last contains the announcement that, on the occasion of the celebration of her Majesty's birthday, the Queen has been graciously pleased to promote Thomas Galbraith Logan, Esq., M.D., C.B., to be an Ordinary Member of the Military Division of the Second Class, or Knight Commander of the Most Honourable Order of the Bath. Sir Thomas Logan has, during his tenure of office, earned such golden opinions from the department over which he presides, and from the Profession at large, that it is almost superfluous to say his knighthood will be received with general satisfaction. A more deservedly popular Director-General has never presided at Whitehall-yard. In the same *Gazette* it is announced that Inspector-General of Hospitals and Fleets George Burn, M.D., Inspector-General of Hospitals George Steward Beatson, M.D., Deputy-Inspector-General of Hospitals Hampden Hugh Massy, M.D., and Staff Surgeon-Major George Saunders, are appointed Ordinary Members of the Military Division of the Third Class, or Companions of the Bath; and that John Grant Stewart, Esq., M.D., Inspector-General of Hospitals and Fleets, has been appointed an Ordinary Member of the Civil Division of the Third Class, or a Companion of the said Most Honourable Order. To all of these gentlemen we offer the congratulations of the Profession. We should have liked, however, to have seen the name of Dr. Currie in the same list. It will be remembered that this officer's promotion to the rank of Inspector-General of Hospitals for services in Abyssinia had the paradoxical effect of placing him upon the retired list at the very summit of his career. The services of Dr. Beatson as Principal Medical Officer of British Troops in India, of Dr. Massy as a regimental Surgeon in the same country during the mutiny of 1857 (and more lately as head of the Sanitary Branch of the Director-General's Office), as also those of Surgeon-Major Saunders in China, well entitle them to the distinction. As the Government shows an inclination to recognise the services of naval Medical officers, we may hope that some amelioration in the general condition of that service is in prospect, and that it will before long rise, in popularity at least, to the level of the army.

Mr. Goschen's speech, in moving the second reading of the Poor-law Amendment Bill, afforded an instructive commentary on the evils of spasmodic legislation. Mr. Hardy's Bill of 1867 was the very type of this kind of legislation. The popular cry in which it had its origin has long since died away, and, as Mr. Goschen confessed, under the influence of doubled and trebled rates, popular feeling has undergone a great revulsion. This will be no matter of wonder when it is known that the expense of the new asylums, schools, and infirmaries, according to Mr. Goschen's calculation, which is probably under the mark, would amount to £1,400,000, or nearly as much as the total amount expended since the issue of the Poor-law Commission in 1834. Mr. Hardy's estimates of expense have proved to be in several cases less than one-half of the real amount. In the meanwhile the pauper population have increased about one-third. Mr. Goschen's remedy for this state of things is classification of paupers and aggregation of parochial districts for the erection of schools, asylums, and hospitals. By this means he believes that the outlay will be reduced to something less than £1,000,000. Of course, with a pauper population, thus increasing, it would be wonderful if the present buildings would accommodate the sick poor. If, therefore, the sick are to be treated in infirmaries, the buildings must be increased in proportion to the inmates. Where this is to stop it is difficult to calculate. But we deny that a large amount of sickness can be better treated in such infirmaries as justice to the ratepayers would sanction than in patients' homes. Of course there are cases, such especially as surgical accidents and fevers, which imperatively demand removal to a Hospital; but a large amount of sickness is not of this kind. To take the whole sick of a district away from their families, and to mass them together in a huge Hospital, is a measure neither in accordance with the dictates of morality, science, nor common sense.

The Chancellor of the Exchequer has carried his Customs and Inland Revenue Duties Bill, with but very few amendments, through committee. We are therefore all committed to the payment of five quarters' income-tax in a year. We noticed that Mr. C. S. Read made a gallant attempt to obtain the exemption of male servants under sixteen from duty, but was defeated on a division by 57 to 28. The Doctor's boy is henceforth promoted to the dignity of Jeames.

The election of Councillors at the Royal College of Surgeons will take place on July 1, and Monday, the 9th inst., is the last day on which nominations can be received. Mr. Mackmurdo

will not again enter the lists, but Mr. Solly and Mr. Adams seek re-election. With the new candidates—Messrs. Gay, Erasmus Wilson, Erichsen, and Henry Lee—in the field, the electors will have no difficulty in choosing fit men for the Council; in fact, for whichever they vote they cannot vote wrongly. As some misconception exists in certain quarters with regard to Mr. Wilson's recent grant for the purpose of founding a Professorship of Dermatology to the College, it should be clearly understood that, in case the College of Surgeons had declined to accept it, Mr. Wilson was prepared to offer it to the College of Physicians, or to St. Mary's Hospital. We believe that before he made the offer to the College of Surgeons he had made a similar one to the University of London. With regard to Mr. Solly, it is well known that he has been a teacher of Anatomy and Surgery for more than forty years. He has been for ten years a member of the Council, and has every reasonable prospect of being elected President if he should be in the Council next year. Mr. Solly may lay claim to the consideration due to his long-established Professional character. He, too, has always been a Liberal, though he very justly refuses to pledge himself to specific measures. There is therefore ground for an appeal to the good feeling and *verecundia* of the younger Fellows to abide their time and delay their election to the Council one year, rather than allow the career of so distinguished a Surgeon to be mulcted of its much-coveted climax of honour. Mr. J. Adams is considered sure of re-election on a future occasion, even if he should not succeed now.

We are glad to learn that Mr. Swan, the eminent anatomist, and member of the Council of the College of Surgeons, is not in such imminent danger as his friends have lately feared.

The refusal of Mr. Skelton, M.R.C.S., of Great Russell-street, Bloomsbury, to have his child vaccinated, and the fact of his having been therefore fined at Bow-street, have been made the text for much comment in the daily press. We have not the slightest sympathy for Mr. Skelton. We hold that the evidence in favour of vaccination is sufficient to convince any but the wilfully blind, and that every means short of coercion should be used to induce people to have their children vaccinated. But we can conceive no means better suited to get up and keep alive an anti-vaccination sect than the present Compulsory Vaccination Act, with its fines and imprisonments.

In the long-pending case of the Queen *v.* Diplock, the Court of Queen's Bench has at last given a verdict in favour of Dr. Diplock, on the ground that the sheriff's declaration at the poll was a judicial act which could not be impeached or impugned. Mr. Goldney's Bill for changing the mode of electing county coroners, as will be seen from our Parliamentary Report, has been considerably altered from its original draft. It is now proposed to vest the election of county coroner in the registered freeholders, and not in the Home Office, or with the Lord Chancellor. Although we think this leaves the main evil of an expensive contest untouched, it will be a small instalment of reform, inasmuch as it will get rid of graveholders, watermen, and such "free and independent voters."

A new Dispensary has been opened at Bournemouth. The *Bournemouth Visitors' Directory* gives a florid account of the opening meeting and the speeches which were delivered on the occasion. Bournemouth is built, we believe, on land originally of little worth. Building, however, has proved so profitable that some of the poorer houses are crowded closely together in defiance of hygienic laws. On one of the roads out of the town, one of the most delightful walks—a cheap luxury—for the sick poor has been spoilt by a high brick wall, which extends for miles around an enclosed portion of heath, cutting off the view, but improving the property of the landowner. The sick poor, however, are to be blessed with a Dispensary, to which no doubt the owners of property at Bournemouth will subscribe largely. The meeting terminated with the singing by the choir of the appropriate hymn, "Brief life is here our portion."

THE UNION OF THE MEDICAL SOCIETIES.

The scheme for the union of the Medical Societies has finally passed the Royal Medical and Chirurgical Society. It has been transmitted to the other bodies, and Dr. Pitman, Mr. Gascoyen, and Mr. Holmes, have been nominated as the representatives of that body in the general committee to be formed of the various societies. It must thus far be satisfactory to the Council of the Society that their scheme, notwithstanding the prolonged discussion, has been virtually adopted by the body of the Fellows. Nor are the Fellows less to be congratulated on the liberal, almost magnanimous, offer of the Society. It has often been urged against the Medico-Chirurgical Society that it was narrow and exclusive, and that it has stood in the way of Medical advance. Had such a reproach ever been applicable, the Fellows have wiped it away by the liberal conduct on the present occasion. They have shown themselves anxious to bring together into one body the various Medical societies. On any honourable terms they are willing to give up their property, their library, and, if we must say so, their exclusiveness. Under such circumstances we trust that they will be met by the other bodies in a friendly spirit. And of this we have good hope. We have full confidence in the majority of the societies, but, as we have hinted, the Obstetrical may stand in the way. We have also pointed out why this is so. Obstetric instruction has undoubtedly been neglected. The Practitioners of the obstetric art themselves have but recently been emancipated by the College of Physicians. No one of them has ever yet filled the presidential chair, and we can fully sympathise with men earnest in their calling who want to elevate their profession, and to secure for it a more assured and a more honourable position. Let us hope, both for their own sakes and for that of the Royal Society of Medicine, that they will see their way to act heartily in unison with the other Medical bodies in the formation of the new one.

KING'S COLLEGE PRIZE DISTRIBUTION.

The Archbishop of Canterbury distributed the prizes in the Medical department of King's College on June 2. His Grace, who was supported by the Bishops of London and of Gloucester and Bristol, was most emphatic as to the necessity of the widest possible basis of classical and scientific knowledge before Professional education, in its technical sense, is begun. The Principal and professors who presented the student prizemen to the Archbishop were warmly received by the assembled students, and it would not be easy to say whether the late Principal, Dr. Jelf, or his successor, Dr. Barry, or Professor Partridge was hailed with the loudest acclamations.

THE STRYCHNIA CASE IN SOUTH WALES.

A Medical Practitioner in bad health, who was residing in a village near St. David's, has been poisoned by strychnine under singular circumstances. Being in the habit of taking large doses of acetate of morphia, he sent his bottle and a written order for some of the solution of that alkaloid to Mrs. Hicks, who, with her daughter, conducts a chemist and druggist's business at St. David's, and is duly registered as chemist and druggist. She takes down a bottle labelled "acetate of morphia," which had been in her shop about three years, and which she had never opened before, although her son, Mr. Hicks, a Surgeon, had once taken two grains out of it. She then proceeds to make a solution, not after the new *British Pharmacopœia*, which is now the only legal standard, but after the *London* Pharmacopœia of 1851, which she says she had used for thirteen years, and which unfortunately contains a formula exactly twice the strength of the now universally adopted solution. The fatal bottle is conveyed to the invalid, who takes a very large dose—a quantity which ought to have been equivalent to 1½ grain of alkaloid, but which really contained 3 grains. He dies in ten minutes with all the symptoms of strychnia

poisoning. On further investigation, it turns out that the bottle labelled acetate of morphia really contained strychnia, a double dose of which had thus been substituted for the morphia. There is no evidence to show that Mrs. Hicks was to blame for this, and it seems clear that the strychnia had been sent by mistake for morphia from the wholesale chemist three years ago. We must express our surprise that a registered chemist and druggist, even at the extremity of South Wales, should not be aware of the existence of the British Pharmacopœia. The double dose took away the patient's very slender chance of escape. Concentrated remedies are admirable things in their way: but since any mistake may be fatal, it is better that no one should meddle with them who is not in the constant habit of using them and accustomed to take precautions.(a)

CONTAGIOUS DISEASES AT ALDERSHOTT.

A CORRESPONDENT informs us, with reference to our late remarks on the increase of venereal diseases in some regiments in camp since the arrival of the militia regiments, that the latter marched into camp with a clean bill of health, having been thoroughly inspected by their own Medical officers before starting for Aldershott, and that in a strength of 1350 men there had not yet been one case of syphilis. This is as it should be.

DUBLIN OBSTETRICAL SOCIETY.

THE debate of this Society on puerperal fever has not yet been closed. On May 22 Dr. Sawyer occupied the meeting for the whole night. At the following meeting Drs. Beatty, Stokes, and Henry Kennedy spoke at considerable length and with great ability. Dr. Byrne moved the adjournment, and will commence the proceedings of the next meeting, and will be followed by other speakers. This will probably close the debate, and Dr. E. Kennedy will then have a night for his reply. The decision of the Society on such an important question will be looked for with considerable interest. Dr. E. Kennedy has established some very strong points of his case, but the question as to the feasibility of his proposed plan is rendered very difficult by considerations of expense. The matter is so important, that after such full discussion we hope the decision may be well considered and authoritative, and probably the best plan to render it so would be by a report from the committee of the members, as is the custom in the French Academy of Medicine.

THE ARMY MEDICAL SERVICE DINNER.

WE are glad to hear that our good wishes for the success of the dinner of the officers of the British and Indian Medical Services, which took place on Friday evening, the 28th ult., have been fully attained. About seventy gentlemen, many of whom were of the Indian Service, sat down to dinner. Everything passed off most satisfactorily, and the hope was universally expressed that the good custom would be well maintained now that it has been set going. Considerable regret was felt and expressed that the Medical Officers of the Navy had not been invited to join: but it is hoped that next year there may be a social gathering of the Medical officers of the three services.

"FABRIC OF ARTIFICIAL CHAMPAIGN WINE."

WE reprint *verbatim* from the inventor's prospectus his proposals for selling the privilege of making artificial champagne at about 2d. per bottle, of which sum the value of the liquid itself will be $\frac{3}{5}$ of a penny. Should this scheme gain popularity, our Medical brethren must beware how they incautiously prescribe what used to be a wholesome stimulant. Certes, we believe that the stomach of any one who may partake of this "artificial champaign, grand mousseux first quality," will find the truth of the manufacturer's promise, "we join the plan of our apparatus to fabric instantaneously vinegar."

TO DELIVER FOR ALL COUNTRIES

FABRIC

OF ARTIFICIAL CHAMPAIGN WINE.

ESTABLISHMENTS TO FORM IN EVERY LOCALITY.

Patent of Invention for Belgium, France and Pontifical Estate.

Sole production of artificial champaign, grand mousseux first quality, the fabric price being only from seven to eight centimes per bottle. This production is owned to the analysis of the wines (fermenting) of Epernay, Ay, Chalons, etc.; it is produced by infusion, is clear, very fermenting, has the taste of the true champaign wine and betters in getting old.

Price of production per thousand bottles.	Raw materials	fr. 60	Together 240 frs.
	Corks, tin, twine... ...	,, 15	
	Wages, one days work ...	,, 5	
	1000 bottles, the hundred 16 f.	,, 160	

In selling the thousand bottles at one franc each one realizes a profit of 760 francs.

The arrears of this production can be transformed in excellent vinegar, indicating 25 to 26°, capable to rivalize with that of Orleans. In transmitting our process of production for artificial champaign wine, we join the plan of our apparatus to fabric instantaneously vinegar. Important profits, concurrence made impossible (Patented in March 1859).

CONDITIONS FOR DELIVERING OF THE PRIVILEGE.

We deliver the right to employ our fabriemark for the whole duration of our patent, 1869 till 1885—15 years for the price of *one hundred francs*, payable per post-assignation or in banknotes, letters franked and recommanded. The proceding and instructions to fabric this artificial champaign wine, given by letter, are sufficient to make all necessary manipulation, knowledge of the raw materials, and to obtain the same results as ours.

At foot the protocoll of the society of industrious sciences of Paris and a third list of the Papentees.

For Belgium, the Netherlands, Germany, Spain, Italy, England and Switzerland to adress oneself; per letter franked, to

MESSS. LAHAUT ET CO., CHIMISTS,
111, Rue Lairesse, à Liége. — Belgium.

For cessions for France to direct to Paris, 21, rue Grange-aux-Belles.

PRELIMINARY SCIENCE TRAINING IN FRANCE.

WE commend to the notice of those of our readers who are interested in the reform of Medical education in this country the following lament, which appeared in a late number of the *Gazette des Hôpitaux*. The article is headed "The Faculty of Medicine and the Faculty of Biology," and the writer (Dr. E. le Sourd) says:—

"The separation is becoming daily more marked between clinical Medicine and the Medicine of the laboratory; between Medical observation, strictly so called, and the application of chemistry and physics to Medicine; between the teaching of the Medical Profession, and the teaching of Medical biology or physics and chemistry. A Faculty of Biology has been installed in the Faculty of Medicine, and, like all parasites, which end by killing the beings by which they exist, that which is not Medicine in the Faculty has succeeded in stifling the Medical element. 'Medicine is passing in our time through a curious phase of renovation; sciences which were formerly styled accessory, and which were somewhat neglected, now become almost of first importance.' Such is the sentence just pronounced by the Minister of Public Instruction, in defence of his university budget, to justify the foundation of public laboratories of chemistry, physics, physiology, and histology. It is the funeral oration of the Faculty of Medicine of Paris. Formerly Medicine and Surgery were taught there to make men useful to the sick, and physics and chemistry were taught but as accessories to special Medical education. In the present day sciences which used to be regarded as accessory are almost of principal importance, and such is the Faculty of Medicine as it appears to the Minister of Public Instruction. In this new direction given to Medical studies what becomes of Medicine? It is easy to foresee, and, indeed, it is known already by the clinical inefficiency of the Surgeons who present themselves for the examination for the Fellowship and for Hospitals, or by the weakness of the competition for the House-Physicians' posts. The pupils know some biological physics, some comparative physiology, and something of histology, but they are almost ignorant of common anatomy, of regional anatomy, of human physiology, of common pathological anatomy, of symptomatology, and of the principles of diagnosis—that is to say, of what constitutes the basis of practical Medicine and Surgery. *Pauvre Faculté!*"

We would respectfully observe that the abuse is no argument against the use. To educate boys in experimental physiology

(a) On referring to the register of chemists and druggists we find the name of Anne Hicks registered as having been in business before 1868. On comparing specimens of acetate of morphia and of strychnia, kindly shown us by Mr. Squire, it is evident that the acetate of morphia is decidedly of a brownish hue, whereas strychnia, whether in crystals or powder, is white.

and biological physics when they do not know the A B C of common anatomy and physiology is absurd; but what we complain of is, not that our young men get too high a science training, but that they do not get enough of the mere commonplace sort, so that they come into the wards ignorant of common anatomy, physiology, and chemistry.

FROM ABROAD.—THE MECCA PILGRIMS AND THE CHOLERA—OTITIS OF NEW-BORN INFANTS.

M. Barth, at the last meeting of the Académie de Médecine, terminated the reading of a very long report on the Cholera Committee appointed to consider the circumstances attending the epidemics of 1854, 1865, and 1866. The Academy received it with the highest testimony of favour, but agreed to defer discussion on its conclusions until it had been printed in the official bulletin. M. Fauvel, however, who took so active a part in the recent International Sanitary Convention held at Constantinople (of which he has since published the proceedings in a convenient form), requested permission to address the Academy, not on the report, but in relation to the improved sanitary conditions which now attend the pilgrimages to Mecca. He observed that not only is our Indian administration very strict in limiting the number of pilgrims allowed to embark in each ship, but that an effective surveillance has been established on the Red Sea by the Ottoman and Egyptian governments, the former expending between 500,000 and 600,000 francs for the *personnel* of the surveillance alone. Since the Constantinople conference, the canals have been cleansed and the aqueducts repaired, so that Mecca is abundantly supplied with water. The pilgrims assemble at Minah, some leagues from Mecca, for the religious festivities, where they are agglomerations of more than 100,000 men under the worst hygienic conditions and exposed to a burning sun. In 1865 there was a want of water, while all the animal detritus were left to putrefy in the open air. Now these are deeply buried, water is abundant, and the numerous privies which have been constructed are thoroughly disinfected with lime and sulphate of iron. This year there was no case of cholera on board any of the vessels, nor did the disease appear during the festivities. It is true that the temperature was very moderate (27° to 29° Reaum.), but the numbers were greater than any since 1865, being estimated at about 110,000. Of this number 26,993 were brought in 40 ships to Djidda, 6150 of these coming from the continent of India, 4222 from Java and neighbouring islands, 11,801 from Suez, and 3776 from various parts, principally the coasts of the Red Sea. The greater number (about 70,000) came by caravans from Egypt, Damascus, and other places in the interior. During the three days the festivities continued only 40 deaths occurred among this great concourse, and several of the pilgrims were in a dying state when they arrived at Mecca. The Ottoman authorities were most active and intelligent in their operations, and the good results that have attended the sanitary measures adopted have made a great impression upon the inhabitants of the countries. The Egyptian government has been very lavish in its promises, but very defective in realising them, and, had cholera broken out, they had provided no quarantine measures. It is very desirable that a quarantine station should be established near the entrance of the Red Sea in case of cholera breaking out on board any vessel on future occasions.

As to the fears that have been expressed that the cholera will be more readily imported after the opening of the Suez Canal, M. Fauvel does not partake of them. It is not, in fact, the ships which sail direct from India to European ports that are to be feared, for they never import the cholera. This is a matter of actual observation. What are really to be feared are centres of aggravation (*foyers de renforcement*), like Mecca and Egypt. Cholera ravaging Egypt will be with certainty transmitted to European ports, in spite of all the measures actually in force.

M. Jules Guérin thought one point in M. Fauvel's address inconsistent with his belief in the transport of cholera. He stated that, of the 26,000 pilgrims who came by sea, 6000 were from Bombay, where the cholera prevailed at the time. How was it that none of these 6000 carried with them the germs of the disease? Then of the 80,000 who came by land some must doubtless have come from places infected with cholera, and how is the absence of the disease among them to be explained? M. Fauvel replied that the 6000 pilgrims did not come exclusively from Bombay, but from various parts of the whole Indian coast. At the time of their departure the epidemic of cholera at Bombay had lost much of its intensity. In fact, 113 deaths in a week was no great mortality in a town of from 500,000 to 600,000 inhabitants. Moreover, it is a result of observation that of 100 ships leaving a town in which cholera prevails, but 5 or 6 of these will have cases of the disease on board. As to the 80,000 pilgrims arriving by land, inquiries made concerning them state that not a case of cholera occurred among them. They did not come from Bombay or any other part of India, for their caravan journey would have lasted more than a year; and, if such a journey were possible, they would not bring traces of the cholera with them, as they must either have succumbed or arrived cured. The free ventilation in the deserts and mountains through which they would have had to pass would have dispersed all miasmata.

"The general conclusion is that the cholera did not break out in Mecca under circumstances favourable to its explosion, and that, consequently, it is not endemic there, as it has been stated to be, but is imported there—a fact which may be adduced in favour of M. Barth's report. We may give rise to typhus at will, but we can never create cholera."

At the Paris Medical Hospital Society, M. Parrot, on presenting some specimens, read a communication "On Otitis of the Middle Ear in New-born Infants." On examining the bodies of new-born infants, lesions of the middle ear are frequently met with, which have hitherto excited little attention. They are almost always similar in character, any differences observable being referable solely to the period of their evolution at which they are observed. On opening the cavity of the tympanum it is found filled either with a reddish, semi-transparent, gelatinous substance, a greenish-yellow mass like concrete pus, or a yellowish liquid of the consistence of serous pus. In the first case the ossicula and the membrane lining the tympanum are in their place, and of a red colour. In the second the redness is much more intense, and the membrane is tumefied, red, opaque, and difficult of recognition. When a fluid like serous pus fills the cavity the membrane has disappeared, and the separated bones are lying in the fluid. Accompanying this condition, thus far there has been found no appreciable change in the external meatus or the internal ear, and although the Eustachian tube is sometimes tumefied and obstructed with mucus, it is in general healthy. The membrane of the tympanum on its external surface has always been found intact, although its mucous layer is often softened. These appearances, as well as those derived from microscopical examination, clearly show that the lesion must be regarded as belonging to the class of catarrhal inflammations. Its influence in producing deaf-dumbness need not be insisted on. In some of the cases upon which the paper has been founded the infants manifested during life more or less deafness. As to the causes of this otitis much obscurity exists. It is met with accompanying very different affections, among which pneumonia is especially to be noted, as also the diseases of the digestive canal which are so common at this period of life. But it may be stated that most of the infants in whom the lesion has been observed have suffered during a variable period from great disturbance of nutrition, owing to insufficient or faulty food. M. Dumontpallier observed that the frequency with which M. Parrot has met these appearances would seem to show that they had not any great influence on deaf-dumbness. M. Parrot replied that, in fact, the children

who have these lesions in an advanced degree die, but others who are only slightly attacked survive. As to the actual part the disease in question plays in producing a fatal result, this is probably not considerable, as it is very rare to find the lesions propagated to the brain. The right side is the one usually affected, and if both sides are so, that is usually the worst. As already observed, nineteen-twentieths of the infants on whom these researches have been made have died either from lobular pneumonia, or affections of the digestive canal.

PARLIAMENTARY.—COUNTY CORONERS BILL—METROPOLITAN POOR ACT (1867) AMENDMENT BILL.

On Thursday, May 27, in the House of Commons.

Mr. Goldney moved the second reading of the County Coroners Bill. He proposed to make amendments in the Bill to the effect that the voters should be freeholders on the Parliamentary roll, and that the polling should be held at the Parliamentary polling-places.

Mr. Bruce suggested that the Bill should be speedily recommitted *pro formâ*, in order to introduce the amendments.

On Friday, Mr. Goschen moved the second reading of the Bill he introduced some time ago to amend Mr Hardy's Metropolitan Poor Act of 1867. He referred to the recent growth of London pauperism—from 100,000 to 145,000 or 150,000 persons in the last three years—and to the circumstances under which Mr. Hardy's Bill had been introduced and carried. Since the amount of expenditure entailed by Mr. Hardy's scheme had become known, public feeling had undergone a change. That expenditure far exceeded Mr. Hardy's estimates. But still he considered a very heavy expenditure necessary. In order to carry out the Act of 1867 two asylums had been begun, one at Leavesden and the other at Caterham. Mr. Hardy's estimate for these had been £100,000, but the real cost would be £280,000. This discrepancy arose from the fact that it had been found necessary to provide 3000 beds instead of 2000, from the increased cost of the sites, from the increased expensiveness of all building operations, and from other causes. Next came the fever Hospitals. These Mr. Hardy had estimated would cost £70,000, but the actual expenditure would be £210,000. The same figures also applied to schools; and besides all that, £300,000 would be required for infirmaries and £400,000 for enlarging workhouses or building new ones. Thus the ratepayers of London would have to face the frightful outlay of £1,400,000; whereas the total expenditure since the passing of the new Poor-law, in 1834, had been but £1,500,000. The object of the Bill was to diminish this expenditure by an extensive system of amalgamating parishes and unions. By amalgamation and classification he believed that the metropolis would be saved about £460,000. Among the most important points in the Bill, he mentioned that it would give power to the Poor-law Board to dissolve small Unions and unite them with large ones; also to dissolve sick asylums and school districts in order to amalgamate them for other purposes. It would repeal all local Acts as far as the collection of rates goes, but its main feature was to obtain the great object of classification of paupers, not only sick, but able-bodied, by amalgamation and exchange between different workhouses rather than by new buildings.

At the close of Mr. Goschen's speech, on Mr. M'Cullagh Torrens's motion, the debate was adjourned.

The County Coroners Bill passed through Committee *pro formâ*.

THE LATE DR. JAMES JOHNSTONE.—At the last meeting of the weekly board of the General Hospital, Birmingham, the following resolution was passed unanimously:—"That this board desires to express its deep sorrow on the death of Dr. James Johnstone, and its warm and cordial sympathy with the surviving members of the family under their affliction. Elected to the office of Physician to the Birmingham General Hospital in June, 1833, an appointment which had been held without interruption by his father and his uncle from the foundation of the institution up to that time, Dr. James Johnstone fully maintained the high and honoured character of his illustrious predecessors: he also substantially aided every effort made to advance the reputation and interests of the Hospital, and he rendered invaluable services to the charity as a Physician and a Consulting Physician to his death, a period of thirty-six years. During this lengthy period his strictly honourable conduct, courtesy, and kindness endeared him to all with whom he was associated in the management of the institution."

THE PROPOSED AMALGAMATION OF THE MEDICAL SOCIETIES.

An adjourned special general meeting of the Royal Medical and Chirurgical Society for the discussion of this subject was held on Thursday, May 27, at 8 p.m., George Burrows, M.D., F.R.S., President of the Society, in the chair.

Mr. Gascoyen (Honorary Secretary) gave a sketch of the proceedings of the previous meetings.

Mr. Solly proposed, and Dr. Hall Davis seconded, the following resolution, which was carried—"That Fellows, Members, or Licentiates of the Colleges of Physicians or Surgeons of Great Britain and Ireland; Doctors or Bachelors of Medicine, or Masters or Bachelors of Surgery, of the Universities of Great Britain and Ireland, or of the colonies; Members of the Faculty of Physicians and Surgeons of Glasgow; Licentiates of the Society of Apothecaries of London, or of the Apothecaries' Hall of Ireland; or foreigners whose qualifications are satisfactory to the Council, be eligible for admission into the Society by nomination and election, as at present is arranged in the Royal Medical and Chirurgical Society; and that their recommendation be signed by three Fellows of the Society, two of whom, at least, shall be members of a section to which the candidate declares himself desirous of becoming attached."

Mr. Cooper Forster proposed, and Mr. George Cooper seconded—"That in adjusting the scale of payments, consideration be had to the number of sections which each Fellow may join, and, for the privilege of using the Library of the Society, and of receiving copies of the *Transactions* and *Proceedings* of the several sections."

Dr. Pitman asked whether the scheme was to pass out of the hands of the Society without a scale of fees. If so, the other societies would be at a loss how to act.

The President said that a scale of payments was inserted in the first plan that was drawn up; but the Council thought it better to leave the matter undecided, as they could not adjust it in a satisfactory way.

Mr. Solly approved of the action of the Council. The scale of fees would be much better drawn up by a joint committee.

Dr. Stewart observed that it had been already stated last week that the question was to be left to a committee.

Mr. Holmes said that the first draft scheme had been accidentally made public, and therefore the joint-committee would have no difficulty in considering a scale of payments. A scale had not been inserted, lest it should have the appearance of a pecuniary offer to the other societies; whereas the object was to effect junction on any terms which might be liberal and fair.

The resolution was carried.

Mr. Holmes proposed, Dr. Hall Davis seconded, and it was carried—"That deductions from future payments to the Society be allowed for any admission or composition fees which may have been already paid to any of the Societies enumerated in Resolution XII., as provided in the bye-laws of those Societies."

Dr. Pitman moved, Dr. Cholmeley seconded, and it was carried—"That any Fellow, who shall wish to leave one section of the Society and to join another, may do so on the day of the annual meeting of the Society."

Mr. Cooper Forster proposed—"That any registered Medical Practitioner, on complying with the regulations required, be eligible for election as an associate of the Royal Society of Medicine on payment of an admission fee of one guinea and an annual contribution of one guinea, which shall entitle him to attend the meetings of any one of the sections, and also to a copy of the *Transactions* and *Proceedings* of such section; and that the manner of election of such associates be regulated by each section as it may think fit."

Dr. Drysdale seconded the motion.

Dr. Pitman did not oppose the motion, but thought that the resolution would give rise to differences of opinion. The Societies which were invited to join were mostly formed of Members. There was no proposed grade of Members in the new Society; hence those who did not wish to become Fellows must drop into the grade of Associates. Would this title be as acceptable as that of Member? The Obstetrical Society consisted of Fellows; and they must either pay a double subscription to retain their title, or, if they paid the same fee as now, must drop their title and take that of Associate. The difficulty as to the members might be overcome by substituting the word "Member" for "Associate." As to the Obstetrical Society, those who paid the full subscription might be designated Fellows, and those who paid the smaller amount "non-resident" Fellows.

Mr. R. B. Carter thought that too great a prominence was given to the fact of men being already members of a society.

Mr. Holmes said that the only difference between old and new members was, that the former would not have to undergo an election; all would have to make payments according to the scale that might be agreed on. The question raised by Dr. Pitman was no doubt an important one; but there must be some difference of title. The title of Fellow, held by members of the Obstetrical Society, must be changed if it be decided to have a lower grade of payment. The word "Associate" was introduced in order to avoid ambiguity; the title being "Fellow" or "Associate" of the Society, and "Member" of a section.

Dr. Drysdale said that, after the arguments brought forward by Dr. Pitman, he must withdraw from seconding the resolution.

Mr. Power then seconded the motion. He asked whether membership of one section would give a right to the title of Fellow.

Mr. Gascoyen said that at first it was proposed that any member paying two guineas annually, with an admission fee of three guineas, should be a Fellow of the Society.

Mr. Holmes said there was nothing invidious, or that made a real distinction in rank, in the title of "Associate." The only difference was one of payment.

Mr. R. B. Carter asked whether the Obstetrical Society had any right to give the title of Fellow. He thought it a pity to have different titles for different payments.

Mr. Cooper Forster thought that there would be very few Associates. Most who joined the Society would give an additional guinea for the privilege of using the library.

Dr. O'Connor could not understand what the two guinea and three guinea fees meant.

Mr. Holmes said there must be an admission fee for the privilege of using the library. He differed from Mr. Cooper Forster as to the probability of having but few Associates. Many country Practitioners would doubtless wish to join one or more of the sections. He thought that a fair offer was made to those who wished to join the Society without having the privilege of the library.

Mr. Carter proposed, and Dr. Drysdale seconded, as an amendment, that the words "Fellow of any one Section" be substituted for "Associate."

Mr. Heath stated that the Obstetrical Society already had a library.

Dr. Cholmeley said that the privileges of the Obstetrical Society would be preserved by the next clause.

Mr. Gascoyen mentioned that it was understood that the Obstetrical Society should still retain its library, unless it wished to amalgamate it with the general library.

After some remarks from Dr. Stewart, Mr. Holmes, and Dr. O'Connor, the amendment was put to the vote and lost; 6 voting for and 19 against it. The original motion was then carried by a majority of 18 to 2.

Mr. Holmes moved the next resolution—"That no present Fellow or Member of any of the societies enumerated in Clause XII. be required to pay the admission fee of one guinea on becoming an Associate of the Society, and that all privileges now enjoyed by the present members of those societies be, as far as possible, preserved to the members of the future sections." The concluding words had been added to meet the point raised by Mr. Heath—to preserve to the Obstetrical Society the use of its own library if it so desired. There would, he thought, be no difficulty in the placing of the Obstetrical Society's library in a separate room for the special use of members of that Society.

Dr. Hall Davis seconded the resolution, which was carried.

Mr. Solly proposed, Dr. O'Connor seconded, and it was resolved—"That the members of each separate section elect annually the council of that section; and that such council consist of a president, two secretaries, and such number of other councillors as shall hereafter be arranged. The president of each section, and the representative member of the section to the General Council, must be Fellows of the Society."

Dr. Begley proposed, and Mr. S. E. Solly seconded—"That the council of each section have the entire control of the internal business of their own section, subject to such general arrangements as shall be made by the General Council of the Society, and that they publish annually, or at such periods as shall hereafter be arranged, the *Transactions* of their own section, provided the expenditure of each section, for *Transactions* and other special purposes, do not exceed one-half of the income derived from the annual subscriptions of its members."

Mr. Holmes said that this proposal appeared to have given rise to some difference of opinion and misapprehension. The latter part had been introduced at the instance of the President of the Obstetrical Society, in order to fix the sum to be absolutely at the disposal of each section. But nothing limited the sum to be expended to one-half the income of a section, for the Council could grant even the whole of its subscriptions to a section. The expenses of a section of physiology and anatomy would probably exceed the whole contributions of its members. He proposed to add to the resolutions, "or such other proportion as may hereafter be arranged."

Mr. Solly seconded the amendment, which was carried unanimously.

Dr. Pitman moved, Dr. Sedgwick seconded, and it was resolved—"That the General Council of the Society may, under special circumstances, make special grants in aid of the publication of *Transactions* or other expenses of any section."

Dr. O'Connor moved, and Mr. J. D. Hill seconded, the following resolution; which, after a few remarks from Dr. Drysdale and Mr. Holmes, was carried:—"That the proposed Society comprise a grade of Honorary Fellows, consisting of the Honorary Fellows or Honorary Members of any of the enumerated societies which shall join in the amalgamation, and others to be elected for life from British subjects who have eminently distinguished themselves in Medicine or Surgery, or in the sciences connected therewith, but who do not practise the Medical Profession; and from foreigners who have eminently distinguished themselves in Medicine or Surgery, or in the sciences connected therewith. That such Honorary Fellows be elected by the Society at a general meeting, on the recommendation of the Council."

The concluding paragraph of the report was now read, viz.:—"Should the scheme embodied in the above resolutions be approved, the Council recommend that it be submitted to each of the societies mentioned in Resolution XII., and that they be requested to nominate three members each to form a general committee, which shall draw up, with legal advice, a code of laws and regulations to be submitted to each society for its approval."

The President suggested that the paragraph should form subjects for two separate resolutions.

Mr. Solly proposed, and Dr. Begley seconded, "That the scheme embodied in the resolutions be submitted to each of the societies mentioned in Resolution XII."

Dr. Pitman moved as an amendment, and Dr. Quain seconded—"That the following be submitted to each of the societies mentioned in Resolution XII. of the scheme now adopted. 1. That steps be taken to secure the union of various societies now existing in London for the cultivation of special branches of Medicine. 2. That the resolutions now adopted provisionally by the Royal Medical and Chirurgical Society be submitted to each of the societies mentioned in Resolution XII., as a basis of a scheme for effecting such union; and that each society, in the event of its approving of the above resolution, be requested to nominate three members to form a general committee to prepare a complete scheme to be submitted to each society for its approval."

After a discussion, in which Mr. Solly, Mr. Heath, Mr. Holmes, Mr. Savory, Dr. Pitman, Dr. Quain, and Dr. Stewart took part, the amendment was put to the vote, and carried by a majority of twenty-five against three.

On the suggestion of the President, Dr. Pitman, Mr. Holmes, and Mr. Gascoyen were appointed to represent the Royal Medical and Chirurgical Society in the joint committee.

NEW BOOKS, WITH SHORT CRITIQUES.

Auscultation of the Heart. By F. Churchill, M.B. London: John Churchill and Sons.

*** This little compilation is calculated to be of great use to beginners, who have not unfrequently considerable difficulty in mastering the subject of valvular disease. Mr. Churchill arranges his materials in two columns—one dealing with the systole, the other with the diastole of the ventricles. The mitral valve, in health and disease, is first considered; then the causes of its normal and abnormal sounds are discussed, as are the characters of the pulse. The aortic valve is considered in the same way, in health and in disease, both during the systole and the diastole. The causes of the abnormal sounds and the nature of the pulse are all taken in order.

Observations on the Ligature of Arteries on the Antiseptic System. By Joseph Lister, F.R.S., Professor of Surgery in the University of Glasgow. Edinburgh: Edmonston and Douglas.

*** In this pamphlet, Professor Lister republishes his observations, recently made public in the columns of a contemporary. Although all men may not possess the same intense belief in the virtues of carbolic acid, there can be no doubt of the value of Professor Lister's writings and experiments. They are characterised by an intense belief in the value of the remedy, and have a constructive rather than an iconoclastic tendency. Both of these are features to be commended.

REVIEWS.

Atlas of Venereal Diseases. By M. A. Cullerier, Surgeon to the Hôpital du Midi, etc. Translated from the French, with notes and additions, by Freeman J. Bumstead, M.D., Professor of Venereal Diseases in the College of Physicians and Surgeons, New York, etc. Philadelphia: Lea. London: Trübner. 26 plates, pp. 328.

A Treatise on Syphilis, Historical and Practical. By Dr. E. Lancereaux, Head of the Clinical Department of the Faculty of Medicine in Paris, etc., etc. Translated by G. Whitley, M.D. Vol. II. The New Sydenham Society. Pp. 379.

A Treatise on Syphilis. By Walter J. Coulson, F.R.C.S., Surgeon to the Lock Hospital, etc. London: John Churchill and Sons. Pp. 373.

Works on syphilis have recently, after a long pause in their production, been somewhat plentiful, and of the three above cited we have already noticed the former volume of Lancereaux's work. The most striking in many respects is the conjoint work of Cullerier and Bumstead, for there is almost as much of the latter as of the former author in the present volume. Of course its most striking feature is the plates, which are not badly executed; but, as the editor remarks, there is a great difference between steel-cuts coloured by hand and chromo-lithographs, and it is to the latter department of art that Dr. Bumstead has been compelled for financial reasons to confine himself. But altogether, apart from this, the book has an interest, for it is the production of an acknowledged unicist commented on by a dualist. This of course leads to some awkward results, the American sometimes contradicting point-blank the French author. The work, however, unlike the others above cited, does not deal with syphilis alone, but with the whole group of venereal affections, quite half the volume being occupied with the others. In the meantime, we shall confine our attention to the subject of chancre and syphilis, that we may better thereby contrast and compare the one book with the others.

Dr. Bumstead first finds fault with Cullerier's use of the words soft chancre, as directing attention to the character of the sore only; he prefers the terms chancroid or simple chancre, leaving for the other form of sore the term chancre or syphilitic chancre. He is also of opinion that there is not so great a difference between the frequency of the two affections, as seen in private practice, although there can be no doubt of the more frequent occurrence of simple sores in public practice. Not much further on our author and editor again come to blows. Cullerier maintains that a period of incubation follows the introduction of the matter of a simple sore, even below the skin, as in inoculation. This Bumstead denies point-blank, and cites certain tables of Fournier's to strengthen his position, as well as the opinions of Ricord, Rollet, and Clerc. On the whole, he is justified in saying that in simple sores the effects of the virus are made apparent within a week. This is by no means so with infecting chancre. Cullerier's method of dealing with such sores is severe; he recommends a caustic application of sulphuric acid and charcoal, the same as that recommended by Ricord, and he also commends excision where practicable. Both modes of treatment should be exercised with discretion, as in a depraved constitution, such as one already saturated with syphilis, as not unfrequently happens, the sore with such treatment tends more to spread than it did before. Cullerier is especially strong against the use of ointments. We quite agree with him: they are, as a rule, bad, but not invariably so.

When dealing with specific chancres, Cullerier asserts the occasional existence of hard sores which are not followed by constitutional symptoms; of this Bumstead is sceptical, provided they are true syphilitic sores. So, again, their opinions clash on the subject of the incubation of a true sore, as well as on the character of the initial manifestation. Cullerier says the latter is identical with that of a simple sore; this Bumstead denies. The one, he says, is a vesico-pustular ulceration; in the true sore it is either a papule, a tubercle, or a slight erosion. With regard to mixed sores, also, the opinions of the two authors conflict, Cullerier maintaining that they have no substantial existence, Bumstead holding the adverse opinion. When duality has to be discussed, a like uncompromising hostility is manifested. Almost as a matter of course from his opinions, Cullerier is not in favour of giving mercury for the initial lesion only; he waits to see what will turn up. On this subject Bumstead makes no comment, but surely we may be permitted to say that if the sore be unmistakably a true chancre, and if there be nothing in the state of the patient's health to oppose the procedure, the best thing a man can do is to give him a small quantity of mercury—we do not care how it be administered, provided it be so with judgment, and we are inclined to believe that at this stage of the disorder the rule should be *festina lente*.

Cullerier's description of the syphilides is remarkably good, his notes on erythema being especially interesting, for he shows how this affects not the outer surface only, but a variety of other structures in the body, thus producing a number of symptoms which would be considered anomalous were not this fact borne in mind. Of the tertiary stage we need not say anything. From what we have said above it will be evident that the work presents the advantage of representing the views of both schools, and, notwithstanding the awkwardness of having assertions and point-blank denials in the same page, we are, on the whole, inclined to consider that it is an advantage—we see at least both sides of the shield.

Of the Sydenham Society's edition of Lancereaux we may say that the work itself is admirable; unfortunately, its rendering into our tongue is very imperfect. We have already dealt with the former volume, which treats of acquired syphilis, its history, and its initiatory stages. The present one deals with acquired syphilis during the period of gummy deposits, with hereditary syphilis, and with the etiology, treatment, etc., of the former. In some respects the period of gummy products is the most interesting; in others it is the least. It is the last effort of the syphilitic virus, and it is probably more under the control of remedies than any other. Still, the variety of organs affected, and the consequent variety of symptoms, cannot fail to be of interest to the Physician.

As to syphilis itself, Lancereaux recognises three varieties—*common syphilis*, benignant syphilis, and malignant syphilis, according to the degrees of virulence the poison manifests. The semeiology and etiology of syphilis are next discussed. The modes in which the disease may originate are important from various points of view, especially inasmuch as it may be acquired in an innocent way. This, of course, is well known to Medical men, but not so much so to the general public. Suckling, vaccination, cupping, tattooing, catheterism, occupations such as that of glass-blowing, which entails the transmission of bodies, like blowpipes, from one mucous surface to another, are all means of the propagation of this fell disorder, and as such are enumerated by the author.

Of Mr. Coulson's book we cannot speak with any great favour. It contains nothing particularly new, and, as he himself states in the preface, it was written before many of the works recently published on the subject were available, and, as a consequence, a good many things are treated of in these to which Mr. Coulson does not allude. We must also complain of the careless way in which the book is written; one portion is evidently in the form of a lecture, for the basis of the work was a series of lectures delivered some years ago now, and the next page will be in the purely didactic style, the alternation from the personal to the impersonal form being abrupt and disagreeable. The treatise is illustrated by a number of cases; but these cases are, we think, in a majority of instances second-hand, most of them being from French authorities. Some of Mr. Coulson's own cases are of great interest, notably one of phagedænic syphilis, which was with great difficulty restrained, although all sorts of remedies were tried, even to keeping the patient two or three days in a warm bath. Treating of syphilis, Mr. Coulson divides its phases into four stages, separating the quaternary from the tertiary by the nature of the lesion—in fact, making the quaternary synonymous with the period of gummy products. In certain parts the author adopts the convenient plan of formulising his opinions in the form of propositions; this is a good way of attaining clearness, and one to be commended. Altogether we are sorry Mr. Coulson has not taken the trouble to make this what it might easily have been—that is to say, a thoroughly good book on an interesting subject.

Salt, taken in moderate quantities, has not only been supposed a prophylactic against cholera, but it has also been stated the disease seldom visits localities where the earth and water are impregnated with this substance. In the department of Meurthe in France, there are places (Château Salicis and Dienge) where this condition prevails, and in which cholera has occurred, although present in neighbouring districts. But, unfortunately for this theory, the disease has prevailed in the salt districts of Marwar to as great an extent as in any other portion of the province.—*Marwar, the Land of Death, by W. J. Moore, of the Political Agency, Joudpoor.*

GENERAL CORRESPONDENCE.

DR. LETHEBY AND THE WATER COMPANIES.

LETTER FROM DR. H. LETHEBY.

[To the Editor of the Medical Times and Gazette.]

SIR,—At the last meeting of the Metropolitan Association of Medical Officers of Health, when my paper on water analysis was discussed, I was asked if I had any connexion with the water companies of London; and I should esteem it a favour if you would permit me to state through your journal, in a very positive and unqualified manner, that there is no ground whatever for such a supposition, as I am not connected with any of the companies in the remotest degree. I wish further to add that the same denial will be found in my evidence before the Royal Commission on Water Supply, which, I am informed, is ready for presentation to Parliament.

London Hospital, May 31. I am, &c. H. LETHEBY.

ANIMAL VACCINATION.

LETTER FROM DR. EDWARD BALLARD.

[To the Editor of the Medical Times and Gazette.]

SIR,—I am thoroughly satisfied, and have been so for a long time, of two things—namely, 1st, the readiness with which vaccine virus, propagated in the manner practised by Lacroix and Warlomont in Paris and Brussels respectively, and now by Dr. Blanc here, takes upon the human subject; and, 2nd, the excellence of the pocks procured by this mode of operating and the especial excellence of those obtained by the use of lymph thus produced upon the human subject, lymph of the first human generation. This excellence, however, is not always observable, as, for instance, in dark-skinned children. Nor is it fair to compare a pock produced by inoculation from the heifer with one produced by the current vaccine, as is customary, on the eighth day. And for this reason—that the animal virus operates much more deliberately and takes a longer time to pass through its several stages of evolution. It often rises late, perhaps not until the fifth day, and is not to be expected to arrive at perfection until the ninth or tenth day. I have seen the formation of the areola delayed until the tenth day, and have taken perfectly limpid lymph from a pock produced by animal vaccination as late as the eleventh day.

Referring to Dr. Blanc's last letter, I think he is rather premature and too absolute in asserting that "cow-pox taken from heifers does not keep in tubes or on points." There is a limit to the time during which even humanised virus can be preserved thus. I have, indeed, frequently failed with virus procured from M. Lacroix in tubes and on points, but this was in the extremely hot weather of last year, and it is not to be forgotten how often preserved human virus will fail under similar unfavourable circumstances. Yet now and then I succeeded in one instance where I had kept the tube lymph for five days before using it. The keeping quality of animal virus has, in my opinion, yet to be determined by accurate observations, as also the best mode of preserving and transmitting it to a distance. I have myself succeeded more frequently with points than with tubes. Experience is in favour of points in preference to tubes even for humanised lymph. I may suggest to any about to try animal virus on points that the best mode of using them is to scratch freely over a space of about a quarter of an inch, and, taking up any blood that flows with clean blotting-paper, to wait until the flow ceases, then to rub the charged part of the ivory well into the scratches until the dried lymph is thoroughly wiped off both sides. Should the surface be too dry, it may be slightly damped with water before rubbing in the virus. I am, &c.

May 31. EDWARD BALLARD.

THE Ladies' Sanitary Association hold their annual meeting next Tuesday at the house of Lady Burrell. Lord Shaftesbury will preside.

THE *Brighton Daily News*, in its issue of the 31st ult., contains a very able letter on Medical charity as one of the sources of perpetuance of pauperism. The writer gives a striking summary of the arguments and facts which had been adduced throughout the kingdom in proof of his proposition. The letter is well worthy the perusal of all those who are interested in the subject.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, MAY 4, 1869.

RICHARD QUAIN, M.D., President, in the Chair.

A REPORT was read from the Committee by Dr. GREEN on Dr. Semple's case of Diseased Thyroid Gland. The tumour partook of the character of lympho-sarcoma. A report was also read by Dr. BURDON SANDERSON on Dr. Church's case of Lymphoma.

Dr. MOXON showed Colourless Mucus from an Unobstructed Gall-Bladder in a case of pyæmia. There was no bile either in the gall-bladder, ducts, or in the alimentary canal. He had observed several similar cases. The patient was not jaundiced, the skin exhibiting merely the sallow tinge of pyæmia.

Dr. MURCHISON thought that the case tended to prove that bile was not formed in the blood.

Dr. MOXON exhibited specimens which showed the results of Friction in Valvular Disease of the Heart. In one case, there was a movable labellum attached to the aortic valve, which had produced, by friction, thickening and disease of the artery.

Dr. PAYNE showed a portion of a Myxomatous Tumour removed by Mr. James Lane from the gluteal region of a woman. It was composed of a group of globular masses; some opaque and fatty, others gelatinous. It weighed thirteen and a half pounds. A fatty tumour had been removed twelve years previously from the same part.

Mr. HENRY ARNOTT showed a similar specimen removed from Scarpa's triangle. On cutting it across, long viscid strings of colourless fluid adhered to the knife. Microscopically, branched irregular cells with delicate fibrilli formed an open meshwork; within, were abundant mucus-corpuscles. It was a pure case of myxoma, and was otherwise interesting in so far as such tumours are rarely met with in muscles.

Dr. JOHN MURRAY showed the Stomach of a man, aged 38, who died in the Middlesex Hospital of extensive simple ulceration of the stomach of many years' standing. The patient had long been treated as an out-patient with symptoms of painful dyspepsia, and was on several occasions admitted an in-patient with severe hæmatemesis and other symptoms of gastric ulcer. He ultimately died rather suddenly of copious general hæmorrhage from the walls of the stomach. After death an enormous ulcer, $5 \times 3\frac{1}{2}$ inches, was found, occupying the entire space between the cardiac and pyloric orifices of the stomach, and scattered here and there were some half-dozen smaller ulcers. The floor of the large ulcer was formed of the pancreas, which protruded slightly into the stomach, and the thickened and adherent capsule of the liver, both of which had prevented the escape of the contents of the stomach into the abdominal cavity. The thickened edge of the ulcer overlapped and partly obstructed the pyloric opening, thereby tending to increase the dilatation of the stomach, which was to be expected from the destruction by ulceration of so large a part of its muscular wall.

Mr. GAY showed a Colloid Tumour from the Female Breast. It was connected with the fibrous capsule, but did not invade the gland. Referred to Committee.

Mr. GAY also exhibited a specimen of Gangrene of the Head and Neck of the Thigh-Bone from a child who was admitted into hospital with the bone protruding outside a sore on the thigh. There was a distinct line of demarcation at the trochanter.

Mr. GAY also brought forward a specimen of Diseased Knee-Joint which had commenced thirteen months previously in a young man. The leg was removed, and the cartilage was found undergoing a process of shedding, due to the bone beneath being diseased, and not to disease of the cartilage itself.

Mr. HULKE believed that the separation was due to considerable enlargement of the cells of the deeper layers of the cartilage.

Mr. GAY said that there were little bits of bone attached to the cartilage.

Mr. HULKE remarked that the vascular surface of the bone had cartilage-cells.

Dr. CRISP exhibited the heart and aorta of a young man who had been a great spirit drinker. The heart weighed 21 oz. The aorta was covered with atheromatous and bony deposit, and projecting from the inner surface of one of the aortic valves was a cylinder of bony growth half an inch in length.

The ascending aorta was also much dilated, its internal circumference measuring five inches.

Dr. Crisp likewise exhibited echinococcous cysts from various animals, including the harte beeste, nylgau, and great kangaroo. They were prepared as follows:—The exocysts were removed, the endocysts floated on water, the serum evacuated, and the cysts inflated with air. By this means the form and size of the cretaceous heads and necks, which were present in all (multilocular and unilocular), were readily seen and examined.

Dr. Church showed two Renal Calculi. One was of crystalline oxalate of lime with dumb-bell crystals, and had been situated in a small pouch connected with the kidney. It was removed from a lady who had suffered from pain in the back when a child. The other was composed chiefly of cystine, and was from an old man with contracted kidney. The pelvis of the kidney was full of muco-pus mixed with cholesterine.

Dr. Down showed a Microcephalic Skull from a boy 14 years old. The medio-parietal and all the other sutures were present; thus proving, he thought, the German view that the microcephalic skull is produced by premature consolidation to be incorrect. He believed that the cranium adapted itself to the brain. In answer to Mr. Hulke, he said he had not examined the matrix of the bones of the skull.

Mr. Pick showed a Hydatid Cyst of the Liver.

Dr. Cayley showed a case of Sarcoma of the Stomach from a man, aged 67, who, up to his death in the Middlesex Hospital, had no gastric symptoms. There were abundant white corpuscles in his blood, and a tumour was felt in the right hypochondrium. After death, the coats of the stomach were nearly three inches thick, showing, microscopically, oval cancerous corpuscles embedded in intercellular substance. The spleen, though forming part of the same mass, was normal.

Dr. Powell showed a specimen of Tubercular Lung with Thickened Pleura, illustrating iron-grey induration with abrupt line between diseased and healthy lung.

Mr. Adams exhibited a Cancer of the Breast removed from a female aged 80. It did not involve the gland, but had commenced in the deeper layers of the skin, and advanced downwards. Her father had died of cancer of the throat, and her son of cancer of the cheek? He thought it scirrhus, with, perhaps, an epithelial character.

Mr. Adams showed a knee-joint from a woman, 20 years of age, who had had Acute Rheumatism, and was admitted into the Great Northern Hospital with both knees and hip-joints fixedly flexed. They were reduced under chloroform, but she never recovered from the sickness caused by the chloroform, and died. The cartilages of the knee-joints were still healthy, but there were bands between the surfaces. The hip-joints were in a less favourable state. Neither suppuration nor ulceration occurred, he believed, in rheumatism, but fibrous bands.

Mr. Gay believed that the bands passing from cartilage to cartilage were probably formed from lymph thrown out by the synovial membrane.

Mr. Hulke could not conceive that the cartilage could be healthy and these bands present. He admitted the genesis of the bands, as Mr. Adams had said, from lymph; but he thought they were evolved from the superficial layers of cartilage.

Dr. Moxon had sometimes seen the whole surface of the cartilage covered with lymph.

In answer to Dr. Moxon, Mr. Hulke said he did not refer to cases in old age where there was an appearance of connective tissue, but to the fibrous bands in young persons which resolved themselves into cartilage-corpuscles.

Dr. Moxon showed a recent specimen of Extensive Ulceration of the Intestine from a woman who was admitted into Guy's Hospital with symptoms of ileus of a week's standing, and obstruction of the bowels for three weeks. After death, there was found little appearance of inflammation in the abdomen; but the cæcum and ascending and descending colon showed large open gaps. There was a stricture from old simple ulceration at the sigmoid flexure, ulceration had gone on, and she died after being kept alive for a month.

Royal Society.—At the last meeting Lord Rosse gave an account of his researches on the heat from the moon; Professor Norris read an interesting paper on the physics of the blood-corpuscles, of which an abstract will appear in this journal. Mr. Church demonstrated the presence of copper in the feathers of some tropical birds. The metal seems to form with other elements a definite organic compound.

CLINICAL SOCIETY.

Friday, April 23, 1869.

Mr. Paget in the Chair.

Dr. Weber, after referring to a communication lately made to the Society by Dr. Baumler, described three instances of hæmoptysis followed by inflammatory processes. The points of analogy in all of them were, that the subjects were men apparently in good health, but predisposed to epistaxis, and they offered no signs of pulmonary disease at the time when they were seized with hæmoptysis; that only several days after the occurrence of the latter, symptoms of bronchial irritation and lobular pneumonia, with pleuritis, manifested themselves, attended by a corresponding degree of fever. In two of these cases the disease terminated in gradual, but perfect, recovery; while in the third, during the apparent process of recovery, fresh attacks of hæmoptysis took place, again followed by fresh inflammatory changes, and later by another attack of hæmoptysis, leading to immediate death by suffocation. The post-mortem examination exhibited no tubercles, but caseous masses of different ages, surrounded by inflammatory infiltration, and dispersed over different parts of both lungs. The ages of the caseous nodules apparently corresponded to the different dates of the attacks of hæmoptysis; the bronchi and air-cells were partly filled with fresh coagulated blood from the last fatal hæmorrhage, but a large bronchus was filled by an old, partly discoloured coagulum, softened in the centre, and resembling a venous thrombus; some of the old caseous nodules exhibited central softening, and the commencement of the formation of cavities. The author regarded this last case as an instance of a kind of galloping phthisis, caused by the retention of blood in the bronchi and air-cells, and by the changes effected as well in the effused blood as in the surrounding tissues. Dr. Weber considered the inflammatory changes in the two other cases, terminating in recovery, as essentially analogous, as, under unfavourable influences, they might have likewise led to phthisis. He pointed out that this had been the general view until Laennec and his successors had taught that hæmoptysis was almost always the consequence of already existing tubercular changes in the lungs. He thought it was impossible to interpret the cases on Laennec's view, and that much credit was due to Felix Niemeyer for re-establishing the old Hippocratic view. After having mentioned that in many instances hæmoptysis was not followed by any inflammatory changes, owing to the blood having been more or less completely expelled, he alluded to the irritating influence frequently exercised by the retention of other pathological substances (pus and similar morbid excretions) in the lungs. He then made some remarks on the treatment of hæmoptysis, regarding perfect rest as the most important element, and in many cases sufficient to check even severe hæmoptysis. Amongst the remedies not generally used he placed great value on ergotin in rather large doses, administered either by the stomach or by subcutaneous injections, and to the emetic effects of which he attributed the twofold advantage of arresting the hæmorrhage and of clearing the bronchi. Dr. Weber further recommended a prolonged residence in elevated regions in cases characterised by a tendency to hæmoptysis, remarking that experience had amply shown its beneficial effects, and had disproved the view that a moderate decrease of atmospheric pressure favoured the occurrence of hæmorrhage from the mucous membranes.

Dr. Andrew Clark said the paper was valuable in a double sense, but perhaps chiefly in supporting an unpopular view. He would call the disease hæmorrhagic phthisis, using the latter word to indicate deposit and disintegration, and of deposits there was more than one kind. There were two principles in naming a disease—1st, we should avoid hypothesis; 2nd, the title should be based on some invariable fact. He had seen cases where there had been extravasation of blood, giving rise to change without inflammation, and resembling the phenomena of phthisis. Some objected to the term phthisis when so used, but if we admitted the existence of a pneumonic phthisis, we must admit others also. That his nomenclature was retrograde was perhaps in one sense true, but that was that we might see the more clearly.

Dr. Powell said that in a phthisical patient who had suffered from hæmoptysis, and died four days after the attack, there were found lobular pinkish patches, resembling the effects of pneumonia, apparently following the hæmorrhage.

Mr. Holmes Coote read the particulars of a case in which a Medical man in attendance on a woman during parturition

accidentally infected his hand with syphilis. He was not aware of the fact until some time afterwards, when secondary symptoms showed themselves, and he then just remembered a troublesome excoriation on the forefinger. Since that time, for a period of fourteen or sixteen years, he had been the subject of phagadenic ulcerations about the head, almost exclusively confined to the right side. Mr. Coote spoke very strongly in opposition to the view that induration at the base of a primary sore was any evidence of its infecting properties. He also added that, under conditions of moisture, patches of syphilitic lepra were contagious.

Mr. Myers also brought before the Society a case illustrating the identity of the syphilitic virus in the hard and soft chancre. He considered that the soft chancre is the proper type of the syphilitic sore, and that the others are deviations from it, and that the primary sore is at first a local affection, and that the constitutional effects depend upon the continual absorption of its poisonous matter.

Mr. Maunder asked if in Mr. Myers's case the sore was on the skin or on the mucous membrane. He had been accustomed to look upon syphilis as dual. The only source of error he could think of was the probable existence of a parchmenty base, which was liable to be overlooked. The sore had been treated mostly by nitrate of silver, which itself tended to indurate. A suppurating bubo might originate from irritation.

Mr. H. Coote looked upon the parchment base as a fiction of Ricord's brain. Among females at St. Bartholomew's Hospital, induration was rare, but secondaries followed in at least one-half the cases. The induration depended on the tissues rather than anything else.

Mr. T. Smith thought that, notwithstanding single cases brought forward, there were good reasons for believing that there were two distinct forms of the disease. If people looked dispassionately, they would admit two kinds, or at least two degrees, of syphilis.

The President objected to the papers, that whereas some men study rules, some study exceptions; and in this form of disease there are no difficulties in the way of finding exceptions.

LEGAL INTELLIGENCE.

STRYCHNIA POISONING BY MISADVENTURE.

(*From a Special Correspondent.*)

On May 31 an inquest was held at St. David's, Pembrokeshire, touching the death of Essex Thomas Williams, Surgeon, late of Markyate-street, Dunstable, Beds, before O. T. Edwardes, Esq., Coroner for the Upper Division of Pembrokeshire, aided by W. V. James, Esq., Haverfordwest, Coroner of the Lower Division, as Assessor. Wm. John, Esq., of Haverfordwest, appeared for the widow of the deceased; J. Eaton Evans, Esq., for Messrs. Collins and Roper; G. Thomas, Esq., Carmarthen, for Mr. and Mrs. Hicks. The inquest was opened on May 6, and had been adjourned from time to time until the 31st ult., when the proceedings were commenced *de novo*. The evidence was as follows:—

Katharine Manning Williams deposed: I am widow of the late Essex Thomas Williams. We came to Penberry on the Saturday previous to the decease of my husband. He was in ill-health, and had been suffering for the last seven months from great debility. From November last, my husband was in the habit of taking morphia as a sedative. On our way through Haverfordwest, my husband in my presence requested Mr. Williams, a chemist there, to dispense a bottle of solution of acetate of morphia. We brought that bottle to Penberry. I administered the contents of that bottle from time to time to my husband until it was exhausted on the Friday previous to my husband's decease. On that day, Mr. Hicks, Surgeon, of St. David's, called at Penberry. He did not see my husband. I gave the bottle to the sister of the deceased, while Mr. Hicks was there, to give it to Mr. Hicks, and to tell him to fill it with a solution of morphia, and we would send for it. On the next morning, my sister-in-law asked me to write something on a piece of paper now produced. The words on it are "acetate of morphia," and on the outside "Dr. Hicks, St. David's." I gave that paper to my sister-in-law. About 2 p.m. on the same day, my sister-in-law handed me a bottle wrapped up in paper and sealed, and directed to E. Williams, Esq. (Paper produced.) It was delivered to me in the bedroom, where my husband was reclining on the bed. I broke the seals and unwrapped the paper. I remarked that the bottle contained only about four drachms, and that it was cloudy. I then gave it back to my sister-in-law, who placed it in the table-drawer in my presence. About 5.30 p.m. I saw the bottle again, during the interval. I did not leave the room throughout the whole period. The drawer was not opened during the interval. About 5.30 p.m. my husband asked me to give him a dose of the morphia. I took the bottle out of the drawer, and asked my husband how much I should give him. He said a hundred and twenty and sixty. It was a graduated glass minim measure I used, such as is used by Surgeons and dispensing chemists. It was the usual quantity that I used to administer as a dose. I had frequently for months administered the same dose from that same measure. My husband swallowed the medicine. He said it tasted very acid. He took the dose in orange-juice, which I had squeezed out of a divided orange into a dry tumbler, and I poured the medicine from the measure into the orange-juice. When he said it tasted very acid, I asked what tasted acid, and he said "the stuff I have just swallowed." He then lay down on the bed. My sister-in-law was in the room at the time; we did not leave the room afterwards, but sat in the window. We saw Mr. Wathen drive up about ten minutes after the medicine had been taken. My husband said while I was at the window, "I feel very strange, like a person drunk." I then went to him; he looked odd—different from what he used to look. He rose up in a sitting posture in a moment, and said, "Throw off the clothes." This was in about from ten to fifteen minutes from the time he took the medicine. He appeared very much frightened. I was standing by the bedside. My sister-in-law had just gone down to meet Mr. Wathen. I went to the landing, and entreated her to come at once. She came, and brought up Mr. Wathen with her. When we all three got into the room my husband exclaimed, "They have made a mistake; they have given me strychnine for morphine." He was very much convulsed. I heard him say "I wish I could be sick." I then left the room, and did not return. I had never seen on any previous occasions of his taking morphia such symptoms. He was always composed and tranquil after previous doses; they were intended to have that effect. On the Saturday on which he died he appeared, on the whole, better than he had been for some time.

Margaretta Williams, of Penberry, spinster, deposed: I am sister of the deceased. My brother came home in delicate health. I remember Friday, April 30, 1869. On that day Mr. Hicks called to see my brother. He did not see him. I told Mr. Hicks that my brother wanted some solution of morphia, which he was in the habit of taking, and I gave him the bottle which was to be filled. He desired me to send down on paper the name of the sort I wanted. On the next, Saturday, May 1, about noon, my sister-in-law wrote down at the dictation of her husband the name of the medicine required, and gave me the paper. I sent it to St. David's by my servant Ebenezer Griffith. He returned about 2 p.m., and brought a bottle from Mrs. Hicks in a sealed paper. He gave it to me, and I took it upstairs to the bedroom in which my brother was, and gave it to my sister-in-law. She opened the seals; we all remarked the smallness of the quantity sent, and that it was cloudy and muddy. She gave it to me, and I put it in the drawer of the table by the bedside. (The witness here confirmed the narration of the preceding.) About 5 p.m. my brother had some tea, and not long after he asked his wife for the morphine. My brother seemed much convulsed and in great pain. I heard him say, "They have given me strychnine instead of morphine." He appeared perfectly conscious up to the time of his death, which was in about twenty minutes after he took the medicine. I gave the bottle to Ebenezer Griffith with my own hands, and received it back again from his own hands.

Ebenezer Griffith deposed: I am a servant to Mr. Williams, of Penberry. On Saturday, May 1, 1869, Miss Williams sent me to the druggist's with a paper. I went to Mrs. Hicks's shop. She and Miss Hicks were there. Mrs. Hicks gave me a bottle in paper. I took it in my hand; it was never out of my hand only when I put it in my pocket. I called at no place on my way to Penberry, except at Prospect House Hotel on a message. I gave the bottle as I had it from Mrs. Hicks to Miss Williams or her mother. I am sure it was to one of them.

Cross-examined by Mr. Eaton Evans: Miss Hicks was not in the shop when I delivered the bottle to Mrs. Hicks. I put the bottle I had from Mrs. Hicks into my coat-pocket. I did not let the bottle a moment out of my possession, nor did I show it to any one until I delivered it at Penberry.

Ann Hicks, of St. David's, widow, deposed: I live at St. David's, where I have kept a chemist and druggist shop for the last thirteen years. I have the general management of the shop myself, and am assisted by my daughter. I received this paper marked B. (the prescription) on the first day of May.

The bottle was brought from Penberry on the evening before my son brought it. I took the bottle, which had been given me the night before, on the Saturday morning, and reached down from the shelf a bottle labelled "acetate of morphia," and with the assistance of the Pharmacopœia, the book which I have used for the last thirteen years, I made the solution in accordance with the formula. This is the Pharmacopœia (book produced), and here is the formula (pointed out). The medicine I prepared was made up strictly in accordance with the formula. I put four grains of morphia, two drops of acetic acid, one drachm of spirits of wine, and three drachms of water, making in all four drachms of liquid. I had had the bottle from which I took the acetate of morphia in my shop for about three years. No person but myself and my daughter has access to the shop. I remember giving the order for the acetate of morphia to Mr. Thomas Williams, who travels for a house in Bristol named Collins and Roper. This is the invoice (invoice produced) of the goods ordered through Mr. Williams of Messrs. Collins and Roper. I had all the goods duly supplied to me, and I paid for them. The invoice is addressed on the outside to H. Hicks, Esq., Surgeon, St. David's, and the interior heading, H. Hicks, Esq., to Collins and Roper. I saw Mr. Williams afterwards, and remonstrated with him for sending the invoice in the name of my son. The mistake was rectified, and after that the goods always came to me regularly in my own name. (Mr. Evans here objected to the admission of what Mrs. Hicks or her son said to Mr. Williams, his contention being that Collins and Roper had never supplied Mrs. Hicks with acetate of morphia.) I now produce the bottle which came with the other things named in the invoice from the Bristol house. It is labelled acetate of morphia. It remained on the shelf in my shop for about three years. Two grains had on one occasion been taken out of the bottle and made up in a mixture, in a twelve-ounce bottle, as and for acetate of morphia. The bottle was full when I first received it; it holds a quarter of an ounce. It was nearly full after I took out the two grains. I have dealt with other houses, but I do not believe I ever ordered or got acetate of morphia elsewhere than from Collins and Roper. I never to my knowledge had strychnine in my shop or in my possession, nor did I ever order any during the whole period I have been in business. I never remember having any other bottle of the acetate of morphia. I gave the bottle I dispensed to Ebenezer Griffith. I told him to take care of it. I have never seen strychnine.

Cross-examined by Mr. John: My son is a Surgeon in this town; his Christian name is Henry. He sometimes, but seldom, dispenses his own prescriptions. I do that for him. He generally writes his prescriptions, and I make them up, unless I should be absent. I cannot be certain whether my son ever used any of the bottle labelled "acetate of morphia." I always open prescriptions addressed to him, and dispense them for him. I weighed the acetate of morphia required. About 6 p.m. on Saturday, May 1, 1869, I saw a servant from Penberry riding hurriedly towards my son's house. My son very soon after called on me, and asked me what medicine I had sent to Penberry. I said that I had made up a preparation of morphine.

By Mr. Evans: I was aware that last year an Act was passed requiring chemists and druggists to be registered. I have complied with it. The goods were in the first instance delivered at my house, and not at my son's. I am quite sure this bottle has never been out of my shop for three years. No one but myself and my daughter ever meddles with the medicines, unless my son comes. In the absence of myself and my daughter, my son might have made up his own prescriptions from the goods in my shop. I cannot say how often he has done so. Two grains out of this bottle were administered to a patient at Treffgarn; I never heard of any bad symptoms ensuing.

Henry Hicks, Surgeon, St. David's, deposed: I am son of the last witness. My mother carries on the business of chemist and druggist, and she is registered as such. I never had any dealings with Collins and Roper. I carried the bottle from Penberry, and gave it to my mother on Friday evening, the day before the decease. I did not say anything to her about the quantity, but that a paper would be sent down, and she was to dispense in accordance with it. I have free access to my mother's shop, and I have frequently seen the bottle in its place. I have seen no other bottle of morphia but the muriate of morphia. When I prescribed two grains to a party at Treffgarn it was dispensed out of the bottle labelled "acetate of morphia," as the muriate was finished, and I dealt with it as acetate of morphia.

Cross-examined by Mr. John: I do not know that this bottle is not acetate of morphia. I have seen strychnine, but never in a pulverised state; this bottle is to all appearance morphia. All my prescriptions are made up by my mother. In her absence, which is very seldom, I make them up myself. As a matter of fact, I do not know that this bottle does not contain morphia. I may have said that I had dispensed it to scores of people. My prescriptions are my only guide. I called on Mr. Propert and told him the bottle contained strychnine. To all appearance the bottle is acetate of morphia. (A bottle of acetate of morphia was here shown to witness, which he examined, and then continued.) This is a frightfully impure specimen. I have never seen acetate of morphia so dark. The morphia that I have seen has been always pure white.

By Mr. Evans: I prescribed the morphia to a patient at Treffgarn as a sedative to an irritated stomach. I do not know the effects produced by it. I made no inquiries. I never saw the patient afterwards. The substitution of two grains of strychnia for two grains of morphia would be followed by no fatal consequences. I wrote to Collins and Roper on May 6, 1869. (Letter produced.) The prescription was made up for the person at Treffgarn about last autumn or winter. I cannot possibly say to how many persons I have dispensed acetate of morphia. I generally wrote prescriptions, which my mother made up; but it is quite possible I may have made up medicine with morphia myself from this bottle. I do not deny having said that I administered it to scores of people.

William Deane Wathen deposed: I am a Surgeon practising at Fishguard. I remember Saturday, May 1, 1869. I called at Penberry on that day about 6 p.m. I only just got into the house when Miss Williams, sister of the deceased, asked me to go upstairs immediately to see her brother, as he was suddenly taken ill. When I got to the bedside, I asked him what was the matter? He said, "I have been poisoned; they have given me strychnine instead of morphine." He was then much cramped. I told him that such a mistake was very improbable. He answered, "What is the meaning of these horrid spasms?" He was then convulsed again. I examined his eyes; the pupils were dilated, the pulse full and rapid. I called for mustard, but he could not swallow it. The convulsions became more rapid. They were of a peculiar character. The back and body of the deceased became rigid and arched, the head was bent backward, and I believe he rested on his head and heels. The slightest touch of his person brought on tetanic spasms. He frequently cried out, "Hold my legs, lift the clothes off." The last words he used were "Oh, kill me, kill me." At length he had a severe convulsive attack, the whole body became rigid and arched, the colour of the face became dusky and almost blue. This attack lasted about a minute. During the spasm he had a sardonic grin, the teeth were exposed, the muscles of the face drawn, and in that condition he died. These are distinctive marks of death from strychnine. My opinion, from what I have seen and heard, is that death was occasioned by strychnia. From the time I entered the room to the time of his decease was about five minutes. I have analysed a portion of the contents of the bottle produced, received from Serjeant Wade. I opened it, took out a portion of the contents. I then sealed up the bottle again, and delivered it back to Wade. I took a part of this portion and analysed it myself. The result of my analysis was that it contained a salt of strychnine, and no morphine. I applied the colour-tests, every one of which proved the presence of strychnine and the absence of morphine. Thirty minims of the solution—that is, half a grain of the contents of the bottle—were administered to a rabbit, which had arching of the back, sardonic grin, pupils dilated, prominent eyes, and death ensued in less than one minute. Half a grain of morphia would not produce such effects upon a rabbit; it might act as a sedative. I produce another stoppered glass bottle I received from Mr. Superintendent Jones, with some liquid in it. This I poured in from a bottle given to me on May 1, 1869, by Mr. Propert. I packed up the bottle in paper and sealed it, and gave it to Mr. David Williams, who gave it to Mr. Superintendent Jones sealed up as I had given it to Mr. Williams. I opened it, and analysed it on May 28 inst. I found the presence of a salt of strychnia, and no morphia. I tried it on another rabbit, which died under similar circumstances to the former one, but in a longer time. The first rabbit had half a grain, the second a very much smaller quantity. One hundred and eighty minims of this liquid would produce death. I have never seen acetate of morphia pure white: the preparation in common use is greyish white. (A bottle of acetate of morphia was here placed before the witness.) This bottle is the colour of morphia commonly

in use. I should certainly prefer the brown if side by side with a white bottle. By candle-light I might take the white for acetate of morphia. By daylight I think a suspicion would be raised in my mind that all was not right, if the label were on and the contents of the bottle were pure white. I have never seen acetate of morphia pure white.

Witness was cross-examined as to the colour of salts of morphia and of strychnia, and as to the probable effect produced by two grains of strychnine dispensed by Mr. Hicks under the supposition that it was morphia.

Thomas Davies Meyler, of Haverfordwest, chemist, was examined as to colour of morphia.

Police-constable Superintendent Jones, David P. Williams, of Penberry, and William P. Propert, of St. David's, deposed as to identity of bottle.

John Howell, of Ninewells, Surgeon, gave evidence as to colour.

Mary Ann Hicks, of St. David's, deposed: I am the daughter of Mrs. Hicks who has been examined here. I live with my mother, and assist her in the shop. I think I remember the arrival of this acetate of morphia some years ago. I have never taken anything out of this bottle. I never dispense; it is only my mother does so. I do not know what strychnine is. I know what arsenic is.

Thomas Williams, of Haverfordwest, called by the jury: I represent Collins and Roper, and take orders from them. Supplied Mrs. Hicks with acetate of morphia, and no one else.

The evidence having been concluded, the Coroner then summed up in the following address: Gentlemen of the jury, it is impossible for me at this late hour to go through all the evidence, and that scarcely appears necessary, as the case seems to me to lie in a very small compass. We are to inquire under what circumstances Dr. Williams came to his death. The evidence shows that the bottle was taken by Mr. Hicks from Penberry, and delivered by him to his mother, and that he told her a paper would be sent to her for it, and that Mrs. Hicks dispensed the medicine directed and gave the bottle to the boy. You are to satisfy yourselves whether you believe that the bottle given by Mrs. Hicks to the boy was the very bottle that was delivered at Penberry, and that the deceased took a part of its contents. The deceased stated that what he had taken was acid, and different from what he usually took. Dr. Wathen states he was convulsed, and died in twenty minutes. What Dr. Wathen and the deceased himself stated will lead you to decide whether death ensued from poison, and that it was delivered by Mrs. Hicks. The next thing for you to decide is under what circumstances Mrs. Hicks was authorised to act. It is for you to decide whether she used due precautions. If she did, then your verdict should be that the death arose by misadventure; if you agree with me, that will be your verdict. If a person in the pursuance of a lawful act, with due caution and care, causes the death of another, that would be a case of death by misadventure; but if, on the other hand, a person caused the death of another, which he might by ordinary caution have avoided, and in the pursuit of an unlawful act, that would amount to manslaughter. (Mr. James then followed.) It is for you to decide whether the bottle was sent by Collins and Roper or not. If there is any fault anywhere, Mrs. Hicks says it is to be laid at the door of Collins and Roper. If you believe that strychnine was sent by Collins and Roper to Mrs. Hicks under a mistake, then the case against Mrs. Hicks must fail, for she relied upon them, and acted upon the belief that the bottle contained what was represented by the label. There is an absence, therefore, of gross negligence on the part of Mrs. Hicks, and the blame must rest on Messrs. Collins and Roper. I should not advise you, however, to say anything about them in your verdict. There is no evidence as to who they are, and there is no individual to whom you can, under present circumstances, attach responsibility. Much of the inquiry about the colour was with the view of showing that Mrs. Hicks was grossly negligent in not being able to distinguish the contents of her bottle by its colour. If, owing to the difference of colour, a person could not be mistaken without heedlessness, then Mrs. Hicks would have been heedless if she had not been led to distinguish her bottle by its colour. You have heard the evidence on that point. Mr. Hicks says the morphia he has seen is pure white; others say that they cannot deny there is such a thing, but they have not seen it. It is for you to decide on this point, and to ascertain whether Mrs. Hicks brought into her business such talent, care, and caution as are usually required of a person following such a business as hers. If you should be of opinion that she has done so, your verdict should be as you have been instructed by the coroner.

The jury retired for a short time; on the reassembling of the court they gave their verdict, "poisoned by misadventure." The court then rose, and the proceedings terminated.

NEW INVENTIONS.

CHAPMAN AND CO.'S PATENT ENTIRE WHEAT FLOUR FOR CHILDREN'S FOOD AND NURSERY USE.

(*Agents, Hitchcock and Garrard, 9, Bruton-street, W.; wholesale at St. James's Mills, Hatcham, S.E.*)

As supply and demand influence each other, so it is certain that the supply of a variety of preparations for children's food which shall contain a good proportion of phosphates is a sign that there are numbers of children in respectable nurseries whose development, especially as regards bone, is unsatisfactory. It is quite open to debate whether the phosphates are the remedy first in order of necessity; but certainly, if the tissues fail to assimilate them, it is in accordance with reason and analogy to supply them in unusual abundance. Moreover, it is good policy to take care always that children shall not want phosphates, and not to wait till their ankles begin to grow out. The flour before us seems to consist of whole wheaten meal ground into a fine powder. It is not therefore so irritating to the bowels as ordinary coarse meal. Of course the pie-crust, bread, and puddings made with it are dark-coloured, and would be the better for being lightened with some of Liebig's baking powder; but for biscuits and as a means of making thick milk, this flour is very good.

VAN HOUTEN'S PURE SOLUBLE COCOA.

(*Manufactured by C. J. Van Houten and Zoon, Weesp, Holland; Sole Agent, H. Eschwege, 6 and 7, Coleman-street, London, E.C.*)

We have tried this preparation of cocoa, and pronounce it decidedly cheap, very well-flavoured, and wholesome. It contains a little more fat than some others, not more than would be relished by a delicate stomach, but enough to confer a smooth, satisfactory, nutritive quality, whilst the peculiar refreshing taste and aroma are well pronounced.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, May 27, 1869:—

Bourne, Charles Rosser, Camberwell New-road.
Bunting, James, Mile End-road.
Fox, Edward Charlton, Cockfield, Durham.
Parsons, Thomas Edward, Islip, Oxon.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—The following appointment has been made:—James Stewart, Assistant-Surgeon to the *Agincourt*.

MEDICAL DEPARTMENT.—Assistant-Surgeon John Dustan, from the Royal Canadian Rifle Regiment, to be Staff Assistant-Surgeon, *vice* Thomas Henry Pickering, placed on half-pay.

BIRTHS.

ALLAN.—On May 28, at Enniskillen, the wife of Alexander Allan, M.D., Assistant-Surgeon 1st Batt. 17th Regt., of a daughter.

BASTIAN.—On May 27, at 81, Avenue-road, Regent's-park, the wife of H. Charlton Bastian, M.D., F.R.S., of a son.

CHALDECOTT.—On May 26, at Beomond, Chertsey, the wife of T. A. Chaldecott, M.D., late of Hongkong, of a son.

GRACE.—On May 25, at Thornbury, near Bristol, the wife of Dr. E. M. Grace, of a daughter.

MAXWELL.—On May 25, at Stickney, near Boston, Lincolnshire, the wife of Peter Maxwell, M.D., of a son.

STOKOE.—On May 28, at Rutland House, East Dulwich, the wife of Paul Henry Stokoe, B.A., M.D., of a son.

MARRIAGES.

LATHAM—NEVITT-BENNETT.—On May 25, at St. Marylebone Church, Philip Arderne, second son of P. M. Latham, Esq., M.D., to Ella, daughter of Rowland Nevitt-Bennett, Esq., of Cornwall-terrace, Regent's-park, and Lincoln's-inn.

LLOYD—RICH.—On May 27, at Holy Trinity Church, Hounslow, T. Franklin Lloyd, M.R.C.S.E., of 42, Finsbury-circus, to Emily, second daughter of George William Rich, Esq., of Alderwick House, Hounslow.

WARD—ARTHUR.—On May 31, at St. Luke's parish church, Chelsea, by the Rev. Francis Synge, M.A., Martindale Ward, L.R.C.P., etc., to Mary Ann, widow of the late Joseph Arthur, M.D., also of Chelsea.

DEATHS.

DAVIES, CHARLES JAMES, Esq., of the Bombay Civil Service, second son of the late Dr. Henry Davies, of Savile-row, and Duchess-street, at Bombay, on April 25, aged 44.

MAYO, SUSAN MARY, wife of Thomas Mayo, M.D., F.R.S., and youngest daughter of the late Rev. John Briggs, Fellow of Eton College, at Yarmouth, Isle of Wight, on May 27, aged 56.

MELLER, CHARLES JAMES, M.D., M.R.C.S., late of Pamplemousses, Mauritius, youngest son of the late James Hill Meller, Esq., of Edenbridge, Kent, at Allington House, Berrima, on February 26.

REEKS, LYDIA ELIZA, widow of the late Robert Reeks, M.R.C.S.E., of Puddletown, county Dorset, at Clapham, Surrey, on May 24, aged 75.

ROSE, MARY, the beloved wife of Dr. C. Rose, at Mile-end, on May 19, aged 65.

RUMBELOW, LUCY, widow of William Rumbelow, Surgeon, of Guildford-street, Russell-square, at 9, Chepstow-villas, Twickenham, on May 23, aged 54.

TAYLOR, SUSANNA GREEN, wife of Thomas Taylor, M.R.C.S., Boeking, Essex, at the house of her brother, J. H. Partridge, Esq., Colchester, on May 25.

WALKER, PENELOPE, widow of the late John Walker, M.D., at Bebington, Cheshire, on May 27, aged 53.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BURTON-ON-TRENT.—House-Surgeon for an Infirmary just completed. Candidates must be duly qualified. Applications and testimonials to the Hon. Sec., J. C. Grinling, Esq., Burton-on-Trent, on or before June 15.

DENTAL HOSPITAL OF LONDON, 32, SOHO-SQUARE.—Dental Surgeon; must be a Licentiate in Dental Surgery of the Royal College of Surgeons of England. Applications and testimonials to the Hon. Secretary on or before June 8.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Resident Clinical Assistant; must have a Medical qualification. Applications and testimonials to the Secretary, at the Hospital, Brompton, S.W., on or before June 5.

LINCOLN COUNTY HOSPITAL.—Physician; must be F. or M.R.C.P. Lond. or Edin., or be F.K.Q.C.P., not practising pharmacy. Applications and testimonials to the Secretary on or before July 5. Election on July 8.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—Assistant-Physician; must be M.D., or F. or M.R.C.P. Applications and testimonials to the Secretary, at the Institution, Queen's-square, Bloomsbury, on or before June 8.

NEWCASTLE-UPON-TYNE INFIRMARY.—Senior House-Surgeon and Junior House-Surgeon. The Senior House-Surgeon must have both Medical and Surgical qualifications. The Junior House-Surgeon must be duly registered and have one qualification. Applications and testimonials to the Secretary on or before June 22. Election on July 1.

NORTH RIDING ASYLUM, CLIFTON, YORK.—Assistant Medical Officer. Applications and testimonials to Dr. Christie, Medical Superintendent.

NORTHUMBERLAND COUNTY PAUPER LUNATIC ASYLUM.—Assistant-Surgeon; must be registered, and be unmarried, and between 25 and 40 years of age. Applications and testimonials to the Medical Superintendent, Asylum, Morpeth, on or before June 14. Election on June 21.

SPALDING UNION.—Resident Medical Officer for the Moulton District. Candidates must possess the qualifications prescribed by the orders of the Poor-law Board. Applications and testimonials to A. Maples, Clerk to the Guardians, Spalding, on or before June 21.

ST. GEORGE, HANOVER-SQUARE, DISPENSARY, 57, MOUNT-STREET.—Physician; must be M.R.C.P.L. Applications and testimonials to the Hon. Sec., on or before June 28. The election will take place on the next day at 5 o'clock p.m., when personal attendance will be required.

ST. MARY'S HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, MANCHESTER.—Resident Medical and Surgical Officer; must be M.R.C.S. and L.S.A., or M.R.C.P. Applications and testimonials to the Secretary, 41, John Dalton-street, Manchester, on or before June 10.

TOTTENHAM TRAINING HOSPITAL. — House-Surgeon; must be legally qualified. Applications and testimonials to the Director, Dr. Lascron.

WORCESTER GENERAL INFIRMARY.—Resident House-Surgeon's Assistant and Dispenser; must be legally qualified. Applications and testimonials to the Secretary on or before June 5.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Bakewell Union.—The Winster District is vacant; area 15,172; population 4498; salary £25 per annum.

Conway Union.—Dr. Williams has resigned the Crenddyn District; area 17,235; population 7899; salary £50 per annum.

Saffron Walden Union.—Mr. Jones has resigned the Seventh District; area 14,406; population 5668; salary £76 per annum.

Spalding Union.—Mr. Edward C. Anderson has resigned the Moulton District; area 16,278; population 2889; salary £45 per annum.

APPOINTMENTS.

Darlington Union.—William H. Arrowsmith, L.R.C.P. Edin., L.R.C.S. Edin., L.S.A., to the Darlington District and the Workhouse.

Hartlepool Union. — Samuel Gourley, M.D. Glas., L.R.C.S. Edin., L.R.C.P. Edin., L.S.A., to the Stranton District.

Salford Union.—Alexander C. Clarke, M.D. Edin., M.R.C.S.E., L.S.A., to the First Salford District.

Stockton Union.—John Hedley, M.R.C.S.E., L.S.A., to the Middlesborough South Districts.

THE annual dinner of the Fellows of the Royal College of Surgeons will take place at the Albion Tavern on July 1. Professor Syme will occupy the chair. Mr. T. Carr Jackson is the Honorary Secretary.

THE LEVÉE.—At the Levée held on Tuesday at St. James's Palace by the Prince of Wales on behalf of her Majesty, the following presentations were made to His Royal Highness:—Dr. A. Armstrong, R.N., on appointment as Director-General of the Medical Department of the Navy, by the First Lord of the Admiralty. Dr. Robinson Boustead, Surgeon, her Majesty's Bombay Army, on return from Abyssinia, by the Secretary of State. Dr. Vernon Bell, by General Cuppage. Mr. Robert Ellis, by the First Lord of the Admiralty. Surgeon Goodchild, by Lord Leigh. Staff-Surgeon Dr. J. R. Holman, R.N., her Majesty's ship *Ariadne*, by the Director-General of the Medical Department of the Navy. Deputy-Inspector-General of Hospitals T. Longmore, by the Adjutant-General. Dr. Charles D. F. Phillips, by Lord Albert Leveson Gower. Dr. A. F. Scott, by the Secretary of State for India. Sirs James Bardsley, Henry Holland, Henry Thompson. Drs. M. Baines, Brewer, M.P., John Forbes, Horatio Goodday, Day-Goss, Francis Hawkins, Minter, Nicoll, Lyon Playfair, Reginald Read, Sall, Sieveking, Swettenham. Messrs. Alfred Cooper, Prescott Hewett, etc.

ROYAL COLLEGE OF SURGEONS.—The usual notice of the annual election of Fellows into the Council of the College has just been sent to the 1300 on the list, stating that the meeting will take place on Thursday, July 1, at 2 o'clock, for the election of three Fellows. As far as at present known there are six candidates—viz., Mr. Samuel Solly, F.R.S., Vice-President of the College, and Mr. John Adams, the retiring Members of the College, who offer themselves for re-election, Mr. Mackmurdo, the other Councillor, declining to be put in nomination. Mr. W. J. Erasmus Wilson, F.R.S., Member November 25, 1831, Fellow December 11, 1843; Mr. John Gay, Member July 11, 1834, Fellow December 11, 1843; Mr. Henry Lee, Member February 22, 1839, Fellow December 24, 1844; Mr. J. E. Erichsen, Member January 11, 1839, Fellow April 17, 1845. The last two gentlemen are Fellows by examination. As the last day for sending in the nomination papers is Monday next, it is probable that the list will be increased. Fellows should be cautious in not nominating more candidates than there are vacancies, at this would incapacitate them from voting at that election. It is stated that Mr. Edwin Hearne, of Southampton, a Member of 1842 and Fellow of 1858, will also come forward.

THE FELLOWSHIP EXAMINATIONS.—Having published the questions on Anatomy, etc., submitted to the candidates for the Fellowship of the College of Surgeons, we now complete it by giving those on Pathology, Therapeutics, and Surgery, and, as in the case of the former questions, so in the present, answers to any four would be sufficient. 1. State the morbid conditions which render necessary partial amputation of the foot—tarso-metatarsal and median tarsal respectively—as well as the condition requiring removal of the entire foot. Describe in detail the tibio-tarsal amputation, and the subsequent local treatment. Refer in illustration of your statements to any case or cases that have been under your observation. 2. State the phenomena of ulceration of the skin; and describe the process by which the ulcer is healed. 3. Describe the morbid conditions of the retina which have been observed to produce different degrees of dimness of sight or entire blindness. State the treatment to be resorted to where any might be expected to be useful; and mention in illustration any case or cases you have observed. 4. In a case of strangulated hernia in which the swelling has been removed by the taxis, but the strangulation still continues, state what may be the cause of the continued strangulation, the circumstances which would influence your judgment as to its nature, and the operation to be resorted to in different cases. 5. Describe in detail the means to be used for restoring suspended animation from immersion in water. State the duration of the immersion up to which the efforts for restoration are likely to be successful, with the facts in support of the judgment you form. Mention the results of the examination in fatal cases. 6. State the different forms of congenital malformation or defect in the lower bowel which cause difficult evacuation or complete obstruction to the discharge of fæcal matter. Mention the plan of treatment to be adopted in different cases. Describe any necessary operation. It is stated that all the candidates for the Pass Examination were successful. The list cannot be published until it has been submitted to the Council on the 10th inst.

MR. LE GROS CLARK commenced his lectures on Wednesday last "On the Principles of Surgical Diagnosis, especially in relation to Shock and Visceral Lesions." Mr. Hulke commenced his course "On the Minute Anatomy of the Eye" the following day in the theatre of the College of Surgeons.

Dr. Richardson will deliver his third lecture at the Polytechnic on the third Tuesday in June.

The monthly dinner of the Medical Club was held on Wednesday, Mr. Erasmus Wilson in the chair. The evening passed off pleasantly, the speaking was good, and we hear the Club is prosperous.

Naval Pension.—The Greenwich Hospital pension of £50 per annum, vacant by the death of Mr. W. Folds, Deputy Inspector of Hospitals and Fleets, on the 11th ult., has been granted from that date to Dr. John W. Elliott, retired Deputy Inspector of Hospitals and Fleets.

The Queen's Hospital, Birmingham. — At the general meeting of the governors held last week the rules were altered, so as to carry into effect a resolution passed at the last annual general meeting to abolish the midwifery department; and a vote of thanks to Drs. Suckling and Earle, for their services as Surgeon-Accoucheurs, was passed unanimously.

Statue of Sir Dominic Corrigan, Bart.—A notice has been issued from the King and Queen's College of Physicians in Ireland, that the President and Fellows were to assemble in the College Hall, Kildare-street, on Thursday, the 3rd inst., at 5 o'clock in the afternoon, to receive from the Testimonial Committee the marble statue of Sir Dominic J. Corrigan, Bart., ex-President of the College, and inviting the subscribers to the testimonial and the Licentiates of the College to be present on the occasion. In our next publication we shall give a report of the proceedings connected with this interesting event.

Presentation to a Medical Practitioner.—On Friday last the friends of Dr. William M. G. Burns entertained him at a dinner at the King's Arms Hotel at Ayr, on the occasion of his leaving that town to be associated in practice with his uncle, Dr. John Burns, at Bridgetown, Glasgow. The chairman, Baillie Rae, presented Dr. Burns, in the name of his Ayr friends, with a handsome silver tea-service and large silver tray, on which a suitable inscription was engraved. Dr. Burns acknowledged the gift in a fitting speech. On Monday last the Volunteer Artillery, of which Dr. Burns was Surgeon, presented him with a valuable piece of plate, and the officers presented Mrs. Burns with a splendid pair of gold earrings.

The members of the Liverpool Medical Institution celebrated the termination of the session 1868-9 by a public dinner on Thursday, May 27. Sixty-five gentlemen, very few of whom were not members of the Society, were present, and from the success which attended this resuscitation of a long-discontinued practice, it is to be hoped that each year will witness a similar gathering. The chair was occupied by the President, Dr. Macnaught, while Dr. Robert Gee filled the vice-chair. The attempt was made at an early period of the session thus terminated to increase the number and interest of the meetings by dividing the Institution into sections, and holding a pathological meeting on one Thursday and a Medico-chirurgical one, for the reading of papers, on the next, instead of embracing both these ends, as had been the custom previously, at one fortnightly meeting. The change was found to work so badly, however, and the number of attendances on any of the Thursday evenings to be so much diminished, that before the winter terminated it was unanimously resolved to abandon it.

State Medicine.—A memorial drawn up by a joint committee of the British Medical and Social Science Associations, has been presented to the President of the Privy Council, the Home Secretary, and the President of the Poor-law Board, asking "for a thorough, impartial, and comprehensive inquiry, by a Royal Commission having power to visit, or to send sub-Commissioners to visit, the large towns and other districts of the country, to obtain information and evidence, and to report on:—

"1. The manner in which the cases and causes of sickness and of death are and should be inquired into and recorded in the United Kingdom.

"2. The manner in which coroners' inquests and other Medico-legal inquiries are and ought to be conducted, particularly in regard to the methods of taking scientific evidence.

"3. The operation and administration of sanitary laws, with special reference to the manner in which scientific and Medical advice and aid in the prevention of disease are and should be afforded; and also with special reference to the extent of the areas or districts most convenient for sanitary and Medico-legal purposes.

"4. The sanitary organisation, existing and required, including a complete account of the several authorities and officers. The education, selection, qualification, duties, powers, tenure, and remuneration of the said officers to be specially reported on.

"5. The revision and consolidation of the sanitary laws, having special reference to the increase of the efficiency of their administration, both central and local."

King's College, London.—The following scholars and students received prizes and certificates:—*Scholarships.*—Alfred Cotterill, senior scholar; Alexander Wynter Blyth, second year scholar; Joseph Henry Philpot, Andrew Duncan, and Gerald Bomford, junior scholars; Joseph Henry Philpot and Andrew Duncan, Warn. Scholars, Class 1; and Francis Richardson Cross, Warn. Scholar, Class 2. *Prizes and Certificates of Honour, Winter Session* 1868-9.—Warneford Prizes: Alfred Cotterill, first prize. Leathes Prize: Joseph Numa Rat. Divinity: Joseph Numa Rat, second year prize; Joseph Henry Philpot and Andrew Duncan, first year prizes. Anatomy: Walter Berry, prize; George Chapman Briggs, Alfred Charles Mayo, and William Francis Hazel, certificates of honour. Physiology: George Chapman Briggs, prize; Robert Eardley-Wilmot, William Allnutt, and Frederick Parlett Fisher Ransom, certificates of honour. Chemistry: George Chapman Briggs, prize; Frederick Parlett Fisher Ransom and George John Eady, certificates of honour. Medicine: Alfred Thomas Gibbings, prize; Robert Wishart Lyell, certificate of honour. Surgery: Eleazer Birch Roche, prize; Charles Tanfield Vachell and Robert Wishart Lyell, certificates of honour. Clinical Medicine: Alfred Cotterill, prize. Clinical Surgery: Alfred Thomas Gibbings, prize. *Prizes and Certificates gained in the Summer Session*, 1868. — Practical Chemistry: Alexander Wynter Blyth, prize; William Allnutt and William Rose, certificates of honour. Forensic Medicine: Urban Pritchard, prize. Botany: Henry John Hope, prize; Alexander Wynter Blyth, William Rose, and William Francis Hazel, certificates of honour. Obstetric Medicine: Charles Mayhew, prize. Materia Medica: George Le Hunt Rowland, prize; William Allnutt and Walter Berry, certificates of honour. Comparative Anatomy: Joseph Numa Rat, prize. Clinical Medicine: Charles Mayhew, prize. Clinical Surgery: Urban Pritchard, prize. Todd Clinical Medicine: George Henry Pedler, prize. *Names of those recommended by the Principal and Professors for Election as Associates of King's College, London.*—George Amsden, Frank Argles, Henry Bland, Edward Casey, Alfred Cotterill, John Curnow, William Little, Frederick Marshall, Urban Pritchard, and Joseph Peeke Richards.

Composition and Quality of the Metropolitan Waters in May, 1869.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction .	19·60	0·113	0·067	0·000	14·9	3·5
West Middlesex .	18·07	0·070	0·083	0·000	13·8	3·5
Southwark & Vauxhall . . .	17·04	0·108	0·105	0·004	14·0	3·3
Chelsea . . .	18·03	0·103	0·120	0·006	14·8	3·7
Lambeth . . .	17·33	0·054	0·165	0·002	14·0	3·2
Other Companies.						
Kent	26·77	0·038	0·173	0·000	20·6	6·0
New River . .	16·33	0·032	0·075	0·000	14·0	3·3
East London . .	18·90	0·054	0·090	0·000	14·3	3·5

The average quantity of water supplied daily to the metropolis in the month of April was, according to the returns of the Water Companies to the Medical Officers of Health, 97,313,153 gallons, and the number of houses supplied was 463,428. This is at the rate of 30·7 gallons per head of the population.

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The name of Mr. Walter G. Lowe was accidentally omitted from the list of candidates who have passed the first examination for the Fellowship at the Royal College of Surgeons in our number for May 29.

We again beg leave to point out our rule not to publish communications unauthenticated by their authors' names. If desired, these names are never published, and are kept in strict confidence.

Bristol General Hospital.—We shall be glad to publish the remarks on the carbolic treatment.

A. N.—The person named is not on the Register; he is what is called an herbalist.

Abnormal Labour.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—As in midwifery anything abnormal cannot fail to interest the Profession, I offer the following particulars for publication:—On April 25 I was called to attend the wife of a farm servant in her seventh confinement, and, after a rather tedious labour, assisted by a good dose of secale, delivered her of a still male child weighing 13½ lbs., and measuring in length 26 inches. The woman made a good recovery. I can find but few cases on record in which the weight of this child was exceeded, and none which can approach it in length by two inches. I am, &c.

Cuckfield, Sussex, May 28. P. Wright.

Syntax.—The word may be spelt either way; there are great authorities on both sides.

A Young Surgeon.—There is no rule on this subject. The new comer generally calls on the resident Practitioner, but there is no breach of good manners or etiquette in neglecting to do so.

Nomenclature of Skin Disease.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Having for many years been engaged upon, and interested in, the subject of skin diseases, perhaps I may be permitted to make a few remarks upon the nomenclature of the speciality here referred to.

With my limited understanding, I cannot conceive why certain terms have been so long retained—*e.g.*,

Erythema (ἐρυθρός, red). Is not scarlatina red?

Rubeola (*ruber*, red). Erysipelas is red.

Variola (*varus*, a pimple). Now another term is applied to the four forms of pimple.

Impetigo (*impeto*, to infest). I think a better term might be employed.

Ecthyma (ἐκθύω, to break out). Most of the eruptions might be said to break out.

Eczema (ἐκζέω, to boil out). I should prefer the word "ooze" to that of "boil."

Psoriasis (ψώρα, the itch). This term, I think, conveys but a poor idea of the affection.

Scabies (*scabo*, to scratch). The itch is termed "scabies," not "psoriasis."

Chloasma (χλόη, grass). I see no resemblance between what is termed "chloasma" and grass.

Chelys (χέλυς, a tortoise). I fail to recognise the resemblance between a tortoise and what is termed "chelys."

Molluscum (*mollis*, soft). I think a better term might be found for this affection.

Alopecia (ἀλώπηξ, a fox). I see no analogy between a fox and bald patches upon the head.

Clavus (a nail). Now, this term is applied to corns.

May 29. I am, &c. H. B. Tuson.

A Candidate.—The names of the successful Fellows cannot be published until the list has been submitted to the Council.

Dr. McB., Liverpool.—From inquiries made for you, it appears you will be too late in your application. We are informed that there are over 200 candidates' names entered for the Arts examination.

Railway Mortality.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your number of March 27 last (p. 336), under the heading "Railway Accidents in Prussia," quoting from a quotation in No. 13 of the *Berliner klinische Wochenschrift* of this year, you have called attention to the great number of fatal accidents among the railway servants of all grades in that country. As recorded in the "official report," there appears to have occurred in 1867 no less than 164 deaths among the total of 73,190 persons, or 1 death in every 446 employed on the Prussian railways. Now, it would be interesting to learn from a comparison with our own statistics what proportion the loss of life among those similarly engaged in this country bears to the above numbers. From your article, intended as it is to sober our exaggerated notions about the dangerousness of our own traffic, we are to infer that in this particular, at all events, we have the decided advantage over the Prussians. It would have been well, however, and quite patriotic too, if you had from the same source drawn for us the important information that of the 38,766,866 travellers over nearly 1,000,000,000 miles none were killed except two who owed their fate to their own carelessness, and, further, that of the nine accidents in all which throughout the year occurred among those vast numbers, four happened from the sufferers' own fault. Instead, you have simply added the two deaths, just referred to, to the 64 (including 18 suicides) which happened not to travellers, but to "strangers"—*i.e.*, trespassers on the lines, etc., from their own recklessness.

The veracity of the "official report" from which the *Berliner klinische Wochenschrift* quotes, you do not appear to impugn. You will agree, then, that, seeing the annual sacrifice of travellers' lives involved in our railway traffic, the flattering unction derivable from the apparent excess of danger to servants' lives on the part of the Prussians cannot avail us much. Your strictures on the slowness, the inconveniences, and restrictions of continental railway travelling are justifiable enough; but the statement, self-contradictory as it is, that "railways on the Continent seem to have in view far more the profits of the shareholders than the advantage of the travellers," is further refuted by the fact with which I have been anxious here to supplement your information. For this you will admit—of all travellers' advantages imaginable, that of arriving alive is *facile princeps*.

I am, &c. A. Samelson, M.D.

15, St. John-street, Manchester, May 31.

L.R.C.P. Lond. complains that he has never been invited to the conversaziones at the College of Physicians, an institution which, he adds, in this respect contrasts most unfavourably with the College of Surgeons, to which all the Fellows and Members are invited. We should think there was some oversight, which would be rectified if a courteous application were made to the Registrar.

C.—The lecture was delivered by Faraday.

A Patient should apply to the Secretary of the Hospital. A letter of recommendation is not required.

A Fellow, Southampton.—Unless the nomination papers are sent in on Monday next at latest, the application cannot be received.

Fairplay.—It is an invention of the enemy. Had the College of Surgeons declined the trust, Mr. Erasmus Wilson would have made the offer to the sister institution in Pall-mall. He certainly was not influenced by the mean motives suggested.

The New County Boards Bill and the Medical Profession.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—One of the most important Bills ever introduced into Parliament, affecting the interests of the tax-payer in every county in England, has just been printed by order of the House of Commons. I refer to the County Financial Boards Bill. It has long been a standing axiom in British and colonial legislation that taxation and representation should be co-extensive, but the doctrine has not hithe to been put iuto practice in the Euglish conntics. The present Bill provides for the establishment of a representative aud responsible body, under whose direct control the expenditure of various public institutions will be brought, thus materially altering relations between the officers and the new boards or committees of management. It is, however, with the Medical officers of gaols and of lunatic asylums, and not with clerks of the peace, county surveyors, or cattle-plague officials, that the Medical journalist has to deal. The position of gentlemen attached to the above institutions has always been one of peculiar delicacy and difficulty. Too few to make any impression collectively, their condition can only be ameliorated by the aid of their Professional brethren or by the dealing out of that even-handed justice which has produced the Bill itself. Thus, while the officers of the Poor-law Medical service can only be dismissed for some dereliction of duty after an impartial inquiry, and with the approval of the Poor-law Board, the Medical officers of the other branches of the public services in question are in the position of private employés of the Visiting Justices, and are liable to dismissal without any power of appeal. The notable case of Mr. Miller that occurred a few years ago shows that this manner of punishment may be applied with equal effect against the innocent or the guilty. It seems, therefore, but just that the representatives of the Medical Profession in Parliament, both general and special, should see that a clause be inserted in the new Bill to the effect that no Surgeon to any gaol or Medical Superintendent of any asylum maintained wholly or in part out of the public rates shall be liable to dismissal without cause being shown to the satisfaction of her Majesty's Secretary of State for the Home Department. I am, &c.

Westminster, May 27. Medical Remembrancer.

A Practitioner.—The contract is binding in law. The covenant not to practise within three miles is clear; it does not mean residence, but attending a patient within that distance. An action at common law might be entered for specific damages, or for recovering the penalty. Or the Court of Chancery might be applied to for an injunction to restrain the offender. Many cases are on record both in the courts of law and equity. It was pleaded in one case by the defendant that no consideration had been given; but this was overruled by the judge, who held the contract to be binding.

Medical Officer.—The length of notice which a district Medical officer may be legally required to give to the guardians prior to his resignation will depend upon the terms of any contract, written or verbal, into which he may have entered. In default of any such contract or stipulation at the time of his appointment, there would appear to be nothing to prevent his tendering his resignation to take immediate effect. The resignation, if unconditional, would be complete without its acceptance by the guardians. A notice of intended resignation should be given, either verbally or in writing, at a meeting of the Board, and not merely to an agent of the guardians during an interval between their meetings.

Intermittent Fever not always produced by Malaria.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—It is usual for a Surgeon in Indian practice to ascribe all diseases to malarious origin. Whether it be inflammatory fever after a capital Surgical operation, or fever after catheterism, the cause is pronounced to be malaria. It is my object in this letter to canvass the feasibility of such wholesale denunciations, and to prove that intermittent fevers are not by any means unfailing accompaniments only of zymotic poisons.

To enter into the subject, let me sift the causes that produce the phenomena of intermittent fever. It is said of malaria that it passes through two stages in the human system—first, a stage of incubation, and, second, a stage of manifestation. In the brooding stage, the patient is troubled with malaise and general languor. This may last for an indefinite period—from a week to a fortnight or months. As a rule, the longer the patients remain under its influence, the firmer is the hold of the poison on their body, and the stronger are the consecutive symptoms. When the poison is thus matured in the system, it manifests itself in symptoms peculiarly of nervous origin. The change in the vaso-motor nerves is evidenced by the phenomena of contraction and subsequent dilatation of the cutaneous capillaries, giving rise to cold and hot stages of fever. Without entering into the details of the process, suffice it for our purpose to say that the existence of the subtle poison is known by its peculiar action on that portion of the nervous centre that governs the cutaneous circulation of our body, and it is this alteration in the distribution of the nervous force, producing alternate cold and heat, that we designate as intermittent fever. The complete resolution of the symptoms, and the restoration of the patient after a few hours to his former state of health (excepting some degree of lassitude left as the result of overaction, and of consequent temporary retention in the blood of the effete products), are all confirmatory proofs of the nervous nature of the disease. If these paroxysms recur regularly for some time, other morbid changes are observed in its sequence, such as splenitis, hepatitis, phrenitis, etc.

Such being the nature of the disorder, let us consider whether it can be produced by causes other than malaria itself. In most diseases we find two

sorts of causes—internal or idiopathic, and external or traumatic. Thus in tetanus the change in the nervous equilibrium can be brought on by some unknown change in the atmosphere acting on that centre, as well as by the irritation set up on the filaments of a peripheral nerve by a foreign body. Thus in dysentery the same changes and symptoms may be the consequence of malaria as well as of some irritation in the alimentary canal caused by undigested ingesta, scybala, or worms. And thus from analogy we can deduce the fact that intermittent fever, like the preceding, is dependent on two sorts of causes, constitutional and external. Under constitutional causes I include zymotic poisons, and under the heading "external" I mean such causes as by their local effect produce derangements in the nervous equilibrium of our system. All of us have witnessed in capital Surgical operations how the patients go through all the stages of intermittent fever, although there is nothing to speak of malarious taint. In burns, where the nervous force is equally disturbed, we meet with the same phenomena. Likewise in dilation of strictures the irritation of highly sensitive parts so upsets the nervous equilibrium of our body as to give rise to symptoms of fever—in fact, in latter instances the degree and the severity of the symptoms are in inverse ratio to the sensitiveness of the part itself or to the amount of injury inflicted, although it may be modified in exceptional instances by peculiarity of constitution. In the passage of instruments in stricture we can predicate with a certain degree of truth in which of the cases we expect pyrexial symptoms by the close observance of the degree of irritability and hardness of the stricture. There may be exceptions to this general rule, as in other instances, and we are as much in the dark to explain why one man with a small thorn lodged in his finger gets tetanic symptoms, whilst another with a bigger one escapes with impunity, as to unravel the mystery why one man with stricture should have comparative immunity from fever after catheterism than others. Certainly it is a far-fetched idea to suppose that in all such instances malaria remaining occult in the system is at the bottom; for can we not better solve the problem on the supposition that the symptoms are entirely external in their origin, and are due to irritation of the most sensitive nerves producing agitation in the distribution of nervous force, and hence the symptoms of fever?

I am induced to make these remarks by finding Dr. Fayrer (a man commanding extensive faith, practice, and experience in India, and for whom I entertain a profound veneration) contribute an article in your journal of August, 1868, on Urethral Fever, in which he adopts the malarious view of the disease, and which was so highly commented on by Mr. Barnard Holt. As I do not agree with him in the views he advocates, I have given out my own thoughts on the subject. I am, &c. GOPAUL CHUNDER ROY,
Teacher, Medical School, Nagpore.

Nagpore City Hospital, April.

COMMUNICATIONS have been received from—

Dr. FAYRER; Mr. H. B. TUSON; MEDICAL REMEMBRANCER; Dr. SIM; Dr. GOPAUL CHUNDER ROY; Mr. P. WRIGHT; Dr. EDWIN LEE; Dr. E. S. KING; Dr. KELLOGG; Mr. DOBSON; Mr. W. G. LOWE; Dr. SAMELSON; Mr. G. GASKOIN; Dr. J. HUGHLINGS-JACKSON; Dr. BALLARD; Dr. B. W. RICHARDSON; Mr. J. CHATTO; Mr. J. H SALTER; Mr. F. CHURCHILL; Mr. C. J. FOX; Mr. E. T. MURRAY.

BOOKS RECEIVED—

Armatage on the Thermometer as an Aid to Diagnosis in Veterinary Medicine—Roscoe on Spectrum Analysis—Turner's Sheet of Rules of Simple Hygiene—Coulson on Syphilis—Bible Animals, part 18—Pharmaceutical Journal, No. 120—Mill on the Subjection of Women—Clark on Diaphoresis—Monthly Homœopathic Review, June—Edinburgh Medical Journal, June.

NEWSPAPERS RECEIVED—

New York Medical Gazette—Brighton Daily News—Glasgow Herald—Bournemouth Visitors' Directory.

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 29, 1869.

BIRTHS.

Births of Boys, 961; Girls, 963; Total, 1924.
Average of 10 corresponding weeks, 1858-67, 1911·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	658	618	1276
Average of the ten years 1858-67	636·9	585·2	1222·1
Average corrected to increased population	...	...	1342
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	...	3	3	...	15	4	.	...
North	618210	3	5	16	3	24	16	1	...
Central	378058	...	7	2	2	15	5	...	...
East	571158	3	6	16	...	19	2	2	...
South	773175	2	2	8	1	10	13	2	...
Total	2803989	8	23	45	6	92	40	5	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·714 in.
Mean temperature	51·7
Highest point of thermometer	70·5
Lowest point of thermometer	41·8
Mean dew-point temperature	45·3
General direction of wind	Variable.
Whole amount of rain in the week	1·12

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 29, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1861.)	Births Registered during the week ending May 29.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending May 29.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London Metropolis	3170754	49·7	1921	1462	1276	70·5	41·8	51·7	1·12	113
Bristol (City)	169423	36·1	112	76	*77	68·9	39·9	50·7	1·02	103
Birmingham (Boro')	300846	46·1	231	175	121	61·0	40·1	48·3	1·18	119
Liverpool (Boro')	500052	99·7	389	295	277	60·1	37·5	47·3	0·82	83
Manchester (City)	370892	82·7	308	210	*173	64·0	41·7	49·6	0·12	12
Salford (Borough)	119350	23·1	112	60	53	61·7	38·7	47·3	0·17	17
Sheffield (Borough)	239752	10·5	155	126	104	61·0	40·0	46·4	1·38	139
Bradford (Borough)	138522	21·0	130	71	54	59·6	38·3	45·5	1·07	108
Leeds (Borough)	253110	11·7	260	120	99	59·0	40·0	45·8	1·20	121
Hull (Borough)	126682	35·6	69	50	47	57·0	37·0	44·6	1·58	160
Newcastle-on-Tyne, &c.	130503	24·5	95	69	54	52·0	40·0	43·3	0·21	21
Edinburgh (City)	178092	40·2	141	86	132	56·7	31·0	45·2	0·10	10
Glasgow (City)	458937	90·6	333	268	306	59·2	32·0	46·0	0·15	15
Dublin (City and some suburbs)	320762	32·9	168	158	149	63·6	34·2	49·5	1·24	125
Total of 14 large Towns	6543587	35·5	4419	3244	2922	70·5	31·0	47·2	0·81	82
					Week ending May 22.	Week ending May 22.				
Vienna (City)	1863 569000	...	...	...	377	...	...	65·1	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·714 in. The barometrical reading increased from 29·38 in. on Wednesday, May 26, to 30·01 in. by the end of the week.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

June 5. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

ROYAL INSTITUTION, 3 p.m. Mr. Emannel Deutsch, "On Semitic Culture."

7. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

ODONTOLOGICAL SOCIETY, 8 p.m. Mr. Alfred Coleman, F.R.C.S., "On the Treatment of Periodontitis by Replantation."

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. Le Gros Clark's Lectures on Surgery and Pathology—Lecture III.: Lesions of the Neck and Throat.

ROYAL INSTITUTION, 2 p.m. General Monthly Meeting.

8. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

ETHNOLOGICAL SOCIETY, 8 p.m. Sir Wm. Denison and Major Pearce, R.A., "On Indian Ethnology."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 7½ p.m. Ballot.

9. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

EPIDEMIOLOGICAL SOCIETY, 8 p.m. Meeting.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. Le Gros Clark's Lectures on Surgery and Pathology—Lecture IV.: Lesions of the Heart and Abdomen.

10. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

11. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. Le Gros Clark's Lectures on Surgery and Pathology—Lecture V.: Lesions of Abdomen (continued).

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ORIGINAL LECTURES.

BY DIRECTION OF THE RADCLIFFE TRUSTEES.

LECTURES ON THE GERMINAL OR LIVING MATTER OF LIVING BEINGS.

DELIVERED IN THE MUSEUM AT OXFORD

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, Physician to King's College Hospital, and Professor of Physiology and of Morbid Anatomy in King's College, London.

(*Continued from page* 540.)

OF MENTAL NERVOUS ACTION.(a)

AFTER the admissions I have been obliged to make of the failure of attempts to make out the mere structure of comparatively simple nerve organs, it may seem almost a waste of time to venture upon the consideration of the action of the highest and most complex of them all; but, in fact, opinions have been formed and conclusions have been arrived at upon the subject. There can be little impropriety, therefore, in asking you to consider what is the general conception of mental nerve action to be derived from contemplating the structure and arrangement of the tissues concerned as far as these have yet been elucidated, in conjunction with a careful consideration of important general facts and principles discovered in studying other and less complex nerve phenomena.

There can be no doubt that the most important part of the mechanism engaged in mental actions is situated in the grey matter of the cerebral convolutions, and the results of observations upon the structure, as well as of experiments upon the action of other nerve organs, justify us in the conclusion that *nerve-cells* consisting of germinal matter and formed material, and *nerve fibres* composed of formed material only, are the active agents. These are so arranged as to constitute a mechanism (if this term may be properly applied to it) of marvellous perfection and complexity. The fibres, many being of extreme tenuity, are seen to interlace with one another, and run in every conceivable direction, so that when the observer realises the actual arrangement as it exists in a very small portion of grey matter he marvels how it has been brought about. Though he is convinced that the whole has been, as it were, laid down according to a definite plan and designed to fulfil a special purpose, he is unable to picture to himself the gradual changes by which the result has been attained, and he cannot point out the laws which have governed them. There can, however, be no question that our knowledge upon these matters will increase as investigation advances, but it is not likely we shall ever be able to explain what power, force, or property determines from the first the ultimate structure and arrangement which the mechanism shall assume. To state that this is due to crystallisation, or formifaction, or differentiation, and to offer such an assertion as an explanation of the facts observed, is not adding to our knowledge.

After having shown you in what particulars the formation of the simplest structure differs from the process of crystallisation, it is unnecessary for me to discuss the question with reference to the highest and most complex tissue known. But even if we could explain the formation of the complex structure of the cerebral convolutions, we should have advanced but a little way towards a knowledge of mental action, for, as it were behind all this structure, operating now on one part of the mechanism, now on another, is the *mind*, the *will*, the thinking power itself. What is the nature of this, and how does it act upon the mechanism? If the conclusions to which I have been led with regard to the importance of germinal matter in all ordinary nervous acts be correct, it is almost certain that mental nervous action is very intimately associated with changes in a particular kind of living growing matter. We find a large proportion of germinal matter present in the grey matter of every kind of brain, and at every period of life. Even in old age, when the proportion of germinal matter in the various tissues and organs of the body has become much reduced, a large amount is still found in the grey matter of the brain. Moreover, the mental excitement, wakefulness, and delirium, so remarkable in many cases of fever and inflammation of the membranes and superficial portion of the grey matter of the convolutions, are associated with changes in the germinal matter. In such cases I find the masses of germinal matter are invariably much larger than in the healthy tissue, and, in some instances they are twice as large. I have also seen the enlarged mass in the centre of the caudate nerve-cells dividing into several masses which closely resemble pus corpuscles.

But if it be admitted that mental phenomena are entirely due to changes in the germinal matter of the cerebral convolutions, there will be much difference of opinion concerning the precise way in which this germinal matter operates; and, in connexion with this question, it must be admitted there is much room for speculation. I shall venture to bring under your notice the view which, in my opinion, appears, upon the whole, to be most in accordance with facts of observation and experiment. But, in the first place, I propose to refer very briefly to some of the opinions which have been entertained upon this matter, and to the general principles upon which these have been based.

Every one will admit that the nerve tissue of the brain is the instrument through which alone thinking power works and mind acts, and I think the facts I have advanced render it impossible for any one to deny that this instrument is formed by, or is the result of, changes taking place in germinal matter; but we are not now inquiring how the material channels which convey the mandates of the will are formed, but rather how these last originate, from what they emanate, and what is their nature.

Are Mental Nervous Actions of the Nature of Reflex Actions?

In all except the lowest animals we find that an external impression is followed by a certain internal change, and we explain this by saying that the physical disturbance is conducted by the afferent nerves to the nerve centre, whence it is reflected by motor nerves distributed to the muscles, which are thus caused to contract, and in many cases the intensity of the contraction varies with the character of the external impression. Such are the so-called physical or reflex nervous actions. In mental nervous actions, however, the impression starts from within, not from without, and although certain of the lower mental operations may perhaps without impropriety be included in the category of reflex actions, we are all conscious of others, and these the highest of all nervous phenomena and peculiar to man himself, which require no external stimulus for their excitation. These, on the contrary, attain their highest perfection when the mind is absorbed in contemplating its own peculiar states, and has succeeded, as it were, in withdrawing itself to the utmost possible extent from the influence of surrounding conditions which operate physically upon the peripheral portion only of a mechanism, the central portion of which is in some way under the immediate control of mind. To say, then, in answer to the question "What happens in the brain when its possessor thinks?" that what he terms ideas and thoughts are excited by, and are the consequence of, changes occurring outside him, the result of an external impulse, and due to a sort of reflex action, appears to me a very unsatisfactory reply, not approaching an explanation. For, in the first place, if we admit that mental action results from external impressions, these must be stored up in some unknown manner, and lie dormant for a long period of time, while actions which are ordinarily termed reflex are characterised by being an immediate result of external impressions. Secondly, in mental nervous acts, no one has shown that the supposed mental reflex action bears any relation whatever to the external physical impulse supposed to excite it; or how is to be explained, upon the reflex hypothesis, the fact that a very slight external impression may excite excessive mental action, or *vice versâ*? Thirdly, when the mind is most active, ordinary reflex phenomena are often in complete abeyance. Fourthly, the organs concerned in ordinary reflex actions are in an active state long before mental nervous organs are developed, and it is difficult to see why the mental apparatus should be so much slower in development than other reflex apparatus if it is of this nature. The reflex mechanism soon attains perfection. The mental apparatus continues to improve for years after it has been formed, and we can form no conception of the state of perfection it might possibly attain. The mental apparatus exhibits a *capacity* of altering its structure and of making itself more perfect. Fifthly, in man, mental actions continue to improve long after the organs concerned in reflex actions have begun to deteriorate. And, lastly, a capacity for mental actions of the highest kind is not unfrequently associated with a nervous system below the average, as regards the performance of ordinary reflex actions. It is therefore probable that mental action is not a kind of reflex nervous action.

(a) This article has been much extended since the lectures were delivered.

Nor can it be maintained that mind is but a consequence of the action of sensitive organs; for, although we are dependent upon the organs of the senses for obtaining knowledge, with which the mind works, the mind itself can have nothing more to do with these or other organs, seeing that they may be entirely removed or destroyed, and the mind work more actively than ever. It cannot obtain new knowledge to work with; but the perfection of its working is one thing, the amount of knowledge acquired is another, and we know that these things are sometimes even in inverse ratio, one individual being remarkable for the excellence of his mental capacity, but having little knowledge, while another has vast information which he can make but little use of for lack of intellect.

The Brain is not a Gland.

Some have looked upon brain as a sort of gland by which thoughts and ideas are formed or secreted, as if thought, which can neither be touched, weighed, measured, or in any way physically estimated, was a thing allied to the bile, the saliva, or the gastric juice, which are material substances, and can be analysed and otherwise experimentally studied. It would not be more unreasonable to maintain design or will to be a part of the material framework of the organism, than to assert that mind, like certain kinds of matter, is secreted. Thought is no more material than that peculiar capacity which makes living matter of a certain kind at length become oak, cabbage, dog, man, etc. Nay, it is further removed from the material, for while this property or power influences the very particles of matter, and makes them take up certain fixed and definite positions, thought only produces a sort of evanescent vibration, which results in the expression of ideas which are themselves as immaterial as the thought itself.

Of Mind as a Function of the Brain.

Mental energy has been regarded as the *function* of the brain, but if it be so it is a *function* of a very different order to that discharged by other organs. *Function* implies an act in which will, purpose, design, are not concerned, and in which material changes can be proved to take place. The function of a gland is to produce a secretion. Certain conditions necessitate the production of this or that particular secretion, which may vary to some extent, according as the conditions are changed. The function of a muscle is to contract and become relaxed, but the material change only occurs in definite directions, necessitated by the structure of the instrument and the force which acts upon it. The exercise of choice is neither possible nor conceivable. So, too, with reference to the function of nerves. These transmit currents. The paths which the currents are to traverse having been determined and formed, the currents are developed and transmitted along the nerves.

But the *function* of the organ of the mind is an operation very different from any of these. Its great characteristic is choice—selective capacity. If the cells of the liver chose for themselves whether they would secrete bile or not, or determined the kind of bile to be secreted, or the bile chose for itself by which ducts it should pass, whether it should flow quickly, slowly, or not at all; if the muscle contracted now in one part and now in another, according as it willed—if it elected to contract in one direction, and then in a different one; if the nerve-cells decided among themselves which should produce current and which not; if the current chose to run along one fibre at one time and then along another, according to the object it had in view—then, but only then, as it seems to me, could mental activity be regarded as in any way analogous to the function of an organ or of a tissue. To look upon mental action as a mere function of the brain is a fundamental error, and unpardonable in those who have really studied the structure and action of secreting organs and nerve organs.

Mental activity may rather be compared to that marvellous power, property, or force, which enables the liver cell to *form* what we call bile, which renders possible that change in shape of the ultimate particles of muscle which gives rise to contraction, and determines the change in the ultimate molecules of nerve matter upon which the current depends; but this power is not the function: it is that which alone renders function possible. But even this comparison is not a true one, for the power above referred to acts as if it were of some necessity, while the remarkable characteristic of mental action is freedom of choice. Certain conditions given, the liver cell *must* form bile, the muscle *must* contract, the nerve cell *must* give rise to, and the nerve fibre *must* transmit, the current; but is it conceivable that under certain conditions, actual or supposed, the brain *must* think? Is what I am now writing but the result of the distribution of a little extra proportion of certain nutrient constituents and oxygen to my nerve cells which thereby compels me to say all these things? Have I no choice?—*must* I say all this, and in the precise way in which it is here said? All these things would surely have been said in a far better and more perfect manner if the ideas had been formed like a secretion by a gland, independently of experience and without any efforts of my own. All our glands perform their work perfectly when their formation is complete. They require no teaching, and they work without effort. There is nothing in the action of a gland which at all corresponds to the improvement in capacity resulting from exercise which is so remarkable in the case of cerebral nervous action. The general tissues and organs, at least of those persons who have reached or passed middle age, performed their functions some years ago as well as, and I fear in some respects even better than, they do now. *Will* has exerted, and can exert, no direct influence. But it is very different with regard to the organ of the mind and the tissues concerned in intellectual action. Every one knows that the degree of perfection which that has attained or will attain is determined in great measure by his own efforts—by his own will. The thinking instrument of one individual is not capable of being perfected in the same degree as that of another, but it is quite certain that each may be improved and made to work more perfectly, if its possessor determines that this shall be; nay, I think I may say, if he will not interfere actively to prevent its improvement, for the natural tendency of the mind is to exercise itself, and, in doing so, the instrument which it directs necessarily improves. As the mechanism becomes more perfect, the pleasure afforded by its working becomes greater, and to real desire and sustained effort on the part of the mind soon succeeds improvement in the structure of the healthy instrument, by which the attainment of the end desired is rendered possible.

ORIGINAL COMMUNICATIONS.

CLINICAL SURGERY.—No. III.

ON THE

PATHOLOGY OF DISEASES OF THE JOINTS.

By THOMAS BRYANT, F.R.C.S.,
Assistant-Surgeon to Guy's Hospital.

To assert that a safe and scientific Surgery can only be based on a sound pathology may appear to be a somewhat trite observation; nevertheless, it is a true one, and so true is it that it cannot be impressed too forcibly on all who seek or profess to practise our Profession. It should, moreover, be the aim of every Surgeon whose duty it is to practise and to teach, to demonstrate the truth of the assertion, and to establish his practice upon such a scientific basis.

It is with this feeling that I now propose to consider the pathology of joint disease, to explain briefly the changes the tissues undergo during inflammation, and the results to which those changes lead, for by so doing I shall render my subsequent remarks on the clinical affections of the individual joints more intelligible, and shall be able to connect symptoms with pathological conditions.

In these observations I shall be as brief as the subject will allow, and as concise as will be consistent with clearness; my aim being to connect the clinical symptoms of joint disease with its pathology, and to make the scientific illustrate the practical. Putting aside for the present disputed points of pathology, and for future consideration the subject of tumours involving joints, it may, in all truth, be stated that disease of a joint generally commences in one of two tissues, the osseous or the synovial, and that either an acute or a chronic inflammation of the bone or synovial membrane is the origin of most joint diseases. It is true that, in the progress of any case, both tissues may become eventually involved, and when disorganisation of a joint has taken place, both bone and synovial membrane will be necessarily affected; but the extent to which either tissue will be involved will depend greatly upon the seat of the original disease. When the disease begins in the synovial membrane and disorganisation of the joint follows, the articular cartilages may disappear, and the bones may be involved, but the disease will, in all probability, affect only their articular facets with the parts immediately beneath—it will rarely involve the deeper parts. But when the bones are the original

seat of the disease, and the inflammatory process has spread from these to the synovial membrane, and disorganisation of the joint has taken place, the chief pathological changes will be seen in the osseous tissue, and will involve either the whole or a part of the articular epiphysis, if not a portion of the shaft. In short, when disease commences in the synovial membrane and disorganisation of the joint follows, it is in that tissue the greatest change will be seen; and when it originates in the bones, it is there that the greatest pathological changes are to be witnessed. Under both circumstances the cartilage covering the articular facets will have disappeared, although in the affection of the bones the cartilages are shed more rapidly, for the articular cartilages derive most, if not all, of their nourishment through the bones, and, as a consequence, any perversion of nutrition and inflammatory changes of the bones at once show themselves in the cartilages.

Practically there is no such thing as a primary disease of the articular cartilages—no such thing as so-called ulceration of cartilage independent of disease of other tissues. When the cartilages undergo a change, that change is always secondary to some other affection; when of the synovial membrane, the change is slow and partial in its action; when of the bone, rapid and complete. It should, however, be remembered that disease in the synovial membrane of a joint cannot exist for any period, or be of any severity, without involving the ligaments with which it is connected, or the cellular tissue with which it is surrounded. Nor can inflammatory disease exist for any time in the articular extremities of a bone without affecting more or less the periosteal membrane with which it is so intimately associated. Nevertheless, I believe that clinically it is important to bear in mind the distinct origin of the disease in one or other tissue, and that a correct treatment must rest upon our diagnosis. I hope to prove this in future papers.

Before proceeding to consider the changes the different tissues undergo from the inflammatory process, it will be well to ask the question, with a view to its solution, whether there be such a disease as strumous disease of a joint—strumous disease of the synovial membrane or of the bone.

If we were to answer this question according to custom, as indicated by the free application of the term to joint disease, I should unquestionably say that it was a common affection, for there are few chronic changes of a joint that are not so designated; indeed, it is rare to meet with any chronic affection of a joint in a delicate child which is not regarded by a Medical Practitioner as a strumous disease. I have often thought that the constant use of the phrase would lead any one to believe that the term strumous disease had some definite meaning, that it conveyed some definite idea from the mind of its employer to those who heard it, that the affection so designated was of a special kind, and was to be recognised by special features, and that it possessed definite pathological characteristics. Yet it can hardly be said that such is practically the case; for, if we look for the points of difference between the so-called strumous disease and the chronic inflammatory affection we shall fail to find them. They are not clinically to be distinguished. They are not practically to be separated. Indeed, I am more than satisfied that the so-called strumous disease of a joint is nothing more than a chronic inflammation of the bones or synovial membrane, or both; that the pathological changes in the affected tissues are such as are clearly traceable to a low form of inflammatory action, and that they differ in no single pathological point from the inflammatory changes found in other parts. It is true that such affections are of a low type, and in that respect they differ from other inflammatory actions of a more healthy character, but that they are nevertheless inflammatory there can be no doubt. Practically, therefore, it would be well to expunge this term, strumous disease of a joint, from our vocabulary; for its use certainly misleads by making the student believe that the term has a definite meaning when it has not, and by encouraging the idea that the disease to which it is applied has more a constitutional than a local origin, and is consequently incurable. Of this, however, I am quite sure, that so-called strumous disease of a joint is, as a rule, as curable as any other affection; that it is as amenable to treatment as any other chronic inflammatory disease. In saying this, however, I do not dispute the fact that, pathologically, we do at rare intervals find tubercular deposit in some of the tissues building up a joint. When present it is generally found in the bone; but I must repeat again, what I wrote ten years ago in my work on diseases of the joints, that such preparations are to be regarded as pathological curiosities—they are so rare. They are discovered also accidentally, and are not clinically to be recognised by any characteristic features from other cases of chronic inflammation of the bone. It would be well, therefore, to give the term up in scientific discussion, or, if it be used at all, to use it in the same broad sense as the words tumours, rheumatism, and fever are now employed, as a broad general term that includes many affections and covers much ignorance.

With these general remarks, we will now pass on to consider the changes the different tissues entering into the formation of a joint undergo in the inflammatory process. We will first of all take the synovial membrane, and at the end of the section pause to consider the clinical symptoms which may be taken to indicate the pathological changes. The pathological changes in the articular cartilages, ligaments, and bones, will occupy our attention in their turn.

On the Pathological Changes which take place in the Synovial Membrane from Inflammation.

In a pathological point of view, inflammation of the synovial membrane may show itself in two distinct ways—firstly, in change of function, and, secondly, in change of structure. The first change may take place without the second, but the change of structure necessarily includes an alteration in the function. We see this in every-day practice, for in the ordinary run of cases of so-called chronic or subacute synovitis, excess of secretion in a joint is the main symptom, and this secretion may be reabsorbed and leave no trace of disease behind. These cases may be regarded as examples of the first class of cases, in which a change of function is the most prominent point. As illustrations of the second class, in which change of structure is the main point of clinical as well as of pathological importance, the pulpy disease of the synovial membrane naturally presents itself. Between the two great classes of cases, however, there are doubtless many links—for example, in acute synovitis we have change of structure even to disorganisation more or less complete, and in chronic synovitis, frequently repeated, we have change of structure such as gradually passes into the pulpy synovial disease; this term including all the cases of pulpy or gelatinous disease of the synovial membrane. It would thus appear that in acute inflammation of the synovial membrane we have pathologically a series of changes that are somewhat different from those seen in a chronic inflammation, and in a clinical point of view the same distinction is to be drawn. The acute form passes, it is true, into the chronic by imperceptible gradations, but the two classes of cases are, nevertheless, very distinct. Let us now consider what these changes are, and first of all with respect to acute inflammations. Now acute inflammation of a synovial membrane is clinically represented by increase of secretion, severe local pain, and heat with symptoms of surgical fever. Pathologically it is represented by what my notes of cases clearly illustrate—a more or less minute injection of the capillary vessels, passing on to a velvety appearance of the synovial surface, a flocculent surface, or one covered with fimbriated fringes of lymph. In the still more acute cases the synovial membrane may have disappeared by ulceration or sloughing, or have so softened down as to be destructible on the slightest touch. In such cases as these acute suppuration of the joint will probably be present, and the synovial membrane may show any one of the conditions already indicated, or it may have disappeared, pus and broken-up membrane alone remaining to indicate the local severity and the destructive nature of the affection.

In less acute cases other changes may be seen, although they are not less marked. In one instance, the notes of which are before me, it appeared as a local patch of capillary injection—an injection which was visible to the eye, and which was attended with a superficial granular change of structure in the cartilage with which it was connected. In another it showed itself by the effusion of a firm fibrinous layer of lymph over the surface of the synovial membrane and articular cartilage. This membrane could be raised from its bed and peeled off—not only off the synovial capsule, but also off the articular cartilage—and beneath this membrane fine radiating capillary vessels were clearly visible, passing from the margin of the articular cartilage towards the centre. In this case, after a section was made through the spot of injected membrane and cartilage down to the bone, the swollen layer of membrane passing over the cartilage was clearly visible, as well as the granular degeneration of the cartilage beneath; for this membrane could be separated from its cartilaginous connexion by means of needles.

This case occurred in a child, but it seems to me to be enough to prove by means of pathology what anatomy has hitherto failed to settle—that a layer of membrane passes over the articular surface of articular cartilage. I have seen these changes more than once.

The changes that take place in the synovial membrane in subacute and chronic synovitis remain now to be noticed. They are essentially of the same pathological character as are those we have just been considering, but they differ in this great point—that the synovial membrane is not destroyed, but becomes changed. It becomes thickened in various degrees by the infiltration of inflammatory product within its walls and upon its surface. This thickening may be so great that the synovial membrane may be represented by a tissue an inch in diameter; but this will only be found in cases in which repeated attacks of inflammation have taken place, and many layers of lymph have been deposited upon and in the affected tissue. These layers may not be deposited rapidly one after another by consecutive attacks of chronic inflammatory action, for they may be the result of disease which has spread over many years, but they will always represent an inflammatory action of a chronic nature which has at uncertain intervals attacked the joint, and on each occasion left behind it pathological evidence of its presence by an inflammatory infiltration.

It is with such changes as these that all cases of the gelatiniform or gelatinous disease of the synovial membrane, as well as the pulpy disease of Sir B. Brodie, are unquestionably to be classed. Both are of the same nature pathologically and clinically—at least, all my own investigations have led me to this conclusion. Ten years ago, when writing upon the point, I suggested that such might be the case, but did not feel sufficiently certain to assert it. All experience since then has, however, led me to the conclusion, and I know of nothing that militates against the idea. In the present papers I shall therefore employ the word pulpy disease of the synovial membrane to designate the disease. It is short and as expressive as any other. It is likewise a term with which the Profession is familiar.

The Clinical Features by which these Pathological Changes may be recognised.

It will have been remarked that, in all the pathological changes we have been describing, excess of secretion, or effusion into the joint and synovial membrane, invariably occurred. It may, moreover, have been observed that these changes were the earliest, or, at any rate, were very early, results of the inflammatory action. Clinically, therefore, the most marked symptom that characterises synovitis in any of its forms is enlargement of the joint, either from effusion into the articulation, thickening of the synovial membrane itself, or both conditions combined. In the superficial joints, such as the knee, elbow, ankle, wrist, all these changes are readily to be seen, and when seen, are readily recognised. In the deeper joints they are also present, and are to be made out on a careful clinical examination.

This is the main point I would wish to be remembered in connexion with this subject.

On the Pathological Changes the Articular Cartilages undergo from Disease.

The most important point the practical Surgeon has to recognise when considering the pathology of the articular cartilages has reference to the fact that there is no primary disease of this structure, for pathological anatomy teaches us that all the changes that are to be found in it are secondary to some other affection, and in the generality of cases to disease in the articular extremities of the bones. There is no such thing, therefore, as primary "ulceration of the cartilages," and when the cartilages are diseased they are so from the extension of mischief from the bone beneath or from the synovial membrane about them.

Much has been written about diseases of the cartilages, under the idea that they were liable to special diseases; and much error in joint pathology has crept in as a result. The authority of great names, such as Brodie, Key, and others, has helped to encourage this idea. But modern investigation, as carried out by Redfern, Goodsir, and others, has corrected this erroneous notion, and an improved pathology has clearly shown that the diseases of the cartilages are due to diseases of other tissues.

When describing the results of my own investigations ten years since, I divided these affections into the fatty, the fibrous, and the granular degenerations, and nothing that has been observed since has led me to doubt the accuracy of this division; indeed, additional experience has confirmed me in its truth. I am not about to enter, however, in this place into a minute description of these different changes, for they are to be read elsewhere; but it will suffice for my present purpose to remind my readers that the fatty degeneration of the articular cartilages is found in joints that have been deprived of their natural functions from any cause—from non-use in the majority of cases, but in many from bad nutrition—that it is found in common with the same change in the bones or other tissues. This fatty degeneration is to be recognised with tolerable facility by the naked eye, for the cartilage, instead of possessing its natural white pearly aspect, will appear somewhat transparent; its surface will probably present an undulating, unequal, although smooth, surface; it will, when cut, feel softer than usual, and may be three or four times its natural thickness. At times it may even be pulped by firm pressure with the finger, and it may be separated from the bone with more than usual facility. Microscopically it will present also characteristic features. The natural cartilage corpuscles will have become changed into fat and granule cells in various degrees; the hyaline matrix will be filled with cavities, varying from the healthy standard to large cells. These cells will be filled with more or less of the elements of fatty degeneration, in which the healthy corpuscles will have changed into fat cells, and the hyaline matrix will have changed more or less into an irregular cellular fatty matrix. This fatty degeneration takes place in most joints that have not been used, but rarely from disease of the joint itself. When present in a joint that becomes the subject of inflammation, disorganisation of the articulation rapidly follows, for such a lowly organised degenerated tissue has no power of resisting disease, and when brought in contact with it rapidly disappears.

The Fibrous Degeneration of the Articular Cartilage is a disease of a peculiar character. I believe it to be associated with only one disease of a joint, and that is the so-called "chronic rheumatic arthritis." It is very gradual in its progress, and is not characterised by any definite symptoms. It is to be recognised pathologically in a joint in its earliest stage by the loss of the natural glistening aspect of the cartilage, the smooth surface of which disappears, and it looks rough. Small fissures next appear, involving more or less of its thickness, and sometimes these extend down to the bone. These fissures are, as a rule, thicker in the centre, and at times radiate outwards; the cartilage seems gradually to thin, and after a time to disappear, exposing the articular surface of the bone, which will probably have undergone the calcareous degeneration. Microscopically the chief change that is seen in this disease is the gradual alteration of the hyaline structure into fibre. The cartilage corpuscles at the first are found interspersed between these fibres, but at a later date these corpuscles will be seen to have changed into granules. At the last stage nothing but fibres may be found, and when this condition exists, the rapid disappearance of the structure altogether will not be far distant.

The Granular Degeneration of the Articular Cartilage is the most important affection of this tissue we have to study. It is the one most commonly found in joint affection, and seems to be the direct consequence of a perverted nutrition in the bone or synovial membrane, the result of disease in one or both of these structures. Although of a simple nature, it shows itself in many ways, and without microscopical investigation must have appeared unintelligible. In its different forms it has doubtless led good observers to describe it as an ulceration of cartilage, for under certain conditions the cartilage presents a worm-eaten excavated appearance, not unlike that which ulceration might produce.

The disease is essentially a granular degeneration, first of the natural cartilage cells which are imbedded in the hyaline matrix, and, secondly, of the hyaline matrix itself. Let a cartilage cell undergo this granular degeneration, and the granules by accumulation and multiplication form a cavity in the hyaline matrix; then let this cavity burst on the surface of the cartilage into the joint, and an excavation which can be seen by the naked eye becomes at once visible, and a so-called ulcer is produced. Let this change take place towards the margins of the articular cartilage, and we find an explanation of Mr. Key's observations upon so-called ulceration of this tissue in certain forms of inflammation of the synovial membrane of the joint. Let this change take place near the bones as a result of disease in the epiphyses, and we find an explanation of the general condition of the cartilages in the bulk of joint diseases; for when the bones entering into the formation of a joint are so affected as to interfere with the nutrition of the articular cartilages, the cartilage may either present the worm-eaten appearance all over or in part, or it may have been shed from its bony attachment, when it will be found to be lying upon the bone as a foreign body in the joint. In an early stage of disease, this granular degeneration may only be detected by a microscopical examination, although, when the bone is the cause, it will always be found to peel off its articular facet with unusual facility.

In synovitis also the surface of the cartilage in contact with the inflamed membrane will be found similarly involved.

Should the disease be local, as is at times seen in cases of injury to an internal ligament, such as the ligamentum teres, the change in the cartilage will be local only, but when general, the whole surface of the cartilage may be involved. In acute disease acute degeneration follows, as daily practice gives good evidence.

On the Pathological Changes in the Bones the Result of Inflammation.

Inflammation of the articular extremities of a bone is a very common disease; it is probably the most common we have to deal with in connexion with joints, for it would appear to be the cause of most, if not all, of those cases of disease of the articulations which we find in children, and which have been described as strumous or scrofulous disease of a joint. Ten years ago, when describing the results of my investigation of this affection, I stated that "I cannot for one moment doubt that the majority of the cases which are described by Surgeons as strumous or scrofulous disease of a joint and of the articular extremities of the bones depend upon a chronic inflammation in the bone," and all the experience I have gained since has tended to confirm me in this opinion. I believed then, as I believe now, that the disease is in its origin and progress inflammatory, and that it is as curable as any other local affection. I am convinced that the presence of tubercular deposit in the bone is a very rare occurrence, and that, when present, it alters but little the natural progress of the disease, although it may render the case less amenable to treatment. It is important to bear this truth, if such it may be called, invariably in mind when examining or treating a case of disease of a joint, particularly when it is found in a so-called strumous or cachectic subject, for if we regard the disease as a constitutional one we are too apt to think that it is to be treated on general principles and to neglect the local means by which alone a good recovery is to be secured. For my own part, I would abolish the term strumous disease of a joint altogether. It is based on a wrong pathology, and unquestionably suggests a wrong treatment. Let the Surgeon recognise the true inflammatory nature of the disease, and be convinced of its curability by local and general treatment. He will then surely be more successful in his practice, and better results by treatment on the expectant principle will unquestionably be obtained.

Let us now, then, proceed to inquire into the changes that the bone undergoes during this inflammatory or wrongly called strumous affection.

The most striking is probably the earliest, and that is the expansion of the articular extremity. In some cases the enlargement will be very great, and it is generally uniform. The articular extremity of the bone affected, and, indeed, the epiphyses of all the bones entering into the formation of the joint, will appear to be rounded and generally enlarged. Upon making a section of a bone thus affected it will be found softer than natural; it may probably be so soft as to allow a knife to divide it. It may even break or crush on firm pressure being made upon it. To the eye the section will appear more vascular than natural, the cancellated portions to be more cancellated, the cells to be enlarged, and the bony septa to radiate from the shaft in a broad palm-like fashion. The cells also will be found filled with a pinkish serum.

Should the disease continue, and the inflammation be of a healthy type, parts of the bone will appear denser and more indurated than the remainder. The cancelli will have been filled with inflammatory product that has organised, and will appear on section as a dense and apparently bloodless mass, surrounded by other vascular cancellated tissue. Should the inflammation be of an unhealthy character, diffused suppuration within the bone will take place, and death of the bone, wholly or in part, follow.

Under these circumstances, the disease will probably have become a genuine joint affection—that is, it will have extended to the synovial membrane of the joint, and have set up disease within its substance. This extension of disease will show itself by effusion within the joint, and by pulpy thickening of the synovial membrane and of the cellular tissue around the articulation. Up to this point the disease has been a local one, involving only the articular extremities of the bones, and has not attacked the proper joint structures; it appears also to be perfectly curable. But at this stage of the disease the articular cartilages will probably become affected; for when the inflammatory action has continued for any period, and has not shown any indications of subsidence, but, on the contrary, has either assumed an unhealthy character or has interfered with the nutrition of the articular lamella of bone upon which the cartilages rest, the articular cartilage will to a certainty undergo the granular degeneration upon its surface in apposition with the bone, become loosened from its attachment, and be thrown off or shed, or it may degenerate in patches, and present to the eye an irregular excavated surface. If the disease be slow, the cartilage will degenerate slowly, and be as slowly loosened from its osseous base. It will then be readily lifted off the bone by any instrument. If the disease be more rapid, the cartilage will be shed likewise more rapidly, when it will be found lying upon the bone as a foreign body in irregular patches, which, under the microscope, will appear to have undergone the granular degeneration.

When the disease is acute the cartilage may disappear altogether, having been shed from its osseous base and become rapidly degenerated.

The articulating surface of the bone during this time may appear in some cases only extra-vascular, as in inflammation; in others it may be rough, or so-called ulcerating; in a third class the articulating facets will have been shed wholly or in part. In another, pieces of necrosed bone involving more or less of the articular extremity of the bone will be seen. In another, an abscess will have made its way into the joint from the diseased articular extremity. But in all these conditions the cartilages will have disappeared and the joint become disorganised.

All these different changes of the bone, etc., from disease will be illustrated by cases in future papers, my object in this being to consider only the general pathology of a diseased joint.

I propose to illustrate the diseases of the different joints *seriatim*, commencing with diseases of the hip-joint. I shall regard each from a clinical point of view, making the scientific illustrate the practical, and applying the general pathological facts which have just been given to special cases. I shall follow up the papers on hip-joint disease by others on the knee, ankle, and foot, illustrating the diseases of the joints of the upper extremity in a like manner.

The cases I shall quote to illustrate these subjects will all probably be from my own experience, and they will necessarily be brief, for they will be copied from the short notes I have been in the habit of taking at the time when the patient was under observation, in which all extraneous matter has been omitted. They were not taken with any view of publication, nor will the cases be specially selected from my note-books. They will be quoted as fair illustrations of the different forms of disease which we meet with in practice, and as such may be of more value than special cases selected for special purposes.

LOW FEVER IN SPAIN.

By GEORGE GASKOIN.

In foreign journals no less than in our own, regret has been expressed that nothing is to be ascertained of the fever that is now raging in Spain, and comments have been made on the reticence observed in this conjuncture by the whole of the Spanish press. Patriotic and prudential motives have had their weight, no doubt, in dictating a certain restraint at so critical a period of their political life to those who have at their command the springs of public opinion. There is indeed existing in Spain a fever of vast gravity and extension, yet travellers through the country do not hear of it, nor do our newspaper correspondents mention it; it intrudes not on the ordinary observer, nor forces itself upon conversation. What we learn about it is by snatches and by scattered scraps of information which it requires some industry to collect, and which, when collected, seem to defy concentration. Only occasionally the plain truth bursts out. "In no other eventuality," we read, "have persons of culture, and to a marked extent Physicians, paid an equal tribute to death, doubtless," it goes on to say, "because of the share the nervous system has in this the reigning complaint, and the appreciation which exists in the Medical faculty of its terrible and mortiferous nature." But, to be more precise, let us consult the published reports of the General Hospital of Madrid which reach us on April 11. "Up to the present time," says the report, "the Hospital has lost five of its professors, eleven Medical officers, one apothecary, and of the brethren who are Hospital orderlies four of the first class (*hermanos*), and twenty-one of the second (*mozos*). Not even in the days of cholera have we known such mortality." Less particular is the announcement that of Physicians practising in Madrid "more than a dozen" have died. In Placencia, a province of limited extent, forty Physicians have fallen victims to this "lamentable hecatomb" (*sic*), and still "the complaint keeps on." The deaths

of D. Foribio Guallart and D. Antonio de la Fuente y Berche, two of the Professors aforesaid, occurred in the month of March, 1869. In the department of military health, the deaths of two distinguished men, Senors Barrera and Farrerous, are the subject of recent notice, and the General Hospital is crowded. The sources of beneficence are taxed. From the provinces there is a defect of systematised information. In Oreagna two men of high rank in the Profession (*titulares*) have died. In a small circle within a league of Presencio (Lerma), four Physicians and a Surgeon are lost to their friends, and two besides have made bad recoveries, one of fifty-four days. Every new journal brings more casualties from the Medical class in Spain. "This typhoid epidemic," says one account (of April, 1869), "which now for some time has afflicted us, goes on repairing its strength, the number of casualties being considerable. Improved ventilation, a more equal temperature, and vegetable food, so favourable to the poor in spring season, should lessen the tale of victims, but this is not the case. The ill condition of the poor, and the present paralysis in trade, has been disastrous to the lower classes. *Post famem pestis.*"

To begin with the present year, it is remarked that the winter months were mild; the winds were chiefly south, which may have had a bad effect "as blowing over the drains"—but this by the way! In January, the Medical constitution was typhoid, and small-pox in a confluent form showed itself "in as bad a type, or even worse, than did the typhoid fever." There were many gastric and catarrhal fevers, and "some that were pure typhus." We treat them, says the Hospital report, with mineral and vegetable acids, revulsives, and tonics—chiefly those that are antiseptic, for of the fevers "the adynamic prevail over the ataxic." On February 28 ends there a bad week. The mortality is excessive. North and north-east winds prevail. With fevers there are measles and small-pox. As to the month of March, attend to this report:—"The admissions have been so many, that for many years the like has not occurred, to which no doubt atmospheric conditions have contributed, but still more the too general indigence. After a mild winter, the month (March) has been cold and stormy. The same fevers that began to develope themselves in December (1868) increased greatly in this month, so far, indeed, that they constituted two-thirds of the acute affections. Of the fevers, many are gastric, a fair number catarrhal; the predominating are those we are agreed to name typhoid. In Hospital, of acute calentures (fevers) 869—that is to say, of the gastric 265, of catarrhal 130, of typhoid 430, of other types fewer. Of such fever cases during the month 85 died; the cures are 262 in the month. The treatment not uniform (it has been before indicated) was generally successful, seeing the gravity and postponement of the cases. During the month, eruptive fevers were severe but few; variola badly confluent, agues diminishing, rheumatism frequent, affections of muscular and nervous systems prevail over the systems digestive and respiratory. Of acute affections, 1345 admissions, 148 deaths; of chronic, 340 admissions, 72 died."

On April 14, we are told of this fever—"Truly it is as bad in Madrid as elsewhere. The General Hospital is the place to study it. Observe its masked course, its hidden etiology, its chaotic therapeia. While in the Hospital reigns this mortiferous plague, nothing informs us of what is going on in the town. Political folks are silent over this tyrant of the hour. It is little noised in conversation. At any other time than this what would have been said? Yet it is curious, too, when in 1865 the cholera was at our doors, we stood at the brink of revolution, but the cholera then absorbed attention more than anything else. What a difference now! A tame subject truly."

In our latest, which is May—an irregular month as to weather in Madrid—this year it is spoken of as stormy, like March; but, curiously enough, intermittents that generally abound in this month are wholly absent. The weather is considered favourable to public health; the typhoid considered "perhaps not so bad;" rheumatism and eruptions.

In the *Pabellon Medico* last autumn, in a paper by D. Juan Herrero "On the Medical Constitution and that now prevailing," he says:—"Misery displays her livid face; the want of work and capital has paralysed trade; transactions are scanty, and tranquillity precarious. The operatives stand with folded arms. This has lasted a year, with bad unsettled weather. Crowded in garrets, with no cheering lights, the state of the people is bad enough; or, with the hog, or mule, or ass, and the filth they accumulate close upon them, what must result from this concubinage? Such, you say, has ever been the case. But a biliary condition, with adynamia, is thus generated. Such we saw last year (1867), but most since June (1868), so that purging, tonics and support have been the order of the day, with little of bleeding and antiphlogistica;" and then he says towards the last solstice excessive heat, fevera predominated of the biliary type, inflammations with the biliary element, rheumatism (articular and muscular), eczema in children, neuralgia in women. He then goes on to give typical cases of fever, with rose and lenticular spots, petechiæ, *gargouillement*, and other symptoms.

If we go back now to an account of the public health in November, 1868, we learn from the *Siglo Medico* the first half of the month was mild, the second damp and wet. The Hospital report says "there were observed many gastric and typhoid fevers, and some of real typhus developed in the Hospital from the wards being too full, the number of admissions constantly increasing through the present winter, as has occurred in the past, exceeding the capacity of the establishment already entrenched on by demolitions and extraneous buildings. Where 1000 might go we have to put 1500." There are also accounts of fever in certain gaols of the Spanish Peninsula. We read also of drought; the last year but one, 1867, is spoken of as a dry year. In a journal of the year past, 1868, I find: "A drought, such as has rarely been experienced since the month of March in the previous year, 1867, continued with slight interruptions till last September, 1868. The first days of which were also hot." Hygiene in Madrid is confessedly at a low point of execution, not so the exercise of charity. There is the Casa de Beneficencia, an admirable central institution, which publishes reports of health; subsidiary to this are the Casas de Soccorro, which I would willingly recommend to the attention and consideration of Londoners, as has been done by a correspondent in Paris already for the Parisians—see *Union Médicale*, March 23, 1869.

This is what I have been able to gather from sources at my command as to the extent and prevalence of these fevers; it will be observed that catarrhal and rheumatic disorders run with them, side by side. What lets most light on the severity of the epidemic is the repeated adjournments of the discussion of the Academy of Medicine on the question of alimentation in typhoid fever, which is now there the question of the hour and comprises much besides. The Portuguese papers inform me they are in suspense in that quarter about quarantine. The authority for the above statements will be verified chiefly by the *Siglo Medico* and the *Pabellon Medico*, papers of the soundest character. The nature and treatment of these fevers may be the subject of another notice.

7, Westbourne-park.

THE WATER SUPPLY OF HOLLAND, AND CHOLERA.

By Dr. A. M. BALLOT, of Rotterdam.

In general, the water of the Maas and Merwede, which rivers contain the waters of the Rhine and Maas, have the effect on strangers of producing diarrhœa and *cholera nostras* (diarrhœa and vomiting); so in Rotterdam, Schiedam, and Delftshaven this effect is called the Rotterdammer, in Dordrecht the Dordtenaar. All the sewage of our towns, and especially in the lower countries, gets into the rivers, directly or indirectly.

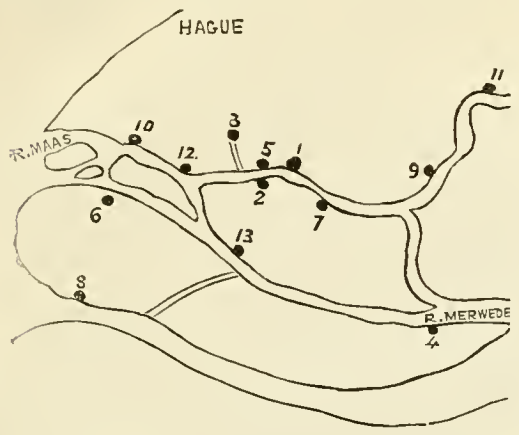
It is believed that the sewage and other organic matter in our canals are often the cause of diarrhœa and typhoid fever. In the preceding year, many cases are mentioned by our Medical inspectors. Many cases are narrated where, in the vicinity of houses wherein many cases of typhoid fever occurred, there were dunghills, ditches with sewage matter, etc.

The propagation of cholera matter by the rivers is more investigated than the two other questions. Directly proved the influence is not, but there exists a great probability as to the propagation of cholera from one town to another by means of the drinking water.

I begin with the cholera epidemic of 1853, where I read in the report on the said epidemic(a):—Outbreak of the cholera in Rotterdam, August 22; Charlois, one English mile down the river at the other side, August 29; Schiedam, at this side of the river, four miles down, September 6; Dordrecht, fourteen English miles the other side (but the Maas is a tidal stream), and Delftshaven, next to Rotterdam, September 12; Brielle, twelve miles down, September 15; Ysselmonde, three miles the other side, September 16; Hellevoetsluis, September 19.

(a) "Verslag omtrent de ziekten welke in 1853 hebben geheerscht." Dr. Sybrandi in *Nederl. Tydschr. voor Geneeskunde*, 1855.

I add here a rude sketch. You can see thereby the water-connexions between the attacked towns.



1, Rotterdam; 2, Charlois; 3, Schiedam; 4, Dordrecht; 5, Delftshaven; 6, Brielle; 7, Ysselmonde; 8, Hellevoetsluis; 9, Lekkerkerk; 10, Maassluis; 11, Gouda; 12, Vlaardingen; 13, Oud Beijerland.

Just as in 1853, the outbreak of cholera in 1859 began in Rotterdam. I will make use for this epidemic of an excellent report of one of our most esteemed Medical brethren, Dr. Zeeman, of Amsterdam ("Geschiedenis der Cholera gedurende 1859 in Nederland."—*Nederl. Tydschr. voor Geneeskunde*, 1860): —Day of the outbreak at Rotterdam, August 16, 1859; Ysselmonde, August 19; Kralingen, August 25; Schiedam, September 2; Gouda, September 3; Charlois, September 6; Lekkerkerk, September 7; Dordrecht, September 12; Hellevoetsluis, September 14; Oud Beijerland, September 17; Maassluis, September 18. Amongst other things, he says:—"Now, on the isle of Ysselmonde (opposite to Rotterdam), there were attacked six bordering communities, situated next to the much-made-use-of waterway between Rotterdam and Dordrecht, and the entire population of these communities drank the water of this river. The mortality was 13 per mille. In Charlois and Katendrecht (opposite to Rotterdam) it was said that the mortality was greater amongst the better class; but their houses were on a dyke nearer the river, the water of which they drank. So also it was with the towns near other rivers. One town was attacked, and soon after the communities on both sides of the river were attacked."

I now pass to the epidemic of 1866, in which epidemic the mortality was 19,691 in 3,530,047 inhabitants. There does not yet exist a more extended report from the side of the Government; but there was installed by the King a commission for the investigation of the drinking water, and its influence on the cholera.(b)

In 1866 the cholera began at Rotterdam on April 8; in a short time our country was infected, and, as usual, the epidemic spread along the waterways also for a great deal.

In the above-mentioned report to the King from the commission for the investigation of the drinking water, we find that in Delftshaven, those who drank the contaminated Maas water were attacked by cholera, while those who drank rain or other water were spared for the greatest part—one Doctor says "were all exempt from cholera."

In Hardinksveld the cases of cholera occurred to those who drank water out of the canal in which cholera matter was thrown.

In Hoogeveen the cholera dejections of the first patient were thrown into the canal; the inner part of the village, where rain water was drunk, remained free; the outer part, where there was much shipping and contamination of water, was very severely attacked.

In Rynsburg the mortality was 71 per 1000; the wells were contaminated with sewage matter.

In Ham, Hasselt, Meppel, with great cholera mortality, the drinking water of the canals was very much contaminated with cholera dejections.

In Oostdongeradeel (Friesland), there was a case of cholera in a ship; the dejections were put into the water; those who drank the water were attacked, those who drank other water were not.

In Vleuten the dejections of a cholera patient were thrown into the Rhine. In the next house lower on the river two were attacked by cholera, six by cholerine; in the house next to the second a servant was heavily attacked. In a third and a fourth house also down the river there occurred cases of cholera, and between these houses many cases of cholerine and diarrhœa.

In Heinenoord the influence of cholera matter in the water was very distinct. On July 12 there came into the haven a ship from Delftshaven. The skipper was attacked by cholera; the dejections were thrown into the haven (canal). The inhabitants took their water out of this haven by flood (high tide), and just at this time the evacuations were thrown into the haven. On the 15th, 16th, and succeeding days many were attacked and died of cholera, some of which it was certain, and of others almost certain, that they had drunk the water out of this haven.

In Groningen eight houses had their water out of the same well, in these houses 24 cases of cholera occurred; in the other seventeen houses who drank water out of other pits only 4 cases occurred. The Commission is certain that cholera matter must have come into the first well, but how is uncertain; all the investigations of this Commission were taken after the cholera epidemic had ceased, therefore also it was too late to search after the cholera matter itself.

Of Utrecht (where the cholera mortality was 27 per mille in 1866), Dr. Vos states in his dissertation that, in a subdivision of the town through which the river (the Vecht) passes, after having been very much contaminated with sewage, and naturally also cholera matter, in its passage through the town, the inhabitants who drank of this water were very much visited by cholera; they who drank other water not.

Dr. Snellen, a very acute observer, gives an example which has much resemblance to the history of the Broad-street pump.(c) In a certain block of houses there occurred a case of cholera; the dejections were thrown on the little street before the houses. This was June 11; on June 13 another case occurred, and in twenty-five days there occurred 32 cases among 106 inhabitants, of which 23 were fatal, therefore a mortality of 25 per cent. There were two pumps with sparkling water, but after investigation it was found that the wooden part of the pump was rotten; the cholera matter had soaked from the street, which was very sloping, into the water of the pumps. On July 4 and 5 the pumps were closed, and after July 6 there occurred no more fresh cases. Very close to this was the Stevens Foundation with 260 inhabitants; here one case of cholera occurred. The condition of these persons was not so good as the former. The two houses were separated by a little stone wall; on one side there occurred 33 per cent., on the other 0·4 per cent. cases of cholera.

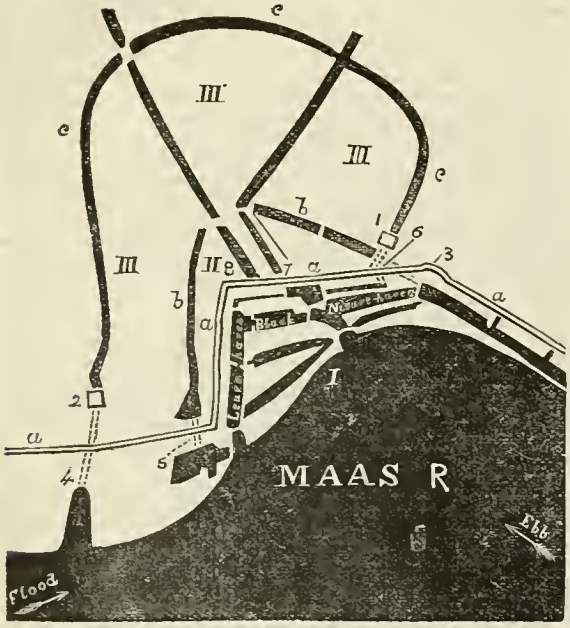
In 1867 the cholera began again in Rotterdam, and the first cases there were amongst the inhabitants of the quays, Blaak, etc., people who belonged to the better class, and, amongst others, two elderly people who lived very retired; but there were stationed before their door ships from Cologne, where the cholera was, and at other parts ships of Dusseldorf, etc., where the cholera was. Now here in Rotterdam the water is drunk from the river, or the havens, or canals, or wells, but these wells contain only surface-water, the same as the canals, rivers, etc., into which all sewerage matter gets. I will add a map to show you how horribly contaminated these waters must be. What is white is land, what is shadowed is water. Rotterdam is divided into three parts—I., the side between the river and a dyke (*a*); II., the inner part between this dyke and a surrounding canal, *eingel* (*enceinte*) (*b*); and III., a yet lower part, the Polder city, between the first-named canal and another eingel (Nieuwe wetering) (*c*). The fresh Maas water gets near 6 and 5 into the eingel, and from the eingel by several little canals into the Polderstad, and from this into the surrounding ditch, the Nieuwe wetering (*c*). You perceive that this wetering contains, therefore, nothing but sewage matter. Two powerful steam-engines, 1 and 2, pump this foul water into the river, one near 4, the other near 3; but, unfortunately, when the river ebbs this contaminated water by 3 near the entrepôt gets not into the river, but passes the whole city by the Nieuwe-haven, Blaak, and Leuvehaven. These havens abound with ships, whose sewage matter is thrown into the water, and in time of cholera always many shippers are attacked.

Moreover, two little streams, Rotte and Schie, throw their water, when the river is ebbing, through sluices, into the Maas, the Rotte near 7, the Schie near 8. The Schie passes, amongst

(b) This report appeared after my article of May 1, in the *Medical Times and Gazette*, was in print.

(c) This case has already been mentioned in my previous article.

other places, Delft, where there is also often cholera. All these contaminated waters pass the town before they get into the river.



Black is water—for instance, the River Maas, and the various *havens*, docks, canals, and rivers; white is land. The double line, *a a*, shows the dyke that bounds the Boutenstadt, or outer town, I., which lies between it and the Maas. The black lines, *b b*, show the *cingels* which bound the Binnenstadt, or inner town, II. (Philologists point out the words "Bouten" and "Binnen" answering to our words *out* and *in*, but more closely corresponding with the *but* and the *ben* of the Scotch.) Ontside this up to the Nieuwe wetering, *c c*, lies the Polder town, III. 1 and 2 are the steam-engines which pump the waters of the cingels back into the Maas at the ebb. The two black lines which converge in III. are the Rivers Rotte and Schie.

PROPAGATION OF TYPHOID OR SCARLATINA THROUGH POTABLE WATER.

By W. E. C. NOURSE, F.R.C.S.,
Surgeon to the Brighton Hospital for Sick Children.

I HAVE had but little opportunity of observing the effects of drinking river water, and have never known typhoid or scarlatina to be communicated from person to person through any kind of water. But I have observed typhoid to follow the use of foul drinking water in the following instances:—

1, 2. Typhoid (mild) in a girl aged 11; and, in the same house, eighteen months afterwards, typhoid succeeded by typhus, in a man aged 22. Drinking water procured from a shallow well close to the cesspool of a privy used by the inmates of seven cottages.

3. Severe typhoid in a boy aged 8. Drinking water derived from a water-butt never cleaned out.

4, 5, 6, 7, 8, 9. Typhoid in six inmates of one house, of various ages; severe in three of the cases, one of which ended in death. The drinking-water had a foul taste, and came from a cistern which had never been cleaned out. No sign of the disease being communicated by infection.

10, 11. Two cases of fever (remittent type) in a house where the drinking water was procured from a well, ten or twelve yards from which were two large cesspools in a sandy subsoil. District malarious.

These are all that I can remember with certainty.

11, Marlborough-place, Brighton.

THE LEIPZIG PHYSIOLOGICAL LABORATORY.—A letter from Leipzig states that not only those specially qualified to appreciate it, but the whole of the inhabitants, are full of wonder and pride at the new laboratory which has been erected entirely according to the ideas and wishes of Professor Ludwig. It is said to surpass the new Prussian laboratories, and is the finest institution of the kind in Europe.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. THOMAS'S HOSPITAL.

LITHOTOMY AND LITHECTASY IN CHILDREN.

[Communicated by Mr. F. CHURCHILL.]

FOUR very interesting cases of stone in the bladder in children have recently been operated upon in St. Thomas's Hospital with success, two of them by Mr. Solly, the patients being a boy and a girl, the other two by Mr. Sydney Jones, both being boys. The comparative immunity of children from renal or other complications is now recognised as one of the principal reasons why this operation is so much more successful in children than in adults. It will be seen by the details given below that each case terminated most favourably; not a single untoward symptom occurred in any one of them, the progress towards convalescence being quite satisfactory. As they have now left the Hospital quite well, it may be interesting to contrast the history and treatment in each case. In Mr. Solly's second case, that of a little girl aged 6, the stone was extracted through a previously dilated urethra. Although the comparative success of this operation in children would warrant the Surgeon in interfering as early as possible, the inexperienced lithotomist must understand that this success is mainly due to a carefnl *tactus eruditus* during the second stage of the operation—viz., the cutting into the bladder; for the prostate gland, being in an undeveloped condition, cannot serve as a guide to the groove in the staff. Then, again, additional impediments to the Surgeon in reaching the neck of the bladder are the pyriform shape, and the position of the bladder, which is higher up in the pelvis, and consequently less fixed, than in the adult. In neither of these cases, however, was there any difficulty during the first or second stages. In the case of lithectasy, although the stone had been detected by the sound when the patient was laid on the table, Mr. Solly could not detect it with the forceps, the reason being that with the first gush of urine the bladder had formed an hour-glass contraction at its centre, and, this constriction being felt, Mr. Solly passed the forceps well upwards and backwards, and found the stone lying at the fundus of the bladder. It was then removed without any difficulty. In Mr. Solly's first case the boy had been operated upon twice before, and on each occasion he had been troubled with a fistulous opening in the perineum for some months after, ultimately it closed completely. It is now three months since the last operation, and the fistulous opening has almost entirely closed, only a few drops of urine passing this way during each micturition, but not at any other time. In neither of Mr. Jones's cases had the patient been previously operated upon for stone. In the first case, that of a cripple, aged 18, the stone originally was an ordinary mulberry calculus, but it had become coated over with some large crystals of triple phosphate. Properly speaking, this lad, being beyond the age of puberty, should be classed with stone in adults, but from the remarks which we have made it will be seen that the general features of the case may be better compared with those occurring before puberty. The stone in the second case was about the size of a small hen's egg, and was found to consist for the most part of large conglomerate masses of uric acid crystals intermingled with layers of phosphatic deposit, especially towards the base, where the stone was flattened by resting upon the *bas-fond* of the bladder.

Phosphatic Calculus—Lateral Lithotomy—Recovery.

(Under the care of Mr. SOLLY.)

J. B., aged 14, residing at Greenwich, admitted January 12, 1869, with symptoms of stone of four months' duration. Mr. Solly removed a stone from him when he was two years old, and again five years ago. During the four months previous to his admission he had been suffering from the usual symptoms of itching about the prepuce and along the course of the urethra, with scalding and pain when micturating. There does not seem to have been much constitutional or vesical irritation. He occasionally passes gravel with his urine. He has no difficulty in passing water, but the stream is sometimes arrested when passing *pleno rivo*. Experiences relief when the bladder is empty. Micturates four or five times daily. The last drops of urine are generally loaded with a whitish sediment, which,

on microscopical examination, is found to consist principally of crystals of triple phosphate. During his residence in Hospital previous to the operation he occasionally passed blood in the urine, which, indicating some vesical irritation, necessitated some delay in the performance of the operation. He did not complain of pain or tenderness on firm pressure in the hypogastrium.

On February 17, chloroform having been administered, Mr. Solly proceeded to operate, having assured himself, as on previous soundings, of the presence of a stone in the bladder. The patient having been fixed in the usual lithotomy position, a lateral incision was made about an inch and a half in length, commencing a little to the right of the raphé of the perineum, and continued downwards and outwards to a point midway between the anus and tuber ischii. The staff, supported by Mr. Clark, was easily found, and the urethra and neck of the bladder opened up upon the groove in the usual way. The stone was grasped by the forceps, but, being soft and putty-like, it broke down and had to be removed in two or three pieces. The particles, however, were of a tenacious consistence and adhered together, so that there did not appear to be much "grit" left. The bladder was syringed out with tepid water before returning the patient to bed. This patient continued to progress favourably up to the time of his discharge, and his health was much improved during his stay in Hospital. The urine passed gradually in larger quantity by the urethra, until, when discharged, he could retain his water at will, and only passed a few drops by the perineal wound.

On microscopic examination, the stone was found to consist principally of crystals of ammonio-magnesian phosphate and some amorphous *débris*. The fragments weighed all together 10·07 grammes.

Uric Acid Calculus—Lithectasy—Recovery.

(Under the care of Mr. SOLLY.)

C. S., aged 6, was admitted into the Hospital on March 8 with symptoms of stone, of eight months' duration, not, however well marked, for she appeared to have no vesical irritation or constitutional disturbance until about a fortnight after her admission, when laminaria tents were inserted into the urethra, in order to obtain gradual dilatation of the canal. This treatment, however, gave her so much pain that it had to be abandoned. She then became somewhat feverish and irritable, suffered from hypogastric pain and tenderness, with purulent discharge from the urethra and excoriation of pudenda and nates. On March 31, chloroform being administered, Mr. Solly proceeded to dilate the urethra by a pair of long wedge-shaped forceps, the urethra rapidly yielding to the distending force. A small pair of stone forceps was then passed into the bladder, and the dilator removed. All the urine had now escaped, and the bladder had contracted into an hour-glass shape, so that the stone could not be detected at first; however, by passing the forceps well up behind the pubis, Mr. Solly succeeded in grasping and removing it without any further difficulty. The calculus was smooth, oval, about the size of a large filbert, and weighed 8·111 grammes. On section it was found to consist almost entirely of uric acid, with a coating of phosphate of lime. She had no more constitutional disturbance after the operation, but rapidly improved. The urine dribbled from the bladder for the first fortnight; but after taking 1·160 of a grain of strychnia, distributed over a period of about three weeks, in doses of $\frac{1}{10}$th of a grain twice daily, the urethra gradually regained its tone, and she was dismissed on April 30, having complete control over the bladder during the day, but incontinence of urine when asleep. A brother was treated for stone in the bladder at the old Hospital.

Mulberry Calculus—Lateral Lithotomy—Recovery.

(Under the care of Mr. SYDNEY JONES.)

A. H., aged 18, a cripple from disease of left hip; not much anchylosis; there was no difficulty in putting him in position for lithotomy. Had had symptoms of stone from early years; but these had been more urgent during the last seven or eight weeks. Admitted on November 10, 1868, with urgent symptoms of stone, itching along the course of the urethra, and pain in glans penis, with frequent micturition, the urine containing a large quantity of sediment, which was found upon microscopic examination to consist mainly of crystals of triple phosphate, bladder epithelium, and granular amorphous *débris*. The stone was detected with the sound, giving a clear metallic ring; the surface felt rough and nodulated.

On November 25, chloroform being administered, Mr. Jones proceeded to perform the lateral operation for lithotomy, by passing a very curved staff with lateral groove into the bladder. The patient being fixed in the usual position, an oblique incision was made, commencing at the mesial line about an inch above the rectum, and passing downwards and outwards for about two inches. The groove in the staff was found without any difficulty, and the bladder opened in the usual way. The stone was grasped with long forceps and removed without any difficulty. The calculus was a mulberry one, coated with beautifully shining phosphatic crystals. Its outline was round, with flattened surfaces; its thickness was three-quarters of an inch, and its diameter in other directions was an inch and a quarter. There was no hæmorrhage. The surface was rough from recent phosphatic deposit. It weighed 15·339 grammes. During the progress of the case the patient had some feverish symptoms, and the external wound, which had closed up prematurely, had to be freely dilated. He had also some tenderness in the hypogastrium.

26th.—Wound almost healed externally; has passed urine to some extent along penis; tongue white; pulse 130; wound reopened by introduction of forefinger.

27th.—Wound with strong disposition to close; looks well; tongue clean; pulse 114.

29th.—Pulse 96; tongue clean; no tenderness about belly.

December 2.—Doing very well; tongue clean: appetite bad. Ordered quin. disulph. gr. ij. b.d.

On January 2 of the present year he was presented, the wound being entirely healed, and all the urine having passed for some time by the urethra.

Uric Acid Calculus—Lateral Lithotomy—Recovery.

(Under the care of Mr. SYDNEY JONES.)

W. S., aged 3, admitted January 12, 1869, with symptoms of stone from birth. Had always been delicate, suffering from tenesmus and relaxed bowels. He has no tenderness or pain in the hypogastrium. Suffers occasionally from urethral irritation, especially when micturating.

On February 17, chloroform being administered, Mr. Jones assured himself again of the presence of the stone. A much-curved staff was used with lateral groove. The steps of the operation were similar to those described above. A large calculus was found at the lower part of the bladder, which was grasped and removed without difficulty. The calculus was oval, an inch and a quarter long, an inch in short diameter, three-quarters of an inch in thickness. It consisted of lithic acid coated in patches with phosphates; that end of it which seemed to have projected into the urethral orifice had a coating of phosphates about 2 lines in thickness. There was some little hæmorrhage after the operation, easily controlled by pressure for a short time on the pudic. He progressed without a trace of bad symptoms, and on March 7 had passed all water by the penis for the last seven or eight days.

Mr. Male was the dresser in each case.

THE inhabitants of most tropical or malarious countries firmly believe that water causes fever. Dr. McLelland remarks on the prevaleuce of this belief. Marshall states the Singhalese attribute fever to impure water. Dr. Lyell mentions the inhabitants of the Eusufzye attribute fever to cold and the drinking water. The inhabitants of the malarious plains of Troy believe their diseases to arise from the water they are in the habit of drinking. It is also the same in Alabama, and among the Shervaroy Hills. Mr. Bettington, of the Bombay Civil Service, has also directed attention to the probability of water causing the fever prevalent in certain districts. M. Boudin records that in 1834 the whole of the crew and troops on board a French ship suffered from fever in consequence of the water being taken from a malarious place. I have elsewhere mentioned an instance of an officer who, neglecting the advice of his shikarree, drank from a pond, the water of which was known to cause fever, and suffered accordingly. Parkes moreover refers to various places in India, France, and even England, where ague ceased after good wells were constructed. The *Army Medical Sanitary and Statistical Report* for 1863 contains a remarkable example of the effects of impure water and the value of sanitary measures. At Bulmano, on the west coast of Africa, the water of a well excited violent diarrhœa and fever. It was found to contain large quantities of organic material. A good trench having been dug round the mouth, the sides of the masonry raised, and the well cleaned out, the water became pure and was drunk with impunity. Nothing, indeed, can well be stronger than both the positive and negative evidence.—*Marwar, the Land of Death, by W. J. Moore, of the Political Agency, Joudpoor.*

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Medical Times and Gazette.

SATURDAY, JUNE 12, 1869.

VACCINATION AND INFANT MORTALITY.

We are listening for a shout of exultation from the camp of the anti-vaccinationists. No less a person than Dr. Farr has made them a present of some facts, which, there can be no question, will turn up again before long, manufactured into a big gun for the total destruction of the false-hearted, prejudiced, self-interested parties who, in the presence of the grand truth enunciated by one of themselves, can still have the effrontery to maintain that vaccination is a good thing, which ought not to be given up, but extended in every possible way. Admitting that compulsory vaccination in England has continued to reduce the fatality of small-pox, Dr. Farr writes nevertheless, in the Report of the Registrar-General, just issued, that "since 1853 other diseases have so prevailed as to counterbalance the gains under this head. The mortality of children has not declined in a corresponding degree." So important is this truth to the community at large, so pregnant with practical inferences does it become in the hands of the able statistical Physician who announces it, that we propose to devote a column in aid of its publicity.

Dr. Farr starts with an extract from a work written in 1813 by Dr. Robert Watt, formerly a lecturer on Medicine in Glasgow, in which he expresses astonishment at finding, on examination of the burial registers in that city, that, while the establishment of the practice of vaccination had greatly reduced the proportion of deaths from small-pox, that from hooping-cough had slightly increased, and that from measles had increased greatly. What he regarded as still more strange was that the proportion of deaths under 10 years of age to the deaths at all ages was rather greater in the six years ending 1812 than in the six years commencing with 1783—in short, that children died in Glasgow nearly in the same numbers as before, but of other forms of disease. Dr. Farr adds:—"There are two diseases—scarlatina and diphtheria (itself a new type of disease)—which have been exceedingly fatal since the year 1855, when diphtheria was first distinguished in the returns. . . . While small-pox dwindled, these two zymotic diseases flourished at the expense of the growing population." Further he says:—"The rate of death is under the same conditions, over a series of years, nearly constant. There is a determinable law of morbility as there is a determined law of mortality." The law of "zymotic" morbility must find its basis in this fact—namely, that in the air we breathe, the food we eat, and the water we drink, there abound the elementary germs of a vast host of maladies, all endued with the principle of vitality, but capable of living and reproducing their like only by pasturing upon the substance of the bodies of children. In the free and uncontrolled process of invasion and reproduction we read not only the extension of epidemics, but their spontaneous arrest and cessation. "Each zymotic disease is generated, we may conceive, by species of living molecules which may be of a twofold nature, bearing some such relation to each other as the germ and sperm plasms of plants and animals, and becoming proliferous after coalescence give rise to the various forms of epidemic disease. The danger of bringing great numbers of persons into close proximity is well known; it evidently increases the chances of the coalescence, propagation, and diffusion of the various active disease molecules. The life of these zymotic generations is the death of the elemental part of the human organism, and yet their development depends on its existence. This, to some extent, limits epidemics. The black death destroyed, according to some accounts, half the population of England; and the very force of its zymotic principle destroyed the pasture on which the death fed; it put an end to the mass of the people living; and to this extent at least it diminished its own mass; it burnt up in a few years its elements in those surviving; and it encountered other organisations whose career it could not arrest. So every year recent epidemics subside on this ground, or they are limited by the operation of conflicting disease molecules. For, if there is a struggle for existence among the visible forms of life, and if the struggle is the severer the nearer these forms are allied, is there not also the same struggle among the elementary independent particles of life to which epidemics are due? Theirs is also a struggle for subsistence." Clothed in the language of hypothesis, such is the explanation given by Dr. Farr of the remarkable fact with which we commenced. And it comes to this—that if our child population is protected from the attack of small-pox, there are other diseases, some of them not less fatal, which are ready to seize upon those so spared. "Thus in a garden where the flowers are neglected, to keep off thistledown merely leaves the ground open to the world of surrounding weeds."

The practical inference is obvious. To protect our population against one disease—small-pox—by vaccination is right and humane; but, having done this, our work is only just commenced. If vaccination is to exert its due influence upon the preservation of infant life in the long run, it must be supplemented by other measures not less necessary, right, and humane. One enemy of our race being shackled, we must not leave our child population merely to become a prey to others. "To operate on the mortality, protection against *every one of the fatal zymotic diseases is required;* otherwise the suppression of one disease element opens the way to others." We must, in the lack of similar methods to that most effectual against small-pox, isolate individuals invaded by scarlatina, measles, hooping-cough, and the like; we must destroy the virus contained in the secretions of diseased persons, immediately on their discharge, by appropriate chemical agencies; we must exercise our ingenuity in devising plans for preventing the diffusion of such germs into the air, or their concealment in clothing, bedding, etc.; and, above all, we must render our population proof against invasion by low corpuscular forms of life by all the means which experience has shown to be adapted to promote physical vigour. We must counteract the tendency to accumulation of individuals in schools and workshops, no less than in pilgrimages, in dwelling-houses, and in ships, by measures of dispersion; and, if needful, we must amend our laws which permit and even compel such things, and place the administration of good laws in the hands of men whose personal interest, short-sighted as they are, does not seem to lie on the side of evasion. Glasgow in the days of Dr. Watt furnishes a case in point. The readers of Mr. Simon's reports—and they are a steadily increasing class—can call to mind plenty of other illustrations, all exhibiting the circumstances under which the suppression

of a most fatal type of disease has failed to diminish the mortality among children. As a nation we cannot plead ignorance. Let us rise to the situation.

"VENTILATE YOUR SEWERS! DO NOT TRAP!"

THESE words form the close of a very valuable address on the influence of sewer vapour on health, delivered by Dr. Carpenter, of Croydon, before the Social Science Association on Monday evening, and we think the substance of it deserves the widest circulation.

It is within the memory of this generation that typhoid fever has been distinguished from other fevers, and has been traced to sewage. The earliest efforts of sanitarians were directed to the abolition of those collections of impurity in cesspools which formerly poisoned the earth, air, and water for our forefathers; and with the introduction of water-closets and of tubular drainage it was hoped that typhoid fever, at least, might be exterminated. Nevertheless, it did recur again and again, as at Croydon; because, says Dr. Carpenter,

"In the early sanitary works which were carried out under the supervision and with the approval of the General Board of Health, and under the authority of the Public Health Act of 1848, *the consequences of sewer gas* not being foreseen were not guarded against; no provisions were made to prevent its ascent into the house, or for exit into the open air before it could reach the inside of the dwelling. The rapid spread of luxurious habits among the people, the introduction of low fireplaces and register stoves, and the methods adopted to exclude draughts by having exceedingly close-fitting windows and doors, prevented the easy exit, and its baneful influence became manifest, often without the real cause being at that time at all suspected. *It often happens that the easiest way for air to enter the house is by the sewer.*"

Then, with this state of things, "fever would recur; fever always the same in type, 'the enteric or typhoid' form, with rose-coloured spots, often with abdominal complications, and always in those houses nearest to the top of the sewer (perhaps I should say generally) and farthest from the outfall."

Nor is fever the only consequence of the entry of sewer gas into dwelling-houses. "Many other disorders of the system," says Dr. Carpenter, "have been directly traced to its influence—thus diarrhœa; dyspepsia in all its forms; palpitation of the heart; various forms of asthma (indeed, it may help to explain some of the vagaries of this curious disease); convulsions, especially in teething infants; headaches, both persistent and intermittent. The evils which sometimes attend or follow upon the puerperal state, as milk fever, abscesses in the breast, and phlegmasia dolens or white leg, are frequently caused by it. I believe that these latter cases have been so associated from observing their frequent occurrence in new houses before the plan now adopted in our district was carried out."

In houses pervaded by sewer gas, invalids cannot recover their health, and delicate women are liable to faint away without assignable cause; not that "stink" is always complained of. A good, honest, unabashed "solid" stink, as Dr. Carpenter calls it—one that assails the nose without ceremony—is a fair open enemy. He gives you warning, and you open your windows and let him out as you would a hornet. On the contrary, it is the "insidious almost imperceptible miasma" that is dangerous; and it is deserving of notice that many miasms do not stink *per se*, but only when, beginning to be ozonised and decomposed, they give rise to that which offends the nostrils. Dr. Carpenter illustrates this by reference to some emanations from a factory, which are often more offensive half a mile off than at the place of issue.

How, then, is this enemy so subtle and deadly to be dealt with? Most sanitarians have but one reply—put efficient traps and shut out the gas. Dr. Carpenter argues that this is useless by itself. The sewer gases must obey the laws of nature, and will find an exit at the highest point, and, unless one be provided for them, will enter houses by sinks, gullyholes, and closets. In the autumn of 1867, nearly 40 per cent. of the 160 children of the Warehousemen and Clerks' Schools on Russell-hill, and this spring about 30 per cent. of the inmates of the Female Orphan Asylum at Beddington, suffered from typhoid fever through the reflux of sewer gas by the traps.

Trapping alone, then, Dr. Carpenter concludes, is delusive; for not only may the trap become dry, but the water that seals it absorbs gas from the sewer, and gives it off into the house, and if there be any pressure, the trap is forced. Neither is it of any use to say that sewers *ought* to be self-cleansing, that they *ought* to form no deposit and give off no gas. What ought to be, and what actually is in this wicked world, are two very different things.

The real plan is to ventilate every sewer abundantly; to have a rapid and constant circulation of air through it; so that the sewer gas may be diluted and decomposed as soon as formed. In order to effect this, in the first place every house drain ought to be ventilated by carrying up the soil pipe to the highest available point, so that it be far enough removed from windows and chimneys. Other ventilating shafts, straight and perpendicular, ought to be put to every pipe requiring a trap, so as to protect the trap from the effects of pressure. Then, instead of closing the apertures into the street sewers, they ought to be as many and as open as possible. Stagnation in sewers, whether of solid, or liquid, or gas, must be avoided, and, considering that the sewers have a higher temperature than the air above, there is sure to be a rapid circulation through them if openings enough be provided; and public safety may be consulted by placing charcoal ventilators in the line of the up-currents.

We ask all sanitarians to weigh well what Dr. Carpenter teaches. Many a house will be saved a fit of illness if an outside vent be given to the gases which are now vainly attempted to be kept from rushing out of the "nursery sink."(a) There are other measures which conduce to the same end, as the use of carbolic acid to limit decomposition, and the use of abundance of water, so as to check the evolution of gases, and hurry off the solid ingredients of sewage. Yet there is something dismal in the idea that, after forty years of sanitary talk and work, we must be content to let the vapours of our sewers escape into our streets, and that the ozone that ought to tint the cheeks of our town children must be used up in decomposing the miasm of our sewage.

INAUGURATION OF THE STATUE OF SIR DOMINIC CORRIGAN, BART., M.D.

THE 3rd inst. was a great day for the College of Physicians of Ireland. The statue of Sir Dominic Corrigan, one of the most illustrious Fellows of the institution, was on that day handed over to the authorities of the College. It is a striking likeness, and is one of the happiest creations of Mr. Foley, R.A.

The idea of the "Corrigan Testimonial" originated in 1865, when, after filling the office of President of the College of Physicians for five years, Dr. Corrigan retired. He had rendered great services to the institution, but he had endeared himself to his *confrères* by many acts of kindness, and had shed a lustre on the office which he had filled. At a special meeting of the College it was determined that a portrait of Dr. Corrigan should be provided out of the College funds, with a suitable inscription testifying to his eminent services. This was an act of the College in its corporate capacity, but a strong desire existed amongst the Fellows and Licentiates to mark their high estimation of Dr. Corrigan by a testimonial to be erected by personal contributions. At first the movement was confined to the members of the College, by whom a larger sum than was

(a) We may call attention to the excellent system of house drains of Mr. Lovegrove, of Hackney, which have a valve to prevent reflux of gas from the main sewer, and another for carrying off the gas of the house drain itself at the back of the house.—ED.

required was quickly subscribed for the contemplated bust. It was soon, however, ascertained that a very general desire existed on the part of the Profession at large, as well as with many of the public, to contribute to this testimonial. The result is the splendid life-size statue which is now placed in the hall of the College, in a space corresponding to that occupied by the statue of the late Sir Henry Marsh. The gathering to witness the uncovering of the statue was large and influential. The Lord Mayor and Lady Mayoress, Lord Athlumney, Sir Bernard Burke, a host of the Fellows of the College, and many other distinguished persons were present. The chair was occupied by Dr. Churchill. The secretary, Dr. Lyons, read letters from the Lord Chancellor, the Marquis of Headfort, and others, regretting their unavoidable absence. He then gave a short account of the origin of the Corrigan testimonial. Then resolutions were passed and speeches made in honour of the eminent Physician whose *alter ego*, as it were, was before them. The speakers were of all shades of political opinion, for at such a moment, in spite of the unavoidable feelings of political animosity which the late election had engendered and fostered, the speakers and the meeting forgot all differences in the one paramount object for which they had assembled—the doing honour to a great Physician, a learned and accomplished gentleman. The speakers were Mr. Porter, President of the College of Surgeons, Sir Bernard Burke, Dr. Beatty, Dr. Churchill, Dr. Stokes, Dr. Banks, Lord Athlumney, and the Rev. Dr. Haughton. The great applause which the speakers met with showed how enthusiastic and hearty were those assembled in doing honour to the distinguished object of their regard, and it is not difficult for those who know Sir D. Corrigan to understand the cause of this unanimous and fervent demonstration. Speaking only in the name of the Profession which we represent, we say it is to be attributed to his qualities as a Physician, to his great acquirements in classic and modern literature, to his conduct as a gentleman, but we think especially to his efforts in the General Medical Council to elevate his brethren in the eyes of the public. He has on all occasions advocated a high standard of preliminary education for those who are to become members of a "learned Profession," so that they may be fit to meet on equal terms the highest personages, whether in regard to rank or education. If occasionally he has been carried away in debate by his ardent and generous nature to advocate what some may call Utopian views, yet all could appreciate his singleness of purpose, his rare eloquence, and his love of his Profession. When we listened on one occasion to his able advocacy of a high standard of preliminary education for the Medical Practitioner, we were forcibly reminded of having heard just thirty years before an equally eminent member of our Profession, with equal spirit and good feeling, declare his wish, before Mr. Warburton's committee, that the time might soon come when "every member of his Profession should be a gentleman." During the thirty years which have elapsed since these memorable words were uttered by Sir Astley Cooper, no doubt great improvements have taken place in the preliminary education of Medical students, but we know how much still remains to be done. As the foremost pioneer in this good work, we all owe a debt of gratitude to Sir Dominic Corrigan.

THE WEEK.

TOPICS OF THE DAY.

Earl Russell's Life Peerages Bill has passed through Committee of the House of Lords with the amendment that only two life peers should be created in one year, and that the total number should not exceed twenty-eight. In the debate on the Bill we were glad to find that the propriety of conferring the distinction of a life peerage upon Medical men of high scientific standing was expressly recognised by Earl Russell, who singled out Dr. Jenner with Watt, Adam Smith, and Sir Joshua Reynolds as types of men who would be ornaments to that select assembly. The omission in previous debates of all reference to Medicine as a Profession which might furnish life peers might, perhaps, have been accidental. At any rate, it has now been repaired by the introducer of the Bill. The hostile character of several of the speeches delivered by eminent members on both sides of the House of Lords, on Tuesday, when the report of the amendments was under consideration, makes it very doubtful whether the Bill will pass the third reading. But should this measure fail there is little doubt that the creation of life peerages is only postponed for a time, and that before long the portals of the higher chamber will be opened to exceptional professional merit of other kinds than that of the lawyer, the soldier, and the ecclesiastic.

Mr. M'Cullagh Torrens' attempt to obtain further discussion before the ratepayers of London are muleted of the enormous sum for Hospitals, Infirmaries, and schools, which even Mr. Goschen's reduced rate of expenditure necessitates, deserved a better fate. In a thin house it was rejected by 118 to 13. Both from a Medical and an economical point of view Mr. Torrens had an excellent case, but the fact was, as stated by Dr. Brewer, that the opposition came too late. Things have gone too far, and too much money has been spent, to go back. One of the best portions of Mr. Hardy's Bill, which would have established the Irish Dispensary system in London, is for the most part a dead letter. Had that been fairly carried out, it would have gone far to remove the necessity for vast schemes of indoor relief, which have been accepted in defiance of the laws of hygiene, political economy, and morals.

The interest which the election to the Council of the College of Surgeons excites seems each year to become greater. It appears clear that it is too late now to denounce canvassing, as the precedent has been established, and is openly and generally followed. The principle of popular election is a fashionable one now-a-days; it has its good side, but it has its concomitant evils, and canvassing and the introduction of electioneering tactics into every contest are not the least of them. In another column we publish a letter from Mr. Gay, expressing his views on various matters of reform in the College. As we believe that these views are in accordance with those of a large number of the Fellows, and that their adoption would have the effect of making the College a more popular as well as a more useful institution, we especially commend Mr. Gay's letter to the consideration of our readers. Mr. Gay has the claim of having only fallen short of election last year by a very few votes, and also the personal one of being a Surgeon who, without any help from a school or large Hospital, has made for himself a very wide reputation, has done as much as most living Surgeons to advance the science of Surgery, and is one of the most deservedly popular men in the Profession with all classes of society. We have on former occasions expressed our opinion of Mr. Erasmus Wilson's fitness for the office which he is desirous of obtaining, and we admire his pertinacity and courage in coming forward again despite former disappointments. Of Mr. Solly's claims we spoke last week. Mr. John Adams is a deservedly popular Surgeon. Mr. Erichsen and Mr. Henry Lee (of whom the latter is, by the bye, the senior, and should be placed first) both hold high rank as Surgeons to large Hospitals, and diligent cultivators of Surgical science. But we think that the Council should represent all classes of the Fellows, and that the present occasion, when there are three seats vacant, should be seized to return men of varied Professional career and training.

We regret to find that Professor Syme's health, although rapidly improving, is not yet sufficiently established to make it prudent that he should preside at the annual dinner of the Fellows. His place on the occasion will be taken by Mr. Nunneley, of Leeds.

The circumstances under which the death of Mr. F. D.

Grattan Guinness occurred undoubtedly warrant the verdict of the Dublin jury, who found that

"Frederick Darley Grattan Guinness accidentally came by his death on Saturday, the 5th of June, 1869, from a dose of poisonous medicine, compounded by mistake, at the establishment of Messrs. Hamilton, Oldham, Long, and Co., of 107, Grafton-street; and we consider that there was not sufficient circumspection taken there for public security, on which account we strongly urge the necessity of strict precantion being observed by the firm, against whom we feel obliged to record our deep censure."

Mr. Guinness was suffering from some affection of the heart, and was under the care of a Physician, Dr. Burke, who had prescribed for him a mixture consisting of carbonate of ammonia and cinnamon water. On Friday night he sent his prescription to be made up at one of the establishments of Hamilton, Oldham, Long, and Co., apothecaries and chemists, who enjoy a high reputation, and are, we believe, the "State apothecaries." The medicine, however, which he received, was different in colour from that which he had previously taken, and a friend advised him not to take it. It seems that he returned this bottle and got a fresh mixture made, for he went out, and, on returning, said "They have given me another bottle." He went into a room by himself, where he took a dose of the fresh mixture. He immediately rushed out, crying, "It is choking me, it is choking me!" and died in twenty minutes. The evidence given at the inquest proved that the medicine supplied to the deceased was made up from a bottle containing cyanide of potassium, but labelled "carbonate of ammonia," which had been filled in order to dispense it. On the allegation that carbonate of ammonia and cyanide of potassium were very much alike, the dispenser of the medicine was acquitted, although it is certain that carbonate of ammonia must be much altered by keeping before it can resemble even in appearance cyanide of potassium. The doubt, however, was solved by the evidence of the storekeeper, George Hudson, who said:—

I remember on Friday last Mr. Swayne (the dispenser) gave me the bottle to have filled, and at the top of the stairs I found the jar which I thought was carbonate of ammonia, and as Mr. Swayne was in a hurry I filled the bottle with the contents. When I came back Mr. Swayne said he had got what he wanted in the front shop, and he then took the bottle from me and put it on the shelf. The jars in which carbonate of ammonia and cyanide of potassium are contained are very much alike. I don't think there was any label on the jar. It was late in the evening, and Mr. Swayne was in a hurry. I am with my present employers about six years.

Now, the thing that strikes us in this case (putting aside the culpable negligence of having cyanide of potassium kept in a jar resembling that which contained carbonate of ammonia, and unlabelled) is that apothecaries or pharmaceutists ought to have no use for large jars of such substances as cyanide of potassium. The old-fashioned apothecary's shop, where medicines and medicines only were kept, was, on the whole, the safest thing for the public. A large jar of cyanide of potassium could hardly be required for any ordinary pharmaceutical work. We believe that the firm of Hamilton, Long, Oldham, and Co. have had recently a photographing department in connexion with their business in Sackville-street. Be this as it may, at all events the stores of wholesale chemists and drysalters ought not to be kept in the same warehouses with the stock of the *pharmacien*.

The President and Fellows of the Royal College of Physicians gave their annual *conversazione* on Wednesday evening. The rooms were as usual filled to overflowing, and many curious and beautiful objects were displayed for the inspection of the guests. The event of the evening was Mr. J. N. Lockyer's demonstration of photographs illustrating recent solar discoveries by means of the electric lamp. In the space of ten minutes' address Mr. Lockyer gave all those of his hearers who had studied the principles of spectrum analysis a clear account of the steps by which the present knowledge of the incandescent processes on the sun's surface had been obtained, the evidence of their chemical nature (hydrogen being present in enormous quantities), the vast space they represent, and the rapid changes which they undergo. The Master of the Mint demonstrated the expansion of palladium by the absorption of hydrogen. Dr. Sibson exhibited Marey's cardiograph, Dr. Guy diagrams illustrating the crimes of insane convicts, Dr. Hawksley a stetho-sphygmograph registering the movements both of the pulse and respiration. These were a few of the novelties brought together for the guests.

Many of our readers will recollect that a woman named Cecilia Jones, a cook, residing at Wimbledon, accused Mr. Berry, the Surgeon of Wimbledon, with having committed a criminal assault upon her. The magistrate before whom the case was heard at once dismissed it, and pronounced, in the most emphatic manner, that there was not the slightest foundation for the charge. Mr. Berry—not to clear his character, for that had been done by the investigation before the magistrate, but in order to prevent the woman bringing similar accusations against other innocent people—prosecuted her for perjury, and she was recently tried at the Central Criminal Court. The jury found her guilty of perjury, but acquitted her on the ground of insanity, and she is again at liberty. Now, if she be insane, is it right that such a person should be at large? If not, there has certainly been a gross miscarriage of justice. Why is the rule that persons acquitted on the ground of insanity should be detained during her Majesty's pleasure, limited in its application to cases of murder?

Dr. Squarey, late Resident Physician at University College Hospital, has been appointed Assistant-Physician to the Hospital for Women, Soho-square.

ROTTERDAM AND SOUTH BELGRAVIA.

We publish in another column a letter from our learned correspondent Dr. Ballot, of Rotterdam, on the topography of that city, on its water supply, and the connexion of both with the cholera. It is but just to Dr. Ballot to say that this paper was not written for publication, being merely an answer to some questions put to him before the late debate on water at the meeting of the Association of Medical Officers of Health. The intrinsic interest of it will be our justification for publishing it. South Belgravia is topographically just such a place as Rotterdam without its picturesqueness. Its sewage waits for the steam-engine that is to pump it from a low-level sewer, but luckily South Belgravia gets its water from a purer source than the Maas.

HOSPITALISM.

In the June number of the *Edinburgh Medical Journal* Sir J. Y. Simpson continues his warfare against large Hospitals. He has collected altogether of amputations of the leg, thigh, forearm, and arm, the operations which he has selected to establish his point, 2098 cases from private, country, and provincial practice; from large and metropolitan Hospitals he has collected very nearly the same number—viz., 2089. Of the 2098 limb amputations in the country 226 of the patients died. After the 2089 limb amputations in eleven large Hospitals 855 of the patients died. The difference is astounding. The mortality after limb amputations in the country is 1 in 9·2, after limb amputations in large Hospitals 1 in 2·4—that is to say, that after such operations in large Hospitals the mortality is four times as great as it is in the country. But this is not all, if due allowance be made for the inexperience of country Surgeons, many of whom have only once or twice in their lives to deal with such cases, for the experienced country Surgeon loses only 1 in 12·4 of his patients, so that he is five times more successful than his skilled and probably even more skilful brother who has to treat his patients in large Hospitals. In no way, perhaps, is the difference better expressed than as Sir James puts it, thus—

Out of 2089 amputations in Hospital practice 855 died.
Out of 2098 amputations in country practice 226 died.
Giving an excess to Hospital practice of 629 deaths.

COMBUSTION OF OIL OF CREOSOTE.

A CASE of some importance in a sanitary point of view was decided before the magistrate of Worship-street on Monday last. It appeared in evidence that a sugar refiner of Mile-end was summoned, under the Nuisances' Removal Act, for causing a nuisance and injury to health by burning a dead oil of creosote in lieu of coal. This oil had long been celebrated as a preservative of timber, but it fell into disuse on the larger railways being completed. The defendant discovered that it was well adapted for heating purposes, and would be much more economical in its use than coal. He therefore used it extensively in the heating of large furnaces. It was expected that the combustion would not be attended by smoke or effluvia, but the contrary was soon proved, as the most injurious consequences to the health of those residing in the neighbourhood were shown to be the result. After a consultation between the counsel and the bench, the defendant ultimately agreed to discontinue the use of the creosote.

PARLIAMENTARY.—LIFE PEERAGES—ASSESSED RATES BILL—POOR ACT AMENDMENT BILL—COMMITTEE ON THE CONTAGIOUS DISEASES ACT.

ON Thursday, June 3, the Lords went into Committee on the Life Peerages Bill.

In the course of the debate, Earl Russell said in his opinion it was desirable to preserve the hereditary character of the House of Lords, and the provisions of the Bill, taken in conjunction with the limited number of life peerages to be created, would not have the effect of altering that character. At the same time it was important that there should be admitted to their Lordships' House individuals distinguished in various pursuits of life, as well as in arts and sciences, like Watt, the inventor of the steam-engine, Dr. Jenner, Adam Smith, and Sir Joshua Reynolds. Men like these would be ornaments to that Legislative Assembly; they would add greatly to the value of debates bearing on subjects with which they were well acquainted, and yet they might not be desirous to undertake the burden of an hereditary peerage. After a long debate, it was agreed that only two peers should be created in any one year, and that the total number should not exceed twenty-eight. The Bill then passed through Committee.

In the House of Commons on Monday, after a long discussion, Mr. Goschen's Assessed Rates Bill was read a second time.

The debate on the Metropolitan Poor Act Amendment Bill was resumed by Mr. M'Cullagh Torrens, who objected to the proposed new Hospitals, contending that the existing private Hospitals, with subsidies from the rates, supplemented by a system of treating the sick poor at their homes, would be the most judicious and effectual mode of dealing with them. He quoted several Medical authorities, amongst others Dr. Sutherland and Sir James Simpson, against massing the sick together in Hospitals, and for the children he advocated the system of boarding out, which had been successful in Ireland. It was not the duty of Parliament, he insisted, to relieve the working classes of the charge of their sick and their children, and, seconded by Sir C. Dilke, he moved a resolution deferring legislation until there had been an inquiry into the sufficiency of the present accommodation.

Mr. G. Hardy defended and explained the calculations on which he had passed the Act of 1867. Agreeing with many of Mr. M'Cullagh Torrens' ideas as to the segregation of the sick and the value of the Dispensary system, he maintained that workhouse Hospitals were necessary for the destitute sick, who, for the most part, had no homes of their own in which they could be treated, and that the ordinary Hospitals were intended for a totally different class. To the Bill Mr. Hardy gave an earnest support, and urged the House not to draw back from a policy which, while it placed the sick and aged in becoming comfort, would make the workhouses deterrent to the vagrant and wilful pauper.

Dr. Brewer admitted that Mr. Hardy's Act was an infringement on local self-government, but held that it was too late to retreat.

Sir M. Lopes maintained that legislation in this direction ought to be accompanied by a revision of our system of taxation.

After some observations from Mr. W. H. Smith, Mr. D. Dalrymple, and Mr. Samuda, Mr. Goschen replied, and on a division Mr. Torrens' amendment was defeated by 118 to 13.

On Tuesday, in the House of Lords, on the report being brought up of amendments to the Life Peerages Bill, a discussion was commenced by the Duke of Argyle, who rejected the idea that the Bill could have any influence in strengthening the political influence of the House of Lords, and in placing it on terms of nearer equality with the House of Commons. Lord Houghton, Lord Malmesbury, and Lord Stratford de Redcliffe opposed the Bill. Lord Russell, however, promised that due notice should be given of the third reading, so that ample discussion should be allowed. On the suggestion of Lord Lyveden, the words of the preamble, "whereas it is expedient to afford facilities for the introduction into the House of Lords of persons distinguished," etc., were altered by the introduction of the word "greater" before "facilities." The report was then agreed to.

On the motion of Mr. Bruce, the Select Committee on the Contagious Diseases Act (1866) was appointed as follows:—Mr. Childers, Sir John Pakington, Captain Vivian, Marquis of Hamilton, Mr. Dalrymple, Mr. P. Wyndham, Mr. Kinnaird, Mr. Collins, Sir J. Simeon, Mr. J. Lowther, Mr. Rathbone, Lord E. Cecil, Lord C. Bruce, Sir J. Elphinstone, Mr. Murphy, Mr. Tipping, Dr. Brewer, Mr. Mills, Captain Grosvenor, Sir J. Trelawny, and Mr. Mitford.

ABSTRACT OF INTRODUCTORY LECTURE ON HYGIENE,

DELIVERED BY

Professor CORFIELD, M.B.,
Medical Fellow of Pembroke College, Oxford,

AT UNIVERSITY COLLEGE, ON JUNE 7.

AFTER a fitting exordium and a definition of hygiene as the science which studies the causes of disease and points out the means of avoiding them, the Professor spoke of the neglect of the hygienic branch of therapeutics by Medical men as the real cause of the apparent success of homœopathy and quackery. He next gave the history of hygiene, beginning with the Mosaic institutes; then passing on to the Chinese system of manuring and tillage. Lower Egypt, once the most healthy, now perhaps the most insalubrious country on the face of the earth, was instanced as affording a proof of the vast influence of tillage and drainage in preventing the production of such diseases as the plague, which was utterly unknown there as an epidemic during the time of the Pharaohs, of the Persian domination, of the Ptolemies, and during part of that of the Roman occupation (the first visitation of it having taken place in the year 263 A.D.), while for many centuries that country has been one of the greatest centres of it. The hygienic conditions of ancient Greece and Rome were described at length, especially as regards the gymnasia and the baths. The splendid system of aqueducts for the supply of Rome with water was extolled, and Frontinus quoted to show that these channels (of which there were nine) were in several cases more than forty miles long, and supplied at least 330 gallons of pure water a head daily to the people of Rome. We must go back to the ancients for instruction in these matters. More than 300 years B.C. the Romans refused to be supplied with Tiber water, and the Consul Appius Claudius Crassus began the first aqueduct, while we, in the middle of the 19th century after Christ, have not yet found out the means of bringing pure water in sufficient quantities to supply the people of London. The history of hygiene in schools of Physic from Hippocrates downwards having been traced, the Professor claimed for a subject so vast and so varied the aid of all the physical and natural sciences—of the mathematical methods to enable us to make correct deductions from the facts before us and to give a correct explanation of the true meaning of statistical figures, of physics and chemistry to enable us to study the action on the human body of the various forces which act upon it and of the matter which surrounds it, of natural history, of geology, and, above all, of physiology, the science which studies the conditions of the existence of life while we study its preservation. Progress in this science, as in all others, can only be made by direct experimentation and by the rejection of everything that is not proved. We must take the facts given us by the other sciences, and use them as levers with which to remove our Medical difficulties and threw light upon the obscure problems of Medical science. Don't think that a man is a worse Physician

for being a good chemist, or physicist, or mathematician. A man who is well trained in these branches of science has his mind prepared to study the difficult problems of life and of disease, and, depend upon it, will make a far better Practitioner in the long run than one who has neglected them. If this were not the case, the connexion of such institutions as University College with schools of Medicine would be a farce, and the country would join in the retrograde cry of the great French clinical teacher, Trousseau, "Gentlemen, let us have a little more art and *a little less science!*" Dr. Corfield enumerated the diseases which science has robbed of their terrors—the plague (which he thought might yet still be imported and take root in the worst part of our great towns), ergotism, goitre, cretinism, typhoid, scurvy, and small-pox (by means of vaccination). Scrofula and syphilis ought to be next attacked. The daily additions to hygiene from the incessant progress of the arts, by which new kinds of employment arise, many of which are injurious to man's health, were then pointed out and instances given. And so hygiene, being the study of the prevention of disease, gets fresh branches added daily to its already enormous superstructure, and follows the arts in their progress, indicating at each step the precautions to be taken to avoid the spread of disease and death. It is to the poorest classes that we must direct our first attention. Statistics show that the average number of years of man's life has been steadily increasing in most of the countries of Europe during the present century. Let us go on, then (concluded Dr. Corfield), in the path on which we have entered, searching out the *causes* of disease and the means of removing them, and so attacking our common enemy death in his very stronghold, and doing our best to prolong our lives to the utmost limit that is compatible with the conditions of our existence as mortal beings, taking as our motto the lines—

"Ad ædes hominum prisca amphitheatra patebant;
Ut longum discant vivere, nostra patent."

The course will be continued on Mondays and Wednesdays at 4 p.m.

THE CAREER OF A SPECIALIST.

AN ADDENDUM.

So many communications have reached me from friends and strangers with respect to my article with the above heading, that I feel it necessary to make this *addendum* to it. It has been urged upon me that I have dealt harshly with a man with whom circumstances in early life brought me frequently into contact. My object really was not to defame an individual, but to hold up to reprobation a system of practice which at the present day has a tendency to sap the foundations of the practice of Medicine—in one word, to ignore the human body as a whole, and to map out its particular organs as objects of treatment without any regard to the general principles of physiology and pathology. If there be one thing more than another at the present day that is depreciating the importance of the practice of Medicine in the eyes of the public, it is specialism. Abernethy, a shrewd observer, and one of the most successful Practitioners of his day, founded his reputation on his truly philosophical work on the "Constitutional Origin and Treatment of Local Diseases." By this work he struck a blow at specialism which his contemporaries could neither answer nor rebut.

I shall have to treat in future articles on this subject of specialism, and I may here state once for all that in these contributions to the history of the Profession I am desirous of doing justice to all whose conduct it may be my duty to comment upon. I am responsible individually for these articles. I shall not shrink from this responsibility. Many have thought and expressed their opinion that these papers should have appeared in the journal in whose disasters and successes, in whose lights and shadows, I bore so prominent a part. I thought so once, but I think so no longer. In the pages of the *Medical Times and Gazette* I can at all events speak freely and untrammelled. I propose to do my duty fearlessly and faithfully. I am at all times ready to stand upon my defence; not, like Orlando, with my sword ever ready for attack, but with that sword unsheathed when it becomes necessary to defend myself. To recur, then, to the career of a "specialist." I wish, in justice to the memory of John Harrison Curtis, to say that he had many sterling qualities. In private life he was generous to a fault. If he "welcomed the coming," he did not "speed the going guest." He was hospitable, kind, and attentive. In this respect is it too much to say that, with all his faults, he was not at least inferior—nay, was he not superior—to many of his imitators since?

J. F. C.

REVIEWS.

RECUEIL DE RAPPORTS SUR LES PROGRÈS DES LETTRES ET DES SCIENCES EN FRANCE.

Rapport sur les Progrès Récents des Sciences Zoologiques en France. Par M. MILNE-EDWARDS. 1867. Pp. 498.

Rapport sur les Progrès de la Physiologie Générale en France. Par M. CLAUDE BERNARD. 1867. Pp. 238. Paris: Hachette. London: Williams and Norgate.

(*Concluded from page 558.*)

WE now take up the recent history of physiology. Respiration is the first subject discussed, and the views of Lavoisier being taken as a starting-point, the researches of Milne-Edwards, Dumas and Prévost, Regnault and Reiset, Boussingault and Fernet, are duly noticed, and the transformations of organised matter under the influence of respiration are considered. The great question of the formation of fat from starch or sugar next comes in for its due share of notice, and the chief observations in confirmation of the metamorphosis are described: and this is followed by a history of the sugar-forming power of the liver. The important subject of chemical biostatics, or animal statics as it is often called—that is to say, the study of the quantity of alimentary matter of various kinds necessary to preserve man or animals in a normal state—meets with the attention so important a subject demands. In the remarks on animal heat, we have a notice of Bernard's celebrated experiment showing the effect of dividing the sympathetic nerve in the neck in elevating by 6° or 8° F. the temperature of the ear and adjacent parts on the side operated on; of Colin's observations on the temperature of the blood of the domestic animals in various parts of the circulating stream; of Béclard's observations on the relation between muscular contraction and animal heat; and of Milne-Edwards and Villerme's remarks on the influence of low temperature on newly-born children. The mechanism of the heart's action and the sphygmograph (the value of which, in a diagnostic point of view, is now fully recognised), the phenomena of digestion, the functions of the pancreas, and the formation of chyle, having been duly noticed, we arrive at the section devoted to the recent French additions to our knowledge of the physiology of the nervous system. In this department we freely admit that France has done more than England or Germany in consequence of the young physiologists of that country taking so genially to vivisection. While the names of Sir Charles Bell, Marshall Hall, Todd, and Bowman, and those of Muller, Stilling, and Schiff, will always be recognised in the history of this department of physiology, there can be no question that a large amount of our accurate knowledge of the anatomy and physiology of the nervous system is due to the experimental investigations of Legallois, Magendie, Flourens, Longet, Claude Bernard, Brown-Séquard, Chaveau, and Vulpian. We may incidentally remark that the very important discovery made by MM. Vulpian and Philippeaux (and described in one of our articles on Vulpian's lectures) that the difference of function of a nerve depends in no degree whatever on its anatomical structure, but solely on its connexion with sensory or motor organs, although denied by MM. Gluge and Thiernesse, who maintain that sensory fibres cannot be converted into motor fibres, is fully accepted by the reporter. Dr. Bernard, however, in his report, does not fully endorse the views of Vulpian and Philippeaux. The experiment consisted in establishing a union between the lingual nerve (the sensory nerve of the tongue) and the hypoglossal (the motor nerve of that organ), so that the upper part of the lingual shall be continuous with the lower part of the hypoglossal nerve, and is regarded as affording evidence that the functions of these nerves may be interchanged. "Even admitting," says Dr. Bernard, "that the lingual sensory nerve may have the power of exciting the hypoglossal nerve, the reciprocal result has never been obtained. When we pinch the exposed hypoglossal below the cicatrix, we excite movements in the corresponding part of the tongue, but obtain no evidence that the animal suffers pain; so that while the irritated hypoglossal distinctly propagates its influence to the periphery, it remains very doubtful whether it transmits that influence centrically, or,

at all events, that it excites the lingual nerve. Moreover, after fusion has been effected between the two nerves, the tongue does not cease to remain paralysed in so far as motion is concerned. Hence it is evident that *the lingual nerve has not replaced the hypoglossal.* If the voluntary movements of the tongue had been restored, then only could we admit that the nerves could exchange functions, and that a sensory nerve can be converted into a nerve of motion." (P. 32.) The subject is one of such extreme interest that we offer no apology for introducing this exposition of Dr. Bernard's views. There can, at all events, be no doubt that MM. Vulpian and Philippeaux have so far proved their case that we must admit that a sensory nerve is unquestionably capable of exhibiting the properties of a motor nerve.

The independent researches of our late distinguished countryman Mr. Newport and of M. Serres have shown that the central portion of the nervous system in the articulata possesses, like the roots of the spinal nerves in the vertebrata, distinct excito-motory and sensory fibres. M. Faivre has recently confirmed this view in a remarkable memoir containing an account of his experiments on the common whirligig water-beetle (*Dytiscus marginalis*), and published in the *Ann. des Sc. Nat.*, vol. i., 1864, in which he shows that sensibility especially resides in the inferior region of the ganglia, while their upper surface is the special seat of excitability. The recent investigations of a similar nature in relation to the difference of function in the different parts of the spinal cord, for which we are mainly indebted to Brown-Séquard and Vulpian, are next described, and the reporter expresses his regret, in which we heartily concur with him, that for some years past Dr. Brown-Séquard's Professional duties have interfered with the pursuit of those intricate and difficult investigations into the mysteries of the nervous system for which his early labours showed his remarkable aptness.(a)

He concludes his remarks on the nervous system with a few highly eulogistic remarks on Claude Bernard's "Lectures on the Physiology and Pathology of the Nervous System" (1858), and on Vulpian's "Lectures on the General and Comparative Physiology of the Nervous System" (1866). A section treating of muscular contractions is followed by one of great interest "On Instinct," which he regards as closely allied to reflex nervous action. As an illustration of the view that the actions of animals (at all events in some cases) can only be explained by the supposition that they possess not merely memory and the power of association of ideas, but also the aptitude for connecting one observation with another, of forming opinions, and of following out a line of reasoning, Milne-Edwards records the following anecdote:—A few years ago a young orang-outang was brought to the menagerie of the Paris Museum. It exhibited a great liking for society, and was especially attached to its keeper, who during the first day carried the young creature about in his arms, and laid it to rest in his own chamber. On the following morning, as he could not carry it about with him during his ordinary avocations, he kept it shut up in his room. For the first few days the poor animal spent its time in uttering cries of despair, in tearing its hair, and striking its head against the door. It then took to observing how its keeper contrived to escape every morning, and arranged its plans accordingly. The handle of the door-lock clearly had to be turned, and then the door would open. But the poor little beast was too short to reach the handle, and it proceeded to act as any reasoning child would have done under similar circumstances—it drew a chair from some distance to the door, mounted the chair, turned the handle, and escaped. This part of the work concludes with a very modestly written notice of the reporter's great work, entitled "Lectures on the Comparative Anatomy and Physiology of Man and Animals," the first volume of which appeared in 1852, and which has as yet only reached the ninth volume. We need only say of it that although its size and price will prevent it from having any great circulation in this country, it is a work of inestimable value to every real physiological inquirer.

The last part of this valuable report treats of various subjects pertaining to general zoology, such as the meaning of the word *species*, the variability of species, etc., in reference to which we will merely remark that Milne-Edwards is by no means a supporter of Darwin's views. He then proceeds to a section extending over more than fifty pages to consider "the tendencies of nature in the constitution of the animal kingdom," a subject on which he wrote very fully in an excellent little work entitled "Introduction à la Zoologie," published in 1853. The law of the division of physiological labour is here very clearly laid down and aptly illustrated by examples, as also are various other laws or tendencies, and the reporter sums up with the conclusion that the great differences introduced by nature into the constitution of animals seem to depend essentially on the existence of a certain number of general plans or distinct types, on the perfecting to different degrees, either collectively or in part, of each of these plans, and on the adaptation of each type to varied conditions of existence. Recent views on zoological classification are then somewhat briefly considered, and a reference is made to those of Isidore Geoffroy Saint-Hilaire and De Quatrefages, who add to the two great divisions of living organised beings a third—viz., the *human kingdom*—a classification which Milne-Edwards thinks that he may say "is not generally accepted in France." Considering the acrimonious charges of materialism that have been recently brought forward against many of the leading French physiologists—as, for instance, that a man and a steam-engine are equally entitled to be supposed to possess a soul—we cannot help expressing an opinion that there is a little irony in Milne-Edwards's remark. The volume concludes with a history of the valuable results obtained by deep-sea dredging.(b) Full honour is given to our distinguished countryman, the late Edward Forbes, for initiating bathymetric researches. From his dredgings in the Ægean Sea, which were not carried to a greater depth than 230 fathoms, he deduced the law that the number of animals living at the bottom of the sea decreases very rapidly as the depth increases, and that a limiting depth might soon be reached beyond which animal life could not exist. The later observations in other seas of Löven, Darwin, H. Goodsir, Wallich, and others, show that although Forbes's general views are correct, his assumed limits were too limited: for instance, the last-named observer, Wallich, brought up certain annelids and two amphipoda from a depth of 445 fathoms, and mentions cases of starfishes that lived at a still greater depth. But these researches are eclipsed by those of Alphonse Milne-Edwards, who has most unquestionably proved not only that corallines (Madrepores and Zoanthairia) and molluscs (both gasteropodous and acephalous) are capable of living in the Mediterranean at a depth of fully 1100 fathoms, but that they undergo development and grow rapidly at that depth. The fact that an animal so highly organised as a gasteropodous mollusc can exist and flourish under a pressure of more than 200 atmospheres, and in a medium into which the faintest trace of light can scarcely penetrate, is well worthy of record. The animals thus found by Alphonse Milne-Edwards were attached to a piece of injured electric telegraph cable which was fished up from a deep subaqueous valley between the Island of Sardinia and the coast of Algeria, in which it had been lying for about two years. Long-submerged telegraph cables in fruitful seas may in future produce still richer fruits.

We cannot resist the pleasure of quoting from the reporter's final peroration. After alluding to the probability that his work contains many omissions, in consequence of the short time allowed him, he adds that, however that may be, "it is not without a feeling of patriotic satisfaction that I have thus passed in review the labours recently accomplished by French zoologists. But, as a naturalist, it would have afforded me far more pleasure if, neglecting the distinction of country and of race, and caring only for the interests of science, I had been permitted to include in a single *coup d'œil* the services rendered by all who at the present time cultivate the same branch of human knowledge." If the reporter's modesty were not as great as his literary, zoological, and physiological knowledge is profound, he might have added that the general history which he now laments that he has not been permitted to write is, to all intents and purposes, being most ably written by himself in his splendid "Lectures on Comparative Anatomy and Physiology," now nearly completed.

Professor Claude Bernard's report on the recent progress of "General Physiology" in France seems to us to have been altogether uncalled for, inasmuch as almost all the subjects which it discussed are more fully considered by Milne-Edwards in the chapter of his report "On Works relating to the History of the Functions of the Animal Economy." Like everything that issues from Claude Bernard's pen, the report is pleasantly written, and will be of use to those who do not care to enter into the various zoological topics considered by Milne-Edwards. To his own countrymen it will possibly be the more acceptable

(a) Since this article was written we are happy to state that this eminent physiologist has been elected to fill one of the most important of the professorial chairs in Paris.

(b) It is almost unnecessary to remind our readers of the splendid results in relation to deep-sea life that have been obtained since the publication of Milne-Edwards's report.

of the two, while those who love France much, but scientific truth more, will prefer the report of Milne-Edwards. The following sentence, illustrating his excessive nationality, will explain our meaning. "M. Vulpian has thoroughly developed the arguments which prove that the discovery of the functions of the roots of the spinal nerves belongs to Magendie. I have read what he has written with great pleasure, both from my interest in the truth and for the glory of French physiology." (P. 158.)

FOREIGN AND PROVINCIAL CORRESPONDENCE.

FRANCE.

(*From our Surgical Correspondent.*)

PARIS, June 8.

THE question recently brought before the Imperial Society of Surgery as to the propriety of immediate amputation in comminuted fractures of the lower third of the leg, because of the frequent communication of the fracture with the tibio-tarsal articulation, or the exposure of the medullary canal, has, like many others, come to a close without the least result. But another subject, and one which will doubtless be lively discussed—that of treating constitutional syphilis by hypodermic injections of mercury—is to commence to-morrow. This will give to some of the members of the Society—M. Després, of the Lourcine Hospital, for instance, the bitter opponent of mercurial treatment in syphilis—again the opportunity to be heard on the subject. M. Després, though young and not a favourite, is by no means sparing in his arguments.

M. Liégeois has adopted this mode of treatment for syphilis at the Midi Hospital, and he has thus treated since January 15, 1868, up to December 1, 1868, 193 patients affected with syphilis. (The worst cases of secondary syphilis were chosen.) Of these 127 were cured, and 66 ameliorated. Of the 127 cured there were 6 relapses. The preparation used is corrosive sublimate, the dose per day 4 milligrammes, of which half is injected in the morning, half in the evening, making each injection 2 milligrames only. The part chosen for the injections is the back of the body. The average number of injections employed was 72—36 days of treatment. No baths, no cauterisation, in fact, no other treatment was resorted to.

These are certainly results which deserve attention. I have myself witnessed several times the injections practised, and I may state that the patients complained of but little pain. No abscesses or sloughs are produced—two cases excepted, in which the canula had not reached the subcutaneous cellular tissue—no salivation, no diarrhœa or digestive troubles, such as have been observed by Berkeley Hill, Lewin,(a) Bardeleben, Sigmund, Bamberger, etc., who have used larger doses of mercury.

Another, and very unlooked-for, result from these injections is the increase in weight of the patients while under treatment. The reverse is true when pills of (green) protiodide of mercury are administered. These same injections practised upon men in health cause a still larger gain in weight. Equal results are obtained in animals. M. Liégeois showed me two rabbits this morning which had been treated by injections of one milligramme daily for six weeks, causing an increase of nearly two kilogrammes in each. The urine of the patients under treatment, carefully analysed, was found notably augmented in all its proportions, urea excepted. The two great acts of the organism, assimilation and disassimilation, are therefore increased, and M. Liégeois concludes mercury in small doses is a tonic. The announcement is startling; let others verify the fact.

The interesting lectures of Brown-Séquard, which were to have lasted until his regular course commenced next winter, have been brought to a speedy and untimely close because the Faculty refuses to furnish the necessary material for experiments. The demand for animals was doubtless larger than our poor Faculty could afford to pay for.

The competition of the aspiring Surgeons for the four vacant places of "professeur-agrégé" at the school terminated on Friday last. The lucky four of the ten candidates who presented themselves are MM. Launelongue, Ledentu, Dubreuil, and Coetean.

(a) Lewin, of Berlin, who, if not the inaugurator, is certainly the one who has practised these injections upon a very large number of patients, injects a centigramme and even more of corrosive sublimate. The objection to these large doses, other than that of pain, salivation, abscesses, etc., is the greater chance of relapses, because they cure too quickly.

BIRMINGHAM.

JUNE 4.

THE working men's movement instituted for the enlargement of the Queen's Hospital, and which is so ably presided over by Mr. Sampson Gamgee, one of the Surgeons of the Queen's Hospital, is not quite as successful as its friends could wish. Money rolls in, certainly, but it is only driblets, and whether these, lumped together, will reach the prophetic sum named at the outset is very doubtful; but as "mony mickles mak' a muckle," we must not be surprised if the shillings and pence which are regularly recorded in the weekly newspaper yield in the end a good round sum. Whatever its chairman takes in hand he brings to a satisfactory and profitable conclusion. We therefore predict for this new venture of his a success as great as it deserves.

Referring to this Hospital, I think it should be recorded in letters of red ink that the authorities of it have thought fit to abolish the Midwifery department. This they have accordingly done, without showing the officers who have held the appointments of Surgeon-Accoucheurs for several years the slightest consideration beyond a bare resolution feebly expressive of thanks for their past services. This act of grace, however, was absolutely nullified by the remark which followed it—"that there was nothing personal intended by the closure of the department"—nevertheless, it deprived two officers of appointments to which they had been elected by the subscribers to the charity. In the case of one of them the election was a costly one and hotly contested: it resulted in sixty-eight votes being recorded for him, yet, by the wish and policy of a minority of the governors, he is, *nolens volens*, ousted from his position. On the face of it a great injustice has been committed, and the motives—and I understand that sinister motives are ascribed—which actuated those by whom the Midwifery department has been closed are perhaps better concealed than made public.

The Children's Hospital is a great success, and gains on public confidence. Not only have the governors of it built a roomy and substantial outdoor department to provide for increasing patients, but they are about quitting their old in-patient building, which is not large enough for their wants, and appropriating the Lying-in Hospital, whose doors have been closed, the patients now being attended at their own homes by experienced midwives, under the supervision of honorary Surgeons. This institution, although it will be some distance from the out-door department, is well adapted to the purposes for which it is required, being in a wide thoroughfare, in a purer atmosphere, and in a more healthy district of the town.

No reply has yet been received by the Guardians from the Poor-law Board in reference to their last communication in justification of their reduction of the Medical staff. From what I know, the parish officers are able to do the work required of them, and would be quite satisfied with their appointments if more money were added to their inadequate stipends; and I am led to understand that the more liberally disposed of the Guardians are inclined to increase the salaries of their Medical officers, provided the Poor-law Board sanction their present Medical arrangements.

The Contagious Diseases Act seems to have found favour with men of influence here. A meeting has been held at the residence of one of our influential *confrères* to consider the subject. A committee was formed, comprising many clergymen of the Church and Medical men. Sundry resolutions were passed, and steps taken to secure the extension of the Act to Birmingham. This committee has issued a pamphlet explanatory of the objects which they have in view, and of the wise measures of the Act which they wish to introduce into the provinces. I have heard an exception taken to this pamphlet, and it arose from the very indiscreet way in which it is circulated. It is left, uncovered, at the houses of gentlemen who the committee think will support the movement. Now, as its contents are not intended for the eye of servants, wives, or children, it would be more in accordance with our notions of propriety if an envelope concealed their loathsome truisms, and thereby secured them only for the intended recipient.

Nursing is engaging the attention of our Hospital officials, and the best way of educating nurses is being considered. To further so desirable an end, the wards of the General and Queen's Hospitals have been thrown open for their practice and instruction. We may therefore look forward to the organisation of a band of clean, sober, and well-trained nurses, competent to manage even the most anxious cases. Such, indeed, will be an acceptable boon to the sick poor in Infirmaries, where an attentive and gentle nurse is next in efficiency and

welcome to a kind and skilful doctor. Would that we had more nurses after the pattern of the staff which Miss Nightingale so ably raised! This movement for the training of nurses originated at the Queen's Hospital, under the auspices of Dr. Fleming, and it has found favour with all classes of the community.

There has been a death from chloroform in the General Hospital. The post-mortem examination showed that it resulted from fatty degeneration of the heart, but there were no symptoms previous to the operation indicating that the patient was the victim of this morbid condition.

The health of the town is excellent, the mortality averaging about 17 in the 1000.

GENERAL CORRESPONDENCE.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

LETTER FROM MR. HENRY LEE.

[To the Editor of the Medical Times and Gazette.]

SIR,—In olden time, when two distinct companies of Surgeons existed, one company called the Barbers of London, and the other the Surgeons of London, it was very fit and proper that his Majesty should will, ordain, constitute and declare, give and grant certain privileges to particular individual members of those companies. It was at that time his Majesty's further will and pleasure, that the individuals whom he had named should elect, choose, and appoint twenty-one persons to be the Court of *Assistants* of the said College. Of these assistants, ten were to be appointed examiners. His Majesty further willed that the masters, governors, and assistants should in July of each year choose out of the examiners one person to be principal master, and should choose the requisite number out of their own body to be examiners of the said College, and also choose out of the members of the College certain persons to supply the deficiency in the Court of Assistants. The examiners soon became the controllers of the College, and instead of being assistants they became the real governors. It was they who determined who should be admitted into the Council, and they naturally took care to admit those only who would conform to their principles. Nothing could work in a more vicious circle than things then did. The examiners elected the Council; the Council elected the examiners; a councillor might then, and may now, give the casting vote in his own favour as an examiner. The Council (practically under the control of the Board of Examiners) now had the exclusive appropriation of large sums of money. These sums were derived almost entirely from the junior members of the Profession, and yet they were allowed no voice either in the appropriation of these funds or in the management of the College.

Circumstances having so far changed from the time when our charters of incorporation were granted, a change was called for in the government of the College. Whenever any society or corporation shows that it has the elements of self-government, no length of time can elapse before it attains its freedom. The College of Surgeons has shown that it has that power, and has obtained the right to exercise it. Much has been accomplished, but more remains to be done; we are in a transition state. By far the greater number of our body as yet have no voice in the management of its affairs. If they prove themselves (as I doubt not for a moment that they will) capable of discussing and voting upon principle, independent of personal or private interests, they must ere long have their share in the management of the affairs of our College. I should be glad, even now, to see every subject of interest submitted, at periodical meetings, to the discussion of the Fellows and Members of the College, and whenever such a subject could be placed in a definite form, I think that the country Fellows should be allowed to vote upon it by proxy.

The privilege of voting has also its responsibilities. Any abuse of these presents a direct hindrance to self-government. This subject has been brought vividly before my mind in the mode of election of Councillors of the College. It appears to me evident that a gentleman who seeks the honour of a seat in the Council, and those who support him, should have the interests of the Profession alone in view. If, either directly or indirectly, they add to the burdens, already great, of that Profession, they so far do an injury to their Professional brethren. Now, those who have instituted the practice of canvassing at elections for the Council have evidently done this. They have instituted a very troublesome and distasteful ordeal, which they call upon all future candidates for a seat in the Council to go through. I wish, as far as I am able, to put it to the Profession whether this shall be continued.

In former years we have seen active young Fellows freely discussing the characters of their seniors, and canvassing within the walls of the College itself for some particular person, quite independent of any principle; and now we have a junior Fellow openly requesting even those who do not know him to vote for one of his colleagues in preference to another. It would be idle to think that any Fellow of the College must not see that what he does for one may be against another. Such services must be paid either in malt or in meal, or through some more refined medium; they can have nothing to do with the interests of the Profession. Indeed, any one who has time to spend either upon a personal canvass or upon repaying in kind those who canvass for him has necessarily less time to spend upon his own legitimate work, or upon the affairs of the College. It may be said that canvassing is allowed in other constituencies, and therefore it is proper in ours. The cases are not parallel. Other candidates come before people with different views and interests. We are a scientific society, and have common objects in view. The interest of our Profession is, or ought to be, one. Any person who breaks up that interest, or who unnecessarily excites divisions, is doing a real injury to the Profession, and perhaps to those who depend upon it.

Any one seeking to obtain an office in the College of Physicians by canvassing would, by so doing, render himself incapable of election, and the Fellows of the College of Surgeons should not hold a less dignified position.

Practically, the evil results of the system of canvassing are but too apparent.

We have seen members of Council, rather than engage in what they considered an unprofessional and a degrading contest, resign their seats; and it may be mentioned in passing that if all members of the Council had been true to the dignified position which they ought to hold, canvassing with its many vexatious heartburnings and bitter reminiscences would have been discountenanced long ago. Some of the most distinguished Fellows of the College have declined to be placed in nomination under the present system, and some, after they have been put in nomination, have declined to canvass or to allow others to canvass for them. There are men who do not seek a seat in the Council for any private advantage of their own, who would, if need be, forego, and who have foregone, the honour of a seat in the Council rather than purchase it at the expense of what they might consider any unfair advantage; and there are in the ranks of our Profession, according to the words of the old song, Fellows "forty good as they."

The future of the College is now fairly in the hands of the Fellows. The increase of the franchise will naturally depend upon the way in which it is used. If Fellows vote in accordance with some principle, independent of any private consideration, they lay the foundation of a good government for themselves and their successors. If, on the contrary, each one were to vote in accordance with some private end, it must be evident that we have not within ourselves the elements of good government. It would, under such circumstances, only increase the confusion of an election to extend the power of voting to greater numbers.

Something similar may be said with regard to the candidates. A candidate should represent certain principles; but if a candidate depend for support upon the private solicitation of his friends, he can represent no principle. He will be called upon by each class of his supporters to vote in a different way, and these supporters themselves may probably after a few years, when they find themselves placed in different circumstances, alter their opinions.

I trust that the Fellows will show in future that they have within themselves the power of self-government, and that they will exercise that power for the good of the Profession. This will be the surest, most legitimate, and most powerful mode of enfranchising their Professional brethren.

I am, &c. HENRY LEE.

9, Savile-row, June 7.

THE COLLEGE ELECTION.

LETTER FROM MR. JOHN GAY.

[To the Editor of the Medical Times and Gazette.]

SIR,—As you have done me the great favour to notice the fact of my being a candidate for a seat at the Council board of the Royal College of Surgeons at the ensuing election, may I be allowed so far to trespass on your columns as to explain the grounds upon which I venture to ask that honour?

At the election in July last I was very nearly successful, and I have every reason for attributing the support I obtained to the views which I then enunciated, and which, if adopted by the Council, would, I still maintain, very materially subserve and promote the interests of our College.

I think it would be to the advantage of the College that the Fellows and Members should be induced to take a more lively interest than they have as yet taken in the policy of its governing body, the more especially as that body is now, in theory at least, essentially representative; and this would, in my opinion, be in great measure brought about by the regular publication of its proceedings, and the disclosure that would thus be made of the sentiments of its individual members.

There should also be, I think, a remodelling of the Court of Examiners. This body should be chosen from the Fellows and Members at large, be distinct from the Council, and its members should hold office for five years, instead of ten, the period during which it is held according to the present regulations.

The Fellows living beyond a certain distance from the College should, I think, be allowed the option of voting in its elections by proxy.

I think, further, that there should be periodical meetings between the Council and the Fellows and Members of the College. Such meetings would have the effect of fostering an interchange of ideas and a spirit of good fellowship between these bodies, which would tend materially to impart strength to the one and confidence to the other.

In addition to these views, I should be prepared to urge on the Council some revision of the present system of Professional education, as well as of the tests by which the competency of a candidate for entering upon his public career is determined. The course of study required of students should, I think, include enlarged opportunities of becoming familiar with the actual practice of their Profession; for, without presuming to be authoritative upon so difficult a subject, I would suggest that no system of Medical education can answer its purpose unless it recognises as its basis, more distinctly than it has hitherto done, the principle that a sense of the need of knowledge is the most powerful incentive to its acquirement.

With the expression of these views as the grounds on which I beg again to solicit the honour of a seat at the Council board of our College, I am, &c. JOHN GAY.

10, Finsbury-place South, June 9.

CORRESPONDENCE BETWEEN MR. SOLLY AND MR. MORRIS.

Spalding, May 26, 1869.

Dear Sir,—Is it your intention, as a retiring member of the Council of the Royal College of Surgeons, to seek re-election in July next; and, if so, are you prepared to support the following reforms in the College, viz.—

1. The right of reporters to be at the meetings of the Council.
2. The removal of the remaining objectionable restrictions which prevent Fellows being members of the Council.
3. The power for Fellows to summon by requisition a meeting of Fellows and Members at the College for the purpose of discussing matters of public policy in connexion with the institution.
4. The election of a representative in the General Council by the Fellows and Members.
5. The selection of members of the Court of Examiners from amongst the Fellows and Members generally, and not exclusively from the Council.

Your reply, which is awaited with a considerable degree of anxiety, will be made public for the information of the Fellows and Members generally.

I remain, dear Sir,
Yours respectfully,
(Signed) EDWIN MORRIS.

6, Savile-row, May 27, 1869.

Dear Sir,—In reply to yours of yesterday, I must at once decline pledging myself, if re-elected on the Council of the College of Surgeons, to support any particular measures, however much I might agree to the spirit of them.

If my general conduct as a Surgeon, if what I have done for the advancement of anatomy, physiology, and the practice of Surgery, coupled with the fact that I have always been a reformer, will not secure my re-election, I must submit to the blow.

Nevertheless, I do feel very confident that the great body of Fellows will act justly, and that I must only ask every Fellow who thinks that I am deserving of the honour of re-election to attend the meeting on July 1.

Believe me to remain yours truly,
SAMUEL SOLLY,
Vice-President of the College.

CANVASSING BY F.R.C.S. FOR THE COUNCIL.

CORRESPONDENCE BETWEEN G. POLLOCK, ESQ., AND BERKELEY HILL, ESQ.

14, Weymouth-street, London, W., June, 1869.

DEAR SIR,—Mr. Erichsen will stand for election into the Council of the College of Surgeons on July 1; his friends are anxious, both on public grounds and from personal regard, that he should be elected.

His seniority among the Fellows and Professional position would give him a just expectation of being elected, were not exertions being made to secure the election of other candidates, and Mr. Erichsen may thus be passed by if his friends do not support him.

With regard to his political opinions, I am sure I need not inform you that Mr. Erichsen is anxious to open the management of the College to all the Fellows, to remodel the Court of Examiners, and to introduce voting by proxy.

Mr. Erichsen will put a full statement of his views into the Medical journals. I shall be very glad if you can be present at the election on July 1 at 2 p.m.

Very faithfully yours,
(Signed) BERKELEY HILL.

Geo. D. Pollock, Esq.

36, Grosvenor-street, W., June 7, 1869.

Dear Sir,—I beg to acknowledge the receipt of your letter, in which you ask me to be present at the College of Surgeons on July 1, that I may support Mr. Erichsen, one of the candidates for the Council.

Though personally unacquainted with you, your letter is of so much importance that I think it right, in the interests of the Council and of the Profession, to reply to it; and I trust you will consider all I say in reference to its contents as arising simply from a sincere wish to uphold our Professional status.

I greatly deplore the step you have taken—that you consider it requisite and right to canvass the Fellows of the College in behalf of Mr. Erichsen. Mr. Erichsen is well known to the Profession. If his character and position are not of sufficient worth to insure his election without the aid of canvassers seeking to seat him there, he should not sit in the Council. If his character and position are such as I take them to be, then it were better your letter had been left unwritten.

I look upon it as lamentable that any Surgeon of his position should be compelled to submit to a condition such as your letter would indicate as necessary to secure his election to the Council. The sooner it is put an end to, the better; and it is with some hope that canvassing for the Council may be for ever denounced and stopped, that I have taken advantage of your letter to put forward my views on this subject—views which, I am satisfied, are largely entertained by the leading Surgeons of the day. I think the whole proceeding wrong, unprofessional, and degrading.

Besides, I may observe that, in your writing to ask for my vote, you have entirely overlooked the fact that I am quite as able to judge as yourself whether Mr. Erichsen is the right man to take his seat in the Council. I have known him, professionally longer than you can have done, and I cannot help thinking that you are quite wrong in supposing one of Mr. Erichsen's position in the Profession requires the aid of your public solicitation of votes to secure his election.

I beg, in conclusion, to state that it is my intention to send this correspondence to the Medical journals for publication.

I am, dear Sir, yours faithfully,
To Berkeley Hill, Esq. GEORGE POLLOCK.

A TEST OF GOOD VENTILATION.—General Morin, on giving an account at the Académie des Sciences of the successful application of his ventilating apparatus in a large weaving factory employing 400 workpeople, and in which were lighted 400 jets of gas, observed that its advantage might be judged of from the fact that during October, November, and December, 1867, when the ventilation was defective, only 15,000 kilogrammes of bread were consumed, while during the same months of 1868, after it had been improved, 20,000 kilogrammes were required, being a gain of 25 per cent. for the health and vigour of the operatives.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 11, 1869.

Dr. BURROWS, F.R.S., President, in the Chair.

A PAPER, by Dr. HERMANN WEBER, was read on

THE TREATMENT OF PHTHISIS BY PROLONGED RESIDENCE IN ELEVATED REGIONS.

Dr. Weber premises that he uses the term "phthisis" to signify not only "tubercular phthisis," but all the different subacute and chronic inflammatory processes of the lungs usually leading to consumption, especially catarrhal pneumonia and its products: regarding, with Thomas Addison, "inflammation as the great instrument of destruction in every form of phthisis," and sharing, with some modification, the view of Buhl and other authors, that true tuberculosis is not a primary, but a secondary, disease—the result, not necessarily, of preceding inflammation, and especially of the cheesy transformation of the products of inflammation. He understands by "elevated regions" those localities where phthisis, owing principally to their elevation, does either not, or only rarely, occur amongst its inhabitants; and points out that the elevation necessary for producing a certain degree of immunity is not an absolute one, but varies in different latitudes, and seems to decrease with the removal from the equator towards the poles. He, however, does not believe that there is any fixed elevation of immunity for every degree of latitude; and is, further, not of opinion that the elevation in itself is the sole cause of immunity, but that it is materially assisted or counteracted by other climatic elements, as the situation of a place on table-land, or on the top or on the slope of a hill, or at the bottom of a valley; the aspect to the north or south; the configuration of the surrounding ground; the nearness of standing waters or marshy districts, and the elevation of the place above them; the habitual degree of clearness or mistiness of the atmosphere, its purity, or the degree of admixture of foreign elements, mechanical and organic; the geological structure of the soil, and all the circumstances influencing its degree of dampness or dryness, regarding which subject he specially points to the important results of Bowditch and Buchanan's researches. The author then expressed his astonishment that in spite of the works of Archibald Smith, Mühry, Hirsch, Jourdant, and others, there is still amongst Medical men a great disinclination to sending consumptive patients to high elevations; and he endeavours to prove that the usual objections are entirely unfounded—that cold is not injurious to delicate persons threatened with consumption, but, on the contrary, often beneficial; that it is not correct that in Alpine health resorts the great cold of the winter altogether prevents invalids being in the open air; that hæmoptysis is not more frequent, but more rare, in moderately high situations; that the principal morbid processes leading to consumption are counteracted; and that the tendency to acute affections (catarrhal and inflammatory) in consumptive conditions is likewise not increased, but diminished. Dr. Weber then gives a description of seventeen cases treated by prolonged residence on high-level health resorts, these being not selected, but all the cases which at one time or other came under his own observation, and of which he knows the final result. He refers to fourteen other patients, who are still residing in elevated regions, and regarding whom the final result is as yet unknown. He has, however, reason to think, from written reports, that the progress of these fourteen cases is favourable. The treatment adopted during the stay on high elevations was in most cases only dietetic and hygienic, except during intercurrent acute affections. The effect of the high-level plan may be described as decidedly satisfactory in fifteen out of seventeen cases, undecided in one, and unsatisfactory in another. None of the patients have died in high elevations. Two, in early stages subacute phthisis, had been, as shown by the post-mortem examination, quite cured by a prolonged stay in their native mountains, but were some years later, after their return into unhealthy localities and occupations, seized with fresh attacks, rapidly leading to death. Two other patients had been, to all appearance, likewise cured by residence in high regions, but were later, while living in low regions, again attacked by fresh pneumonic affections, with fatal termination. The remaining eleven cases may be regarded, up to this time at least, as cured; most of them had likewise fresh attacks or relapses, sooner or later, after having again settled in low elevations; but a second and third more prolonged stay on high ground led, as far as can be judged, to final cure, provided the prolonged exposure to unfavourable influences be avoided. Some of these patients had previously spent one or several winters in warmer, low-level health resorts (Egypt, Algiers, the Riviera), without having derived the same amount of benefit as they did on high ground, where they were more free from catarrhal and other intercurrent acute affections. Some had one or several attacks of hæmoptysis while in low elevations, but none while on high ground. Of all the thirty-one cases, including the fourteen still under treatment, only one had an attack of hæmoptysis while in high altitudes. The author does not regard it prudent to enter on a theory of the *modus operandi*. The agents are too numerous, and the physiological and chemical researches as to their influence on man and animals are insufficient. Thus, with regard to the rarefaction of the air, he alludes to three or four possibilities:—1. That in order to inhale the same quantity of oxygen as in low elevations, the mechanical respiratory action must be increased. 2. That, without this increase, the quantity of oxygen inhaled is diminished, and that thus oxidation may be retarded. 3. That, in spite of the diminution in the quantity of oxygen inhaled, the oxidation may remain the same, or become even increased by a greater "mobility of atoms," according to Drs. Frankland and Tyndall's experiments on combustion. Or 4. That a larger amount of ozone in the air of high elevations increases its oxidising power. Dr. Weber is inclined to attribute special importance to the dryness of the soil and air, to the presence of a large amount of ozone, and especially to the freeness of the air from foreign admixtures, mechanical, chemical, and organic, alluding to Pasteur's experiments on the air of different elevations. The fact that most consumptive invalids in the Swiss health resorts feel better during summer than during winter, is likewise noticed, and the probable explanation is sought for in the greater intensity of the beneficial influences just mentioned during winter—viz., dryness of soil and air, large amount of ozone, comparative absence of foreign admixtures in the air. The author mentions that some of the influences at work in the high-level health resorts exist also in some of the low-level, especially maritime, health resorts; and he does not wish to disparage the latter, which have their own advantages, and only requests the Fellows of the Society to give an impartial trial to the elevated health resorts in proper cases, and points to the probability of the great advantage which would arise to the consumptive soldiers of the Indian army, if they were to be sent for a sufficient length of time to the high regions of the Himalayas, instead of being invalided and sent home. He then shortly refers to the localities suitable for treatment of cases of incipient phthisis on high ground on the Cordilleras, in Switzerland, and in Germany, the number of which would soon be multiplied and provided with the necessary comforts, if the plan advocated were more frequently adopted. The following points are summed up for consideration:—1. That the elevated regions deserve greater attention in the management of consumptive tendencies and affections than they have hitherto received. 2. But they deserve this attention not only as summer, but even more so as winter, health resorts. 3. That without underrating the value of maritime and other low-level health resorts, the elevated localities offer great advantages in cases of early consumption and tendency to consumption, in the disposition to catarrhal pneumonia, and the results of this disease, particularly the so-called tubercular (cheesy) deposits, and tubercular (pneumonic) infiltrations. 4. That in such cases the occurrence of fresh catarrhal and other acute intercurrent affections appears to be less frequent in high-level than in low-level health resorts. 5. That the tendency to absorption and fibrous transformation or cicatrisation of deposits is promoted, and the tendency to the breaking down of tissues and formation of cavities is counteracted in elevated health resorts. 6. That the tendency to hæmoptysis is diminished, and not, as usually stated, increased in elevated localities. Dr. Weber concludes his paper with a tribute of gratitude to the late Dr. Archibald Smith, to whom he is indebted for much valuable information on Medical climatology, especially with regard to elevated regions.

Dr. SYMES THOMPSON said that the author had referred to various elevated health resorts, especially in Mexico and in Peru. He believed there were others in South Africa that were even more eligible. In the colony of Natal, the Drackenburg range attains a height of 10,000 feet, and is crowned by

table-land, on which there is free movement of air. The climate is dry, the sun brilliant, and the heat not excessive. He was acquainted with the cases of two phthisical patients who had gone to the Orange Free State, and in whom the results had been very satisfactory. He thought it would be hardly possible to determine, in any locality, the height at which phthisis did not exist; and he believed that the limit would have reference to the isothermal lines, as well as to the elevation. With reference to temperature, he rather feared the effect of extreme cold, and leaned towards a trial of elevated positions in the tropics. The long voyage to the Cape would often be extremely beneficial.

Dr. C. J. B. Williams expressed his sense of obligation to the author. He believed that the notion that cold was injurious to delicate people had taken deep root in the minds alike of the public and of the Profession, and would not easily be removed. Our daily experience was that cold is hurtful, and moderate warmth useful. Statistics not at present in existence were needed for the determination of the question that had been raised. It would be necessary, also, to make a marked distinction between prevention and cure, between phthisis *in esse* and phthisis *in posse*. Although phthisis may not prevail in elevated regions, that does not prove that removal to them will cure the disease. Phthisical patients shrink from cold instinctively; and although to enforce outdoor exercise is one of our best hygienic rules, the difficulty of enforcing it is that the phthisical feel that cold hurts them. He believed that great benefit might accrue in the way of prevention, but that in developed disease there would be much risk. Cold might easily be so applied as to derange the circulation, and to increase inflammatory action. In summer great benefit was often obtained by removal to a cooler region; but many patients went to Florida, or came to this country, from Canada, in order to avoid the rigour of the winter. The speaker concluded a lengthy address by a humorous description of the discomforts that might attend upon a winter residence in some of the places suggested.

Dr. Wilks observed that the chief question was whether the benefit might not be due to diminished barometric pressure, and, if so, he considered the fact to be of immense importance. At present the Profession knew nothing about the comparative effects of exertion or of quiescence of the lungs in retarding or accelerating phthisis. At present all our systems are founded on giving more oxygen. One man tells a patient to expand his lungs; a second, to keep them quiet; a third, to expand them in moderation. He had come to the conclusion, long ago suggested by Dr. Barlow, that disease was developed in proportion to the activity of the organ, and was arrested by keeping the lung quiet. If in an elevated position, where the barometric pressure was diminished, the patient used his lungs only half as much, and thence derived benefit, the fact would be a most important one in our knowledge, and would be worth all our remedies.

Dr. Drysdale asked how it was possible to account for the immunity from phthisis of the inhabitants of the western islands of Scotland and of Iceland, and suggested that it might be due to the absence of towns. If so, the immunity of the inhabitants of elevated regions might be of the same kind.

Dr. Weber replied to the observations of the several speakers.

CLINICAL SOCIETY.

Friday, May 14, 1869.

Dr. C. J. B. Williams in the Chair.

Dr. Sanderson related a case of Uncomplicated Diabetes Mellitus, in which he had employed the treatment recommended by Dr. Pavy at a previous meeting of the Society—that of administering opium for a long period in gradually increased doses. At the period of his admission into Hospital, the patient had suffered from diabetes for about seven months; he was emaciated and excessively weak. He was at first placed for six weeks on the usual diet of diabetes, without any medicine. During this period he improved in health and rapidly gained weight, although there was no diminution either of the daily quantity of urine or in the excretion of sugar. At the end of this period the opium treatment was commenced, the daily aggregate dose being gradually increased from one grain to twenty grains. No marked improvement was observed until as much as ten grains were taken in the twenty-four hours, but from that time the quantity of urine excreted daily rapidly diminished. The patient was shown. Notwithstanding that he is taking so large a quantity of opium, he shows no sign of narcotism. In confirmation of the recent observations of Dr. Foster it may be stated that the bodily temperature of this patient is always below the normal. The arterial tension, as estimated by the sphygmograph, is far below the average; it is increased, however, with the general improvement of the patient's health.

Dr. Anstie wished to know if any one had known a diabetic patient who had taken to opium-eating. He suspected the practice was common, but only knew of it in one instance. This patient took large quantities. He suffered from an intense feeling of cold, especially in the head. His diabetes had lasted nearly twenty years. He took nearer 100 grains than 50.

Dr. Williams knew one patient who took a drachm and a half of acetate of morphia for a dose. There were really no limits to the quantity which might be taken. He had given large doses of opium to rabbits without producing any effect.

Dr. Pavy referred to the case he had brought before the Society. He had continued to watch the case, and at the beginning of April there was no sugar, and the quantity of urine was normal. The treatment would not be always available. In one patient, now in Guy's Hospital, both morphia and opium had been given. The patient was middle-aged, and had been ill two or three years. Under restricted diet the urine had been reduced to six or seven pints, containing 5000 grains of sugar, in the twenty-four hours. He had used ozonic ether without any good result. Opium was given; the sugar disappeared, and the urine became natural. He took off the morphia; the urine remained healthy for a week, when the sugar began again. Opium was given again, and the sugar disappeared. There has been none for the last month. He had seven grains of opium three times a day. Bread had been given sparingly; still there was no sugar. Another patient treated with nepenthe was also better. Opium tells first on the quantity of urine, not so much on the sugar. Private patients have not done so well under its use as Hospital patients. He had frequently failed to obtain the influence of opium on the lower animals.

Dr. Williams's experience was much that of Dr. Pavy. The urine was improved by restricted diet and carbonate of ammonia; sometimes nothing else was required. Dr. Prout thought patients might eat brown bread and drink porter. He found that both surprisingly increased the quantity of urine and sugar.

Dr. Anstie asked if the patients were seen immediately after the dose, but they were only seen in the ordinary rounds.

Dr. Sanderson wanted to separate the effects of diet from those of opium. Diminution took place as soon as 12 grs. were taken. He never noticed the slightest effect on the pupils.

Dr. Gee communicated a series of important observations as to the properties of apomorphia, the new base recently obtained by Dr. Matthiessen by the prolonged action of strong hydrochloric acid on the chloride of morphia. An account of the chemical properties of this alkaloid, which differs from morphia as to composition by the elements of a molecule of water (the formula of morphia being $C_{17}H_{19}NO_3$, that of apomorphia $C_{17}H_{17}NO_2$) will be found in the *Proceedings* of the Royal Society for the present month. Dr. Gee's numerous observations show that apomorphia is a certain and promptly acting emetic, and that as such it possesses the following advantages over all others at present in use:—1. It acts in extremely small doses, one-tenth of a grain being sufficient when injected subcutaneously to produce vomiting in ten minutes, while by the mouth twice as much will act in twenty minutes. 2. It possesses no irritant properties, and can therefore be injected under the skin without the slightest inconvenience. 3. It acts with unfailing certainty. 4. The vomiting produced is not followed by nausea. When employed in larger doses it produces in animals symptoms referable to the nervous system, particularly epileptiform convulsions, preceded by great excitement and followed by muscular relaxation and death. In one case, that of a patient affected with chronic Bright's disease, the emetic action of one-tenth of a grain of apomorphia was succeeded by slight and very transient delirium.

Dr. Anstie pointed out that when morphia itself is rapidly absorbed it causes epilepsy in cats and dogs.

Dr. Gee said it was quite soluble enough for hypodermic use. There was no evidence of opiate effects.

Dr. Anstie related a case of Epilepsy of between eight and nine years' duration, which had been under his observation during nearly the whole of this period. The peculiarity of the case consisted in the fact that the paroxysm could always be arrested if quinine were administered directly on the occurrence of a sensation of numbness in the left hand, which sensa-

tion was always the precursor of an aura preceding the fit. So well aware is the patient of this circumstance that he invariably seeks advice on the very first occurrence of symptoms, and in this way has been able entirely to ward off the paroxysms for nearly five years, although he has had repeated premonitory symptoms. The quantity of quinine required to produce this effect is remarkably small. One or two doses of two grains each have often entirely arrested the fit. It should be stated that the paroxysms, when left to themselves, are of a true epileptic character, attended with complete unconsciousness and biting the tongue. At the time of his first application for advice, his intellectual faculties were impaired, but the total freedom from fits has resulted in improvement of his mental condition. Dr. Anstie pointed out that the therapeutical history of the case no doubt suggested a suspicion of malarious origin of the disease, which was strengthened by the fact that the first fits occurred at a time when the patient was a sailor off the coast of China. There were, however, no other evidences in confirmation of this view. There was no neuralgia.

Dr. Clapton had for the last three years treated all his patients so at St. Thomas's Hospital. He gave twenty grains as a dose when the aura was perceived. In most cases there was no chance of this; but in those cases where it was possible he advised the patients to keep a dose constantly in their pockets. In almost all, the effect seems to be wonderful. He would advise the use of the remedy in tetanus by way of trial. He had treated about fifty or sixty cases so.

Dr. Greenhow asked if they were benefited as to the frequency of these attacks. He had seen two cases of epilepsy clearly malarial in their origin. Bromide of potassium clearly affects the frequency of the fits.

Dr. Clapton had never given the quinine alone. There was always some other treatment; but he did not think this would modify the result.

Dr. Williams had under his care an old Indian who had suffered much from jungle fever; latterly he had become epileptic. He gave the bromide of potassium, and there were no attacks for eighteen months, but he had suffered from symptoms of fever.

Dr. Anstie suggested the value of the subcutaneous injection of quinine in such cases as those mentioned by Dr. Clapton.

Dr. Fagge said he had taken quinine in wine without any acid. It easily and readily acted.

MEDICAL SOCIETY OF LONDON.

Monday, April 19.

The paper which Dr. Routh read before a very full meeting of the Medical Society consisted chiefly of an elaborate series of statistical tables, deduced from the returns of the United Kingdom, America, and most Continental countries. An immense amount of labour must have been expended on their compilation. It appeared from them that hereditary nobility, great wealth, living in towns, agricultural occupations, scanty and vitiated food, consanguinity—which word, by the bye, was repeatedly pronounced consanguin*ui*ty by one of the subsequent speakers—and preventive habits, are the circumstances which influence the prevalence of comparatively unfruitful marriages. On the last point we understood Dr. Routh to state that the means adopted are generally in France such as to prevent conception, in America to procure abortion, and that in England infanticide is the prevailing method of restraining inconvenient increase of the population. If such be the gradations of the scale, we have really descended—as Mr. Huxley would remark—in a direction the reverse of that indicated by the ladder of Jacob. The statistical nature of the paper appeared rather to take the Society by surprise, and precluded the variety of discussion which might have followed had its nature been more discursive.

Dr. Chapman, although no advocate of Malthusian doctrines, protested against the introduction of an argument founded upon the command to "increase and multiply," as recorded in the Old Testament, into the discussion of a question which should be decided on purely scientific grounds. He would prefer to oppose all preventive habits on the grounds of reason and modern science.

Mr. Sansom dissented from this, being of opinion that the religious aspect of the question is indissolubly connected with the consideration of the whole subject.

Dr. Chapman also expressed the opinion, not very complimentary to that amiable individual, Paterfamilias, that the fruitfulness of marriages was, as a general rule, inversely proportional to the individuality of the parents—that is, that the higher their intellectual faculties and mental vigour the smaller will be the number of the family.

Dr. Webster made some interesting remarks on the favourable effect of change of climate and scene in cases of sterility, as also in causing in some instances the advent of a second family after considerable intervals.

Another speaker, apparently a French gentleman, confirmed the statement of Dr. Routh that the population of France, according to the latest and most accurate returns, is actually stationary, the apparent increase in numbers being really due not to the predominance of births over deaths, but to the increased longevity of the population. This gentleman also remarked that it was an indication of an important change in the state of public feeling that many questions, such as the present and the extension of the Contagious Diseases Act, should now be openly and freely discussed in a manner which five and twenty years ago would not have been tolerated. He referred particularly to an article in a contemporary in which the subject of unfruitful marriages has recently been treated with great freedom of expression.

Dr. Routh, in his reply, stated that, as to "preventive habits," he had not, as an individual, dared to treat the matter as its importance demands, but was quite willing, associated with two or three other gentlemen, to take it up and discuss it in all its details under the protection of the Society.

WESTERN MEDICAL AND SURGICAL SOCIETY.

Friday, April 2.

J. R. Lane, Esq., President, in the Chair.

The President related a case of a female patient, aged 42, with Gangrene of the Leg, supposed to be caused by embolism of the popliteal artery, in which he had amputated the limb at the knee-joint in St. Mary's Hospital. Six weeks previous to her admission to the Hospital, suffering from symptoms of cardiac inflammation, she suddenly lost the use of her left leg, which became at the same time cold and numb. No pulse could be felt in either the anterior or posterior tibial arteries, but it was distinct in the femoral in the middle of the thigh. Common sensibility and motor power were soon completely lost in the foot and lower two-thirds of the leg. The progress of the case was such as would be caused by sudden arrest of arterial supply. The foot and leg gradually dried up, and assumed the dark mahogany colour characteristic of dry gangrene, and at the end of about six weeks a distinct line of demarcation was established about four inches below the patella. Ulceration took place at this line, and was attended with a very offensive discharge, for the muscles of the calf were not dried up like the rest of the limb, but were in a soft putrefactive condition. Under these circumstances, as these putrid exhalations were evidently acting injuriously on the already depressed vital powers, and as the cardiac symptoms had subsided, it was thought advisable to amputate. This was done at the knee-joint with a long anterior skin flap and a shorter posterior one from the muscles of the calf. The cartilage on the condyles of the femur was not interfered with. The stump was dressed with carbolic acid paste and wrapped in cotton-wool. The patient seemed at first relieved, but sloughing of the flaps set in, which, extending to the thigh, led to a fatal result two days after the operation. The most probable explanation of the phenomena observed seemed to be that during the progress of the cardiac inflammation some fibrinous concretion had become detached, and had been arrested at the bifurcation of the popliteal artery. The suddenness of the stoppage of the circulation in the limb precluded the idea that it was due to inflammation in the artery itself, nor were any symptoms of such a condition at any time observed. The disorganised state of the parts when the limb was removed, however, rendered it impossible to ascertain precisely what had occurred. At the post-mortem examination the mitral valves were found considerably thickened by fibrinous deposit, and on one of the flaps was a roughened surface, which presented an appearance as if a fibrinous vegetation had been detached from that spot.

Dr. Martyn then related the sequel of a case of Femoral Hernia operated upon four years ago.

Dr. Baines read a case of a patient who, six weeks after her

confinement, was seized with severe constitutional symptoms with great pain in the right leg, which became contracted and bent over the other.

Dr. Martyn then mentioned a case of Bleeding from the Right Ear and Wound of the Jaw, the result of an accident. It was produced by a fall from a horse, and the patient, though stunned at the time, was able to walk with assistance. He was treated upon the supposition of deeper mischief to the skull, but after having some bleeding from the ear for two or three days he perfectly recovered. The author thought the bleeding depended upon the articular extremity of the jaw having been forced upon the wall of the meatus of the ear.

PRESTON MEDICAL SOCIETY.

Tuesday, May 4, 1869.

Dr. Haldan, President, in the Chair.

The monthly meeting was held on Tuesday, May 4, at 8 p.m. There were sixteen members present.

Dr. Arminson exhibited a specimen of Rupture of Intestine from Muscular Exertion. J. C., aged 35, whilst making an effort, in conjunction with others, to lift a large mass of iron, felt a sudden pain in his abdomen, as though something had given way. He became collapsed, was assisted home, where he found him suffering from all the usual symptoms of laceration or rupture of some internal viscus. He sank in about thirty hours. He was a fine muscular man, and no history could be obtained of any previous illness with the exception that when young he had to act as nurse to his parents, etc., during an attack of fever, he escaping with slight ailment and little, if any, diarrhœa. Post-mortem showed, besides the ordinary appearances of peritonitis, the lower end of the jejunum marked at intervals of one or two inches with oval smooth diaphanous patches devoid of mucous membrane, as though there had been at some time (which is probably the case) ulceration. The patches appeared to consist only of the muscular and peritoneal coats of the intestine. Some occupied the whole circumference, or nearly so, others only a part of the intestine, their long diameter being transverse to that of the intestine. In one of these cicatrices there was a small rent about two-thirds of an inch in length which had allowed the contents of the bowel to pass into the peritoneal cavity, and so led to fatal results.

Dr. Moore read a paper on the Treatment of Pneumonia, condemning, as a rule, the heroic remedies of our forefathers —bleeding, tartar emetic—and, from his own experience, adopting the sustaining system of Dr. Hughes Bennett. An interesting discussion followed, in which the majority of those present took part. His views were, as a rule, agreed with, except that the too general use of alcohol was condemned.

ARMY MEDICO-CHIRURGICAL SOCIETY OF PORTSMOUTH.

Wednesday, May 5.

Deputy-Inspector General Dr. C. A. Gordon, C.B., in the Chair.

Papers were read by Assistant-Surgeons Park and Murray, of the Royal Artillery, on a severe form of Fever in the persons of soldiers quartered at Hilsea.(a)

The Honorary Secretary read an account by Assistant-Surgeon Wales, R.H.A., at Dorchester, of a case of Inflammation of the Knee-joint, and another of a form of cholera, both believed to have been occasioned by foul emanations.

The Chairman, in submitting to the Society a communication he had received from the President of the Metropolitan Association of Medical Officers of Health, on the subject of "Contamination of Potable Water by Sewage," briefly pointed out the present position of the question, which resolves itself into two divisions—viz., whether rivers fouled by sewage and manufacturing refuse have or have not a self-purifying power; and whether the nitrogenous compounds of river and well waters must necessarily have a previous sewage or manure origin. The importance of the general question in regard to its bearing upon public health is so great and so apparent, that he would propose that it be taken up at the meeting of the Society to be held in June, and trusted that on that occasion some of the members and other gentlemen present would favour the Society with the results of their observations.

Assistant-Surgeon O'Leary (Hon. Sec.) read a paper by Surgeon Lamprey, 67th Regiment, on the Sources of Contamination of Waters in China, and more especially at Shanghai, where those of the Soochow Creek are rendered constantly foul by the products of decomposition of the remains of human bodies that are "buried" at intervals and in all directions around the city, as well as by the constant flow of sewage from that city.

Votes of thanks were proposed, seconded, and carried unanimously, to the Director-General, and to Surgeon-Major Sinclair, 33rd Regiment, for donations of works they had been pleased to make to the Society.

The following list was read of papers to be brought before the Society—namely, 1. On Diseases of the Heart in the Royal Navy, by Dr. Robertson, R.M.A. 2. On the Vapour Bath, by Surgeon Lamprey, 67th Regiment. 3. On British Medicinal Plants, by Dr. Tate, R.A. 4. On the Useful Plants of Britain, by the same. 5. On the Advances made in Surgery during the past Twenty Years, by Assistant-Surgeon Murray, R.A. 6. On the Operation of the Contagious Diseases Act in Portsmouth, by Dr. Evans, of the Civil Hospital, Landport. 7. On some Fossils found in the Isle of Wight, by Assistant-Surgeon Maunsell, R.A.

(a) See the Hospital Reports.

OBITUARY.

MATTHEW STOVELL, M.D., F.R.C.P., C.S.I.

We regret to announce the death of this highly distinguished member of our Profession, which took place on May 8 at the residence of his brother, Belsize-park. Dr. Stovell received his professional education at St George's Hospital during the years 1822 to 1826. He passed the Apothecaries' Hall in 1827, gaining that year the Botanical Prize, and also passed the Royal College of Surgeons in 1828. He left England in October of that year having been appointed Assistant-Surgeon in the East India Company's service. He returned to England in 1858, and obtained the degree of M.D. in the University of Aberdeen in April, 1859. He was admitted a Member of the Royal College of Physicians in 1859, and elected a Fellow of the same in 1863. He retired from the service in 1866, and was gazetted a Companion of the Star of India on September 17, 1867. The following is an extract from the *Bombay Review* of January 19, 1867 :—

"The Government Gazette of last Thursday, in announcing the retirement of Dr. Stovell, Principal Inspector-General of Medical Department, from the public service on the pension of his rank (£900 a year), does him (we are happy to congratulate Government) that justice which he ought long since to have received at its hands. Dr. Stovell (say the Government records) has done good service to the State for thirty-eight years. His skill and good management as Surgeon to the European General Hospital for a space of ten years are well known in Bombay. His work during that period as Secretary to the Board of Education was highly esteemed by its members. His service in Persia as Principal Medical Officer of the 1st division of the force, under Sir James Outram, received honourable mention by the Governor-General. He subsequently held the office of Deputy Inspector-General of Hospitals in the Poona division of the army during a space of four years, and for the last five years, as Principal Inspector-General, he has effectively superintended the Medical Department of the Presidency (Bombay), and usefully advised the Government in all matters of Medical administration. His Excellency the Governor in Council will specially represent Dr. Stovell's services to her Majesty's Government."

Dr. Stovell was one of those men who shed their best lustre on a public service, in whom the official is always lost in the high-minded Englishman, and no member of the Bombay Medical Service ever bore a brighter name than he has "in Christian service and true chivalry."

He did not enjoy his *otium* long, having during the last six months suffered from repeated attacks of epilepsy, in one of which, whilst at Nice the early part of this year, he fractured the right humerus. He had two severe attacks after his return to England, and died during the second on May 8, aged 62.

NEW INVENTIONS.

SIR J. MURRAY'S FLUID MAGNESIA.

This old and well-known preparation has recently been brought somewhat prominently before the public, and we have reason to believe that its manufacture has at the same time improved. There can be no doubt of the efficacy of the fluid magnesia, and it is probably the most agreeable form in which magnesia can be taken. The great difficulty in its preparation is the securing a perfectly pure and tasteless carbonic acid gas, and in this Sir J. Murray's manufacturers would appear to have tolerably well succeeded. The next thing is that the solution shall not contain too much magnesia; either the excess is precipitated, or too much carbonic acid must be added, converting the preparation into an aerated one, and, as no man uses a bottle straightway, the magnesia would, with exposure, be thrown down. At one time too much magnesia was introduced into this preparation, but now the happy medium would seem to have been more exactly attained. On opening the bottle there is a slight escape of gas, and after exposure a slight pellicle appears on the surface, but nothing very material. The preparation contains about six grains of bicarbonate of magnesia to the ounce, and will be found an efficient and agreeable remedy.

MEDICAL NEWS.

Royal College of Surgeons.—The following Members of the College having undergone the necessary examinations for the Fellowship on May 29 and 31, and June 1, were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and at a meeting of the Council on the 10th inst. were admitted Fellows of the College:—

Aveling, Charles Taylor, M.B. Lond. and L.S.A., Homerton, diploma of Membership dated May 23, 1865, student of St. Thomas's Hospital.
Beck, Marcus, M.B. Lond., Isleworth, July 26, 1865, of University College.
Bradley, Samuel Messenger, L.S.A., Manchester, June 10, 1862, of the Manchester School.
Bush, John Dearden, L.S.A., Hanover-stare, May 10, 1866, of St. Bartholomew's Hospital.
Coates, Matthew, L.S.A., Wellington-road, St. John's-wood, January 14, 1859, of Bristol and Paris.
Fuller, Charles Chinner, L.S.A., Albany-street, Regent's-park, February 6, 1857, of University College.
Jones, George Thomas, L.S.A., Clarendon-road, Watford, July 31, 1849, of University College.
Michell, Thomas, M.B. Lond. and L.S.A., Redruth, December 6, 1859, of the London Hospital.
Robson, Frederick Abercrombie Hope, M.D. Brussels and L.S.A., Great Marlborough-street, June 27, 1856, of University College.
Savage, Thomas, M.D. St. Andrews and L.S.A., Bordsley, Birmingham, November 15, 1860, of the Birmingham School.
Sims, Francis Manley Boldero, L.R.C.P. Lond., Down-street, Piccadilly, November 16, 1865, of St. George's Hospital.
Tay, Waren, L.S.A., King-street, Finsbury-square, April 25, 1866, of the London Hospital.
Walker, George Edward, L.S.A., Downshire-hill, April 23, 1863, of University College.
Winkfield, Alfred, L.S.A., Radcliffe Infirmary, Oxford, December 2, 1859, of St. Bartholomew's Hospital.
Woodcock, John Rostron, L.S.A., Holcombe, Manchester, July 28, 1864, of the Manchester School.
Wright, Robert Temple, M.D. Edin., Royal Victoria Hospital, Netley, April 27, 1866, of King's College and Edinburgh.

It is stated that all the candidates who presented themselves for the Pass Examination were successful, including Mr. Edwin Raynes, of University College, a Member April 21, 1868, who will be admitted to the Fellowship when qualified in Medicine.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, June 3, 1869:—

Kennedy, Edward, Manchester.
Morris, John, Cliffe, Lewes.

The following gentleman also, on the same day, passed his First Examination:—

Bayliffe, Alworth Merewether, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Bell, J. Albert, M.R.C.S., L.S.A. (late House-Surgeon).—Resident Accoucheur to St. Thomas's Hospital.

Haroyman, Charles E., M.R.C.S., L.S.A.,—House-Surgeon to St. Thomas's Hospital.

Pollard, Frederick, L.R.C.P., M.R.C.S.—House-Surgeon to St. Thomas's Hospital.

Roberts, Frederick T., M.B., B.Sc.—Demonstrator of Anatomy at University College, London.

BIRTHS.

Archer.—On May 28, at King's Lynn, the wife of Edmond Archer, M.D., Physician to the West Norfolk Hospital, of a son.

Bogg.—On June 2, at Rose-villa, New Barnet, the wife of E. Beverley Bogg, M.D., R.N., prematurely of a son, stillborn.

Cheadle.—On June 4, at 2, Hyde-park-place, the wife of W. B. Cheadle, M.D., of a son.

Elin.—On June 1, at Hertford, the wife of George Elin, M.D., of a son.

Lees.—On May 29, at 112, Walworth-road, the wife of Dr. J. Lees, of a son.

Smith.—On June 5, at Bramcote, Notts, the wife of F. C. Smith, Esq., M.P., of a daughter.

MARRIAGES.

Axford—Niblett.—On June 3, at St. Stephen's, Paddington, W. H. Axford, M.B., of Bridgwater, Somerset, to Amelia Eliza Maria, daughter of the late Robert Berry Niblett, Esq., of Lonsdale House, Dorking.

Ballantyne—Sherman.—On June 3, at St. John's Church, Angell-park, Brixton, Alexander Ballantyne, M.D., Dalkeith, N.B., to Maria Orford Sherman, only daughter of the late Henry Sherman, Esq., of Cape Town, South Africa.

Bensley—Sheffield.—On June 3, at St. Marylebone Church, Edwin Clement Bensley, F.R.C.S., H.M.'s Indian Army, to Catherine, youngest daughter of Henry Sheffield, Esq., of Avenue-road, Regent's-park.

Brend—Charles.—On June 3, at Clapham Presbyterian Church, William Brend, M.R.C.S., etc., Kensington, to Margaret, only daughter of the late John Charles, Esq., of Champion-park, Denmark-hill.

Bridges—Hadwen.—On June 1, at St. Bartholomew's Church, Ripponden, John Henry Bridges, M.D., Halifax, to Mary Alice, eldest daughter of G. B. Hadwen, Esq., of Keybroyd, near Halifax.

Caddick—Armstrong.—On June 8, at Holy Trinity Church, Milton-next-Gravesend, Alfred Caddick, of West Bromwich, to Anne Jessie, second daughter of John Armstrong, M.D., J.P., of Gravesend.

Chapman—Ponsonby.—On June 2, at St. Mary's, Walton-on-the-Hill, Lancashire, John Baines Chapman, eldest son of the late Dr. Chapman, of Albemarle-street, London, to Annie, second daughter of Thomas Ponsonby, Esq., of Regent-street, London.

Griffiths—Sharp.—On June 3, at St. James's Church, Bristol, Lemuel Matthews Griffiths, M.R.C.S.E., of 9, Dowry-parade, Bristol, to Anne Susannah, younger daughter of G. H. Sharp, Esq., of Somerset-street, Bristol. No cards.

Heelas—Duncan.—On June 3, at Aberdeen, Martin L. Heelas, M.R.C.S.E., Fellows-road, London, to Mary Rose, youngest daughter of the late William Duncan, merchant, Aberdeen.

Locking—Hanks.—On June 2, at St. Stephen's Church, Hull, George H. Locking, Esq., of Leeds, to Sarah, second daughter of James Hanks, M.D., Snaith.

Macdonald—Jotham.—On June 1, at St. George's Church, Kidderminster, John Macdonald, of Lincoln, L.R.C.S. and L.R.C.P. Edin., to Louisa Harvey, third daughter of G. W. Jotham, M.R.C.S. and L.S.A., Kidderminster.

Moyles—Cave-Browne-Cave.—On June 1, at St. John's Church, Harborne, Birmingham, Thomas Moyles, M.D., of Birmingham, to Isabella Louisa, third daughter of the late Thos. Cave-Browne-Cave, Esq., and granddaughter of the late Sir William Cave-Browne-Cave, Bart., of Stretton-en-le-Field, Leicestershire.

Shaw—Kellock.—On June 1, at Thornhill, Dumfriesshire, N.B., by the Rev. David Black, Virginhall, Robert Shaw, M.B. and C.M., to Margaret, daughter of the late James Hunter Kellock, Esq.

Stainthorpe—Pattinson.—On May 19, at Hexham Abbey Church, Thos. Stainthorpe, M.D., M.R.C.S. Eng., etc., to Elizabeth, only daughter of the late George Pattinson, Esq., all of Hexham.

Townsend—Alexander.—On June 3, at Holy Trinity Church, Southwark, Henry, third son of Charles Townsend, Hatfield, Herts, to Mary Anne (Poppie), second daughter of C. Linton Alexander, F.R.C.S., Great Dover-street.

Ward—Lambert.—On June 1, at Christ Church, Turnham-green, Albert Bird, third son of Dr. Ward, of Blyth, Northumberland, to Louisa Emma, eldest daughter of Mr. Thomas Lambert, of Sutton Lodge, Turnham-green.

Whitmarsh—Blundell.—On June 9, at St. George's, Hanover-square, William Michael Whitmarsh, M.D., of Hounslow, W., second son of W. B. Whitmarsh, Coroner for Wilts, to Harriett Jewell Blundell, daughter of the late John Blundell, jun., Esq., of Timsbury, Hants. No cards.

Willey—Garland.—On June 1, at St. Thomas's, Winchester, Henry Willey, M.B., etc., of Heathfield, Bromley, Kent, to Edith, second daughter of the Rev. Arthur G. Garland, of Winchester.

DEATHS.

Hill, Ninian, M.D., at Levanne House, Renfrewshire, N.B., on May 30.

Humpage, John, M.R.C.S.L., late of Stroud, Gloucestershire, at Milton-next-Gravesend, on June 3, aged 87.

Greville, Richard, M.R.C.S., at All Saints' Parsonage, Clevedon, on June 4, in the 81st year of his age.

Kent, Octavius Jackson, Surgeon, at Molesey House, Eastbourne, on June 2, aged 33.

Key, David, Surgeon, of the Oval, Brixton, Surrey, at his brother's house, Coldharbour-lane, on June 7, aged 72.

McLellan, William E. M., M.D., son of the late Murdoch McLellan, Barra, at Dalrigh Cottage, Oban, N.B., on May 31, aged 30.

Ogden, Jas., M.D., M.R.C.P., at Ardwick-villa, Ardwick, Manchester on June 1, aged 76.

SMITH, SHIRLEY WELSH ELIZABETH, relict of the late William Smith, F.R.C.S., formerly of Lymington, Hants, at Melbourne House, Swansea, Wales, on June 4.

TOMKIN, ELEANOR, relict of the late T. Tomkin, M.D., at Witham, Essex, on May 28, aged 76.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BIRKENHEAD BOROUGH HOSPITAL.—Assistant House-Surgeon; must have at least one legal qualification. Applications and testimonials to the Chairman of the Weekly Board on or before the 21st inst.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon; must be a Member of one of the Colleges of Surgeons of England or Ireland. Applications and testimonials to the Chairman of the Medical Committee on or before July 3. Election on July 13.

BURTON-ON-TRENT.—House-Surgeon for an Infirmary just completed. Candidates must be duly qualified. Applications and testimonials to the Hon. Sec., J. C. Grinling, Esq., Burton-on-Trent, on or before June 15.

KINGTON UNION.—Medical Officer for the New Radnor District; candidates must be duly qualified. Applications and testimonials to A. Temple, Clerk to the Guardians, on or before July 2. Election on the 3rd.

LINCOLN COUNTY HOSPITAL.—Physician; must be F. or M.R.C.P. Lond. or Edin., or be F.K.Q.C.P., not practising pharmacy. Applications and testimonials to the Secretary on or before July 5. Election on July 8.

NEWCASTLE-UPON-TYNE INFIRMARY.—Senior House-Surgeon and Junior House-Surgeon. The Senior House-Surgeon must have both Medical and Surgical qualifications. The Junior House-Surgeon must be duly registered and have one qualification. Applications and testimonials to the Secretary on or before June 22. Election on July 1.

NEWTON ABBOT UNION.—Medical Officer and Public Vaccinator; must be legally qualified. Applications and testimonials to John Alsop, Clerk, on or before June 15. Election on the 16th, when personal attendance will be required.

NORTH RIDING ASYLUM, CLIFTON, YORK.—Assistant Medical Officer. Applications and testimonials to Dr. Christie, Medical Superintendent.

NORTHUMBERLAND COUNTY PAUPER LUNATIC ASYLUM.—Assistant-Surgeon; must be registered, and be unmarried, and between 25 and 40 years of age. Applications and testimonials to the Medical Superintendent, Asylum, Morpeth, on or before June 14. Election on June 21.

ST. GEORGE, HANOVER-SQUARE, DISPENSARY, 57, MOUNT-STREET.—Physician; must be M.R.C.P.L. Applications and testimonials to the Hon. Sec., on or before June 28. The election will take place on the next day at 5 o'clock p.m., when personal attendance will be required.

SHEFFIELD GENERAL INFIRMARY.—House-Surgeon's Assistant; must be M.R.C.S. or a Licentiate of the Faculty of Physicians and Surgeons of Glasgow, and L.S.A. Applications and testimonials to the Secretary on or before June 19. Election on June 25.

SPALDING UNION.—Resident Medical Officer for the Moulton District. Candidates must possess the qualifications prescribed by the orders of the Poor-law Board. Applications and testimonials to A. Maples, Clerk to the Guardians, Spalding, on or before June 21.

TOTTENHAM TRAINING HOSPITAL.—House-Surgeon; must be legally qualified. Applications and testimonials to the Director, Dr. Laseron.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Dewsbury Union.—Mr. W. H. Thornton has resigned the Dewsbury District; area 1335; population 18,148; salary £55 per annum.

Torrington Union.—Mr. William Risdon has resigned the Fourth District; area 11,927; population 2240; salary £42 3s. 4d. per annum.

APPOINTMENTS.

Alcester Union.—George H. Foshroke, M.R.C.S.E., L.S.A., to the Bidford District.

Altrincham Union.—William Henry Sutcliffe, M.R.C.S.E., L.S.A., to the Tabley District. Thomas T. Blease, M.R.C.S.E., L.S.A., to the Altrincham District.

Hambleton Union.—Frederick Lawton, M.R.C.S.E., L.S.A., to the Chiddingfold District.

Hexham Union.—Robert J. Callender, M.R.C.S.E., L.R.C.P. Edin., to the Fifth District.

Highworth and Swindon Union.—John Gay, jun., M.R.C.S.E., L.S.A., to the Second District and the Workhouse.

Llanfyllin Union.—Eyton O. Williams, M.D. Edin., M.R.C.S.E., L.S.A., to the Meifod District and the Workhouse.

Martley Union.—Samuel Lamb, M.R.C.S.E., L.S.A., to the Astley District.

St. Thomas Union.—Wm. Christopher, M.R.C.S.E., to the East Budleigh District.

UNIVERSITY OF LONDON.—For the convenience of students in the midland counties, the matriculation examinations will be conducted in Queen's College, Birmingham, commencing June 28.

THE University of Cambridge is now open to non-collegiate students—that is, to students who do not wish to become members of colleges. Information may be obtained from the Rev. R. B. Somerset, Cambridge.

VIENNA UNIVERSITY.—By a unanimous resolution of the College of Professors, it was determined to request the Minister of Instruction to raise the extraordinary professorships of diseases of the skin and venereal diseases held by Hebra and Sigmund into ordinary professorships.

THE last *Gazette* announces that John F. Arthur, Esq., M.D., late Surgeon-Major, Madras Medical Department, has been appointed Companion of the Most Exalted Order of the Star of India.

M. GABRIEL FAU, formerly Surgeon of the Armies of the First Empire, surnamed "Physician of the Poor," born on November 1, 1768, went on foot in person to vote at Lavelanot during the election.

CHOLERA.—Cholera has reappeared in her Majesty's 58th Regiment at Allahabad. At Bathurst, the seat of the Government of the Gambia, there is a virulent outbreak. Thirty-two died on May 15 out of a population of 4000. The deaths up to May 17 were 190. Of these none were European.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of this College held on Monday, June 7, the following officers were elected for the ensuing year:—*President:* Rawdon Macnamara. *Vice-President:* Albert J. Walsh. *Secretary:* William Colles. *Council:* William Hargrave, Robert Adams, James Barker, William Colles, Hans Irvine, George H. Porter, Hamilton Labatt, Benjamin M'Dowel, Edward Ledwich, William Jameson, Alexander Carte, James H. Wharton, George W. Hatchell, Edward D. Mapother, William A. Elliott, Archibald H. Jacob, John Morgan, Edward Hamilton, Edward J. Quinan.

ROYAL INSTITUTION OF GREAT BRITAIN.—At the general monthly meeting, Monday, June 4, 1869, W. R. Grove, Esq., in the chair, James Spencer Bell, Esq., Honourable Henry M. Best, and Henry Davis Pochin, Esq., were elected members of the Royal Institution. The special thanks of the members were returned for the following additions to "The Donation Fund for the Promotion of Experimental Researches":—Sir Henry Holland, Bart. (eleventh annual donation), £40; J. Carrick Moore, Esq. (sixth annual donation), £10. The presents received since the last meeting were laid on the table, and the thanks of the members returned for the same.

IRISH MEDICAL ASSOCIATION.—The sixteenth annual meeting of this Association was held on Monday, June 7, in the Albert Hall of the Royal College of Surgeons, Rawdon Macnamara, V.P.R.C.S.I., President, in the chair. After an eloquent address by the President, in which he enlarged upon the disinterested and benevolent nature of the services often rendered by the Medical Profession, and paid a tribute of respect to the memories of those prominent members of the Association, Drs. Mackesy, Maurice Collis, and Purefoy, whom death had removed during the past year, the report was read by Dr. Quinan, Secretary and Treasurer. Resolutions urging the necessity of the increased remuneration and of a provision for the superannuation of Poor-law Medical officers, and also of the elevation of the standard of preliminary and Medical education, were proposed, seconded, and adopted. Dr. Martin, of Portlaw, having been elected, was duly installed as President for the ensuing year.

A MEETING of the Royal Sanitary Commission was held on Monday. Present: The Right Hon. C. B. Adderley, M.P., in the chair; Earl of Romney, Right Hon. Lord Robert Montagu, M.P., Right Hon. S. Cave, M.P., Lieutenant-Colonel Ewart, C.B., R.E., Mr. S. Whitbread, M.P., Mr. E. M. Richards, M.P., Mr. Benjamin Shaw, Dr. Acland, F.R.S., Mr. F. T. Bircham, Earl of Ducie, Sir Thomas Watson, M.D., Mr. J. R. M'Lean, M.P., Mr. J. T. Hibbert, M.P., Mr. F. S. Powell, Mr. James Paget, F.R.S., Mr. John Lambert, and the Secretary, Mr. W. H. Birley.

THE LATE PROFESSOR FARADAY.—The Chemical Society, wishing to do honour to the memory of its late distinguished Fellow, Professor Faraday, and at the same time to promote the personal intercourse of the Society with eminent foreign chemists, has recently instituted a Faraday medal, to be awarded from time to time to some foreign chemists upon his accepting the invitation of the President and Council of the Society to deliver a lecture to the Fellows. The inaugural lecture will be delivered on June 17, by M. Dumas, Master of the French Mint, and Perpetual Secretary of the Imperial Academy, who was one of Faraday's intimate friends. By permission of the managers, the lecture will be given in the theatre of the Royal Institution, associated for so many years with Faraday's own expositions. M. Dumas, who was formerly Minister of Public Instruction in France, and has done much to improve the system of scientific education in that country, was for many years one of the most brilliant and elegant lecturers on chemistry, and is the author of many researches which have contributed most importantly to the development of chemical science.

ROYAL MEDICAL BENEVOLENT FUND ASSOCIATION OF IRELAND.—The twenty-seventh annual meeting of this Association was held on Monday, June 7, in the Royal College of Surgeons. The chair was taken by Dr. Porter, the outgoing President of the College. The annual report was read by Dr. M'Clintock, one of the honorary secretaries, and in a financial point of view was highly satisfactory. Two legacies, one of £50 from Mr. Edward Heron, F.R.C.S.I., the other of £100 from Dr. Frith, of Limerick, had been received and invested during the year, and, with some donations, had raised the accumulated capital of the Association to £13,250. The sum available for distribution was about £860. The number of applicants for aid from the Association was ninety, of whom eleven were Medical men, sixty-eight were the widows, and eleven the children of Medical men. The Association had lost warm friends by death during the year in the persons of Drs. Mackesy, Maurice Collis, Hardy, and Guinness. Dr. James Little, of Baggot-street, had been appointed treasurer in the room of Dr. Duke, who had resigned in consequence of ill-health, and Dr. Marks, of Hatch-street, had been elected one of the honorary secretaries, in the room of Dr. Guinness. The adoption of the report and statement of accounts was moved by Dr. Churchill, President of the College of Physicians, and seconded by Dr. Armstrong. At the close of the proceedings the second chair was taken, on the motion of Dr. Hargrave, by Dr. Churchill, and a vote of thanks was passed to Dr. Porter.

READING DISPENSARY.—The office of Resident Medical Officer having recently become vacant, notice thereof was given by advertisement, and about thirty-six applications were received for the appointment. After a great deal of discussion, however, it has been resolved not to appoint a Resident Medical Officer, but three Surgeons and an additional Physician, that one Physician and one Surgeon shall attend at the Dispensary daily, and that the Surgeons shall visit those patients at their homes who are unable to attend at the Dispensary, for which latter duty the Surgeons are to share between them the amount hitherto paid as salary to the Resident Medical Officer, *pro rata*, according to the number of patients they may attend during the year. The general feeling of the speakers at the meeting at which these alterations were determined upon appeared to be to eventually convert the Dispensary from a charitable to a provident institution, similar to that which has been so successful at Northampton.

"WATER, ETC., BUT NOT A DROP TO DRINK."—However impure the water may have been in European countries, it can scarcely, even at the worst, have attained to the minimum condition of defilement prevalent in India. I write more particularly of the Moffussil. Here wells are almost invariably open, and frequently the only water obtainable is from the village pond. Leaves of trees, dust, dirt of every description, and frequently both dead and living insects and reptiles, may be seen floating on the surface. And, as a climax, village tank-water is defiled by the solid and fluid *excreta* of the hundreds of buffaloes and kine, which twice a day are brought to drink; and also by the ablutions, and not unfrequently by the *excreta* of the villagers themselves! I have, indeed, many times seen the latter fill their water-pots within six feet from a micturating buffalo! Our own drinking water is even now carried in skins very imperfectly tanned, the interior of which can never be cleansed; and it is too often cooled in dirty jars. But water from a tolerably pure source, even when maltreated in this manner, would be taintless, when compared with that drawn from village tanks. I quote from a recent official report. "When one remembers that this tank-water washes down from the fields a great proportion of the ordure, the remains of dead animals, and every conceivable filth that accumulates in the environs of a village, and that shallow and unrenewed, it remains stagnant and reeking under a tropical sun, it does not seem strange that the people who have no other drink should become ill. We visited one of these tanks, we saw the people going into the water, and before filling their vessels washing their legs and feet in the very water they were going to drink. We took some of the water out in a tumbler, and found it of a yellow colour, and so thick that we could not see through it." On being submitted to examination, the water was found to contain a large percentage of organic matter, and numerous animalcula of the protozoic variety. And here it may be mentioned that, while the air over marshes, when submitted to chemical experiment, does not materially differ from that of other places, marsh or malarious water always contains a large amount of vegetable organic matter. From 12 to 40 or 50 grains per gallon is not uncommon, and in some instances there is more. And this may probably be the poison which excites malarious fever. It is certainly more consistent with our general knowledge of these matters to imagine that the fever which so frequently devastates Indian Moffussil districts is due to the impure water consumed, rather than to an invariable poison in the air, which, arising from the whole surface of the land, is indestructible by the otherwise all-powerful oxygen. And this view is moreover strengthened by the immunity from fever which those appear to possess who scrupulously avoid drinking impure water, and who confine themselves to soda-water when travelling in the Moffussil.—*W. J. Moore, Surgeon, Marwar Political Agency, on Malaria.*

FIRE SERVICE IN FRANCE.—In France the total number of *sapeurs-pompiers* amounts to 286,166, working 12,720 *pompes* or engines. Among these there are a regiment of *sapeurs-pompiers militaires* which only exists at Paris, the *ouvriers-pompiers* in the marine establishments at Cherbourg Brest, Lorient, Rochefort, and Toulon, and the municipal *pompiers* provided and paid by the municipalities of the large towns. There are also the *pompiers* of the National Guard, who receive no pay, and volunteer societies of *sapeurs-pompiers* formed among workmen and their employers. This numerous body is very unequally distributed, for out of 40,000 communes there are 28,000 entirely destitute of this succour. Two departments have neither *pompes* nor *pompiers*, while some departments have *pompes* without *pompiers*, and others *pompiers* without *pompes*. In the Hautes-Pyrénées there are seventeen corps of *pompiers* and one corps of *pompes*.—*Journal de la Soc. de Statistique*, April.

VACCINATION FROM THE HEIFER.—M. Lanoix, the introducer of this practice into France, has been employed by the French Transatlantic Company to supply vaccinated heifers for the purpose of enabling the crews of their large vessels and such of the passengers who wish to be revaccinated. This has been done in consequence of the company having learned that a bad epidemic of small-pox prevails along 1800 leagues of the coast of the Pacific. One of their vessels, which was returning from Panama to France, shipped a passenger who had come from the shores of the Pacific. Twelve days afterwards the precursory symptoms of small-pox appeared, and, notwithstanding his isolation, all the staff of the ship and many of the crew took the disease, eight of the number dying. As soon as this sad tidings was bronght home, the company gave directions for heifer vaccination to be performed as each successive vessel sailed.—*Bullet. de l'Acad.*, April 15.

SUTURE OF A TENDON.—A drunken youth fell, on February 8, with his hand on some glass, causing a severe wound of the dorsal surface of the metacarpo-phalangeal articulation of the right thumb. The cut extended through all the soft parts, exposing the bone to a considerable extent, and of course dividing the long extensor of the thumb. The second phalanx of the thumb was flexed, and the patient could not move it. The two ends of the tendon were not visible in the wound, but M. Tillaux, by making an incision in the direction of the tendon, soon found the upper end considerably retracted, and shortly afterwards the lower end. These he brought into exact adaptation by means of a single point of suture made with ordinary ligature-thread. The thumb was extended on a splint until the 22nd, when this was removed, and it was found that then—*i.e.*, the thirteenth day—slight movements of the thumb could be executed; but it was only by March 20 that the cure could be considered quite complete, the patient then having quite recovered all the movements of the thumb.—*Bull. de Thérap.*, May 15.

THE following curious account of an individual of doubtful sex is taken from the *New Orleans Medical Journal* for January:—"The person was 19 years old in January, 1867. The general appearance is very feminine. The upper lip, chin, and cheeks do not present any hirsute evidences. The face, hair, and general features, are those of a scrofulous female. The neck and shoulders are delicate, and have outlines of conformation similar to the appearance of a woman. The breasts are like those of a female child of twelve years of age. The nipples are very small, and have very little areola. The outlines of the abdomen and the swell of the hips, thighs, and beautifully modelled legs, tapering delicately and ending with small, well-formed feet, all indicate female peculiarities. The shrinking sensitiveness, manners, and voice are also very feminine. These, however, are the same that would be seen in a person who had been castrated in childhood. I discovered in this person but one organ of sexuality. This is a penis, which is about an inch and a half long and a half inch in diameter. There are a miniature glans penis, faintly outlined,

and an ordinary-sized meatus, occupying their correct anatomical positions. The prepuce consists of numerous small corrugated folds, and constantly covers the glans, thus presenting an entirely distinct form from a clitoris. A urethra passes from the meatus in nearly the proper course as found in males, and the orifice and sphincter are controlled in the manner usual to males. The base of the penis is in the natural situation. There is not the slightest trace of scrotum, testicles, or prostate gland. There are no evidences of an attempt at labia. The perineum is rather full, but the *raphe* does not exhibit any appearance that nature ever attempted to establish a vaginal aperture. A male catheter was introduced through the urethra with much ease. The finger was introduced into the rectum, and the exploration assisted by the point of the catheter did not procure any evidence of a trace of a vaginal canal. The examination discovered to me rather a less quantity of interstitial tissue than is usually found in either sex. The exploration did not discover the slightest evidence of folds of vagina or a uterus. The pulse is strong, and the hand more delicately formed than we usually find in males. The mons veneris is covered with a small quantity of hair, which is of a very fine texture and completely surrounds the base of the penis. The general admeasurement of the pelvis is less than the average in females, though the general appearance of the pelvic formation is very feminine, in all its delicate outlines, contour, and structure.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Bird's Pipe for Inhalation, with woodcut, next week.

J. Willcocks.—The communication referred to has not yet appeared.

A Union Surgeon should state his grievance to the Poor-law Board. The guardians have not the final decision of the question.

J. D.—Mr. Curtis was a member of the Junior United Service Club. He was not a commissioned officer, but was an acknowledged public servant—namely, "dispenser in the navy."

Paddington.—The appointment of Medical examiner for the Post-office Insurance is in the hands of the head of the department.

SPEAR *v.* DOIDGE.

Additional subscriptions received since last insertion:—G. W. Trenery, Esq., Penryn, 10s. 6d.; Rev. Maitland Kelly, Abingdon, £2 2s.; Dr. Ford, Chumleigh, 5s.; Mr. Solomon Perry, Tavistock, 10s. 6d.; Mr. Wm. Perry, Thruselton, 10s. 6d.; Mr. John Perry, Lewdown, 10s. 6d.; Mr. Palmer, Tavistock, 10s.; Mr. W. Medland, Lifton, 3s. 6d.; James Blomfield, Kelly, 2s.; J. Kempthorne, Esq., Callington, £1 1s.; S. Clogg, Esq., Liskeard, 10s. 6d.; Messrs. Gale and Co., wholesale druggists, London, £2 2s.; A Cheltenham Friend, £1 1s.; Messrs. Risdon and Mitchell, £1 1s.; Mr. R. Prout, Milton Abbot, 10s.

Merthyr.—Whether it was the duty of the guardians or the Board of Health to put into operation the provisions of the "Diseases Prevention Act," we think Dr. Dyke was perfectly right in expressing his opinion as to the neglect of the authorities in taking steps to arrest the progress of the fever. No doubt should exist as to the persons responsible for the neglect.

C.—Transcendentalism has its ridiculous side, no doubt: by the way, it was well ridiculed by Hogg the Ettrick Shepherd, or whoever else was the author of the "Flying Tailor" and other parodies of Wordsworth and Southey, etc., in the collected edition of Hogg's works. Here is the passage:—

> "A pair
> Of breeches, to his philosophic eye,
> Were not what unto other folk they seem—
> Mere simple breeches; but in them he saw
> The symbol of the soul."—*Hogg's Flying Tailor.*

Of course it may be easy to speak of vertebræ of the head or limbs of the head in a ridiculous way; but there is another ridiculous side of the question, and that is that men should teach human anatomy in such a way as if they thought man was the only animal, or an animal standing apart from all the rest of created beings, and as if it were right to employ a terminology in human anatomy which cuts it off from general anatomy.

Scalpel.—Mr. Costello exhibited, upwards of thirty years ago, a beak-head catheter or sound at the Westminster Medical Society. An account of it was given in the old *Medical Gazette*. Mr. Stafford was the inventor of the lanceted catheter referred to.

MEDICAL CHARGES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Would you kindly let me know what I ought to charge in the following case? Attending a nobleman's family, living four miles from the town, including medicine, advice, and journeys, and sometimes going twice a day, what ought I to charge each time?

I am, &c. L.R.C.S.I.

*** Seven shillings a visit would be very moderate, with a moderate charge for necessary medicines.

A Practitioner.—Dr. Blanc's office is at No. 9, Bedford-street, Bedford-square, and Tuesday is, we believe, the day most propitious for vaccinating human children. The calf is vaccinated on the preceding Thursday, and the real vaccine lymph on the fifth or sixth day is very effective for its purpose, and not irritating. We have watched cases vaccinated by Dr. Blanc from the fifth to the twentieth day, and can testify to the regularity and benignancy of the vaccine vesicles produced. We believe it to be to the interest of the Medical Profession to support Dr. Blanc. As for the poor, he would vaccinate them free of charge, or allow the public vaccinators to do so with lymph which he furnishes. As for the rich, he takes a fee for the vaccination, and then leaves the case in the hands of the regular Practitioner, who superintends the progress and convalescence, and need fear no rivalry. For thinly peopled districts, where it is most difficult to keep up a weekly succession of children, the importance of a vaccinated calf from which the population can be vaccinated *en masse* will be a great boon. Preserved lymph is the bane and ruin of vaccination.

PHARMACOPŒIAS *v.* HUMAN LIFE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The number of your journal for the 5th instant contains a sad account of the death of a Medical Practitioner in South Wales from a double dose of strychnia, taken in mistake for acetate of morphia, the double dose being twice the strength of the strychnia of the London Pharmacopœia. This is not the only case in which human life is exposed to great peril from the changes in the national Pharmacopœia: for instance, the liq. arsen. hydrochloricus of the new Pharmacopœia is nearly three times the strength of the liq. arsen. chloridi of the London Pharmacopœia. Luckily the new formula is not used, but if it should ever come into use one cannot calculate the number of fatal mistakes which are likely to occur.

I am, &c. CAUTION.

*** Our correspondent is in error; it was adhesion to the old London instead of the British, which caused the fatality in this case. A chemist or prescriber who ignores the British Pharmacopœia now is surely much to blame.—ED.

D. M.—Sir James Clarke and Dr. Neil Arnott are Licentiates, and not Fellows, of the Royal College of Physicians. They refused the Fellowship on a point of principle.

Vaccinator.—Rowlandson was the artist who ridiculed in clever caricature the "effects of vaccination" on the human being. These productions attracted great notice at the time, and did more probably to check the progress of Jenner's beneficent discovery than any other opposition it met with. The caricatures were published, we believe, by Fores in Piccadilly, and may probably be now obtained at the "old shop" at the corner of Sackville-street.

STRYCHNINE AS A SUBSTITUTE FOR QUININE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—With reference to the quinine difficulty at St. Bartholomew's and elsewhere, it may not be amiss to remind the Profession that about the fortieth of a grain of strychnia (equal to three minims of the British Pharmacopœia solution) is a medicinal equivalent for one grain of disulphate of quinine in nearly all cases where a vegetable tonic is indicated. Half a pint of mixture containing strychn. gr. $\frac{1}{40}$ in ℥ss., if swallowed by accident or design, in one dose, would not cause more inconvenience than the same quantity of mixture containing quin. disulph. gr. j. in ℥ss. The price of strychnine is about half as much again as that of quinine, but the very small quantity required as a medicinal equivalent renders it, in the end, all but infinitely cheaper. My own rather extensive experience of the two drugs in intermittent disorders in the fens of Lincolnshire enables me to state that, prejudice aside, the reputed "anti-periodic" virtue of quinine is not superior to that of strychnine. Both are powerful tonics, the chief difference medicinally being that of equivalent dose.

Littlemore, June 5. I am, &c. WM. J. MARSH.

Civilian cannot be admitted to either of the services without submitting to a competitive examination. Examinations take place periodically; due notice of them is given in the *Medical Times and Gazette.*

Brighton.—There is probably some exaggeration in the figures quoted; but there can be no doubt that the number of persons receiving gratuitous relief is very large, and out of all proportion to the real *pauperism* of the town. The loose way in which some of the Medical charities keep their books may account in a great degree for the exaggeration in question; but the amount of "shabby-genteel pauperism," as the *Brighton Times* well describes it, is a disgrace and a fraud.

TOBACCO.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—You refer in your impression of May 29 to a communication from "Anti-weed." Certainly the tobacco question has become almost threadbare, but still it is important. I would offer a few remarks on a point that almost invariably seems to be lost sight of. People always direct their shafts against the quantity of tobacco used—why not write against the quantity of anything used, from cold water to arsenic? If a man has not sufficient power over himself to think occasionally whether he is taking too much, he will injure himself with anything he takes. A man is blamed for taking too much port after dinner, and rightly so; but if his friend gives him bad wine, and a moderate quantity makes him ill, he is not so much in fault. Now, it is just so in smoking. If a man smokes so much good tobacco as to injure himself, he is no better than a drunkard (and every one does know when he smokes too much—his sore tongue, his stomach, and his liver will tell him that). Let more attention be given, then, to the quality of the weed. I know from my own experience, and from what I have seen professionally and otherwise, that one pipeful of strong bad tobacco will cause ten times more mischief than an ounce of mild good tobacco. If nothing else would warn a man, let him look at his pipe after smoking so-called "cut Cavendish" or "black shag." It

is foul and offensive to a degree. Its only virtue is that it blackens his pipe "beautifully." If only such kinds as Cuba and golden leaf were smoked, there would seldom be a case of vertigo or other symptom of nicotine poisoning seen (excepting, of course, the case of youngsters and those going through their probationary term). I have been myself an inveterate smoker for some time. If I have leisure I often smoke a great deal, pipe after pipe; but when chance has thrown in my way (say from the pouch of a friend) a pipeful of strong rancid stuff, I have been ill immediately. Most smokers can give similar evidence. You justly say that the truth lies between the two extremes of opinion, as it does in most things; but I fancy you will find more subject for inquiry and censure in what a man smokes than in how much he smokes.

I am, &c. Cuia.

The King's College Hospital Old Students' Dinner is fixed for Friday, the 25th inst., at the Freemasons' Tavern. Professor W. A. Miller, F.R.S., has consented to take the chair, and a large muster of old friends is expected. Several of the professors have already signified their intention of being present. Dr. Buzzard and Mr. Francis Mason are, as heretofore, hon. secs., to whom all applications, addressed to Conduit-street, must be made not later than Wednesday, the 23rd inst.

Vaccine Preservation.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Relating to the question of the preservation of vaccine lymph, as mooted in your last issues by Dr. Blanc and Dr. Ballard, it has struck me as somewhat surprising that these gentlemen appear to ignore the plan many years adopted by the Vaccine Institution—namely, the preservation of virus on points carefully enclosed in goldbeaters' skin. That this is so I infer from the statement of Dr. Blanc that "cow-pox taken from the heifer does not keep in tubes or on points," and especially also from that of Dr. Ballard, who says, "I have indeed frequently failed with virus procured from M. Lanoix in tubes and on points, but this was in the extremely hot weather of last year, and it is not to be forgotten how often preserved human virus will fail under similar unfavourable circumstances." It is much to be regretted that the method of preserving in the skin satchel should have been more or less supplanted by the use of capillary tubes. The experience of some twenty years, in hundreds if not thousands of cases, has led me to the conclusion that none of the methods of preserving lymph that I have tried are at all equal to the small satchels made out of goldbeaters' skin. I continually find virus to take effect excellently after being so kept one to two years. For private practice this is obviously of the greatest advantage. I always have a stock of reliable virus ready for use at a moment's notice. The Practitioner unable to keep up a succession of cases with liquid lymph from child to child direct, will find it of immense advantage to keep a little stock of satchels, about two inches long and three-quarters wide, with one end not closed. Goldbeaters' skin is equally available after considerable use by the goldbeater—any amount of use, indeed, short of absolute porosity. The points being well charged, a few moments may pass until the lymph be quite dry; then, after depositing four points in the satchel, the thumb and finger should be gently passed from the bottom of the satchel to the top to exclude the air; the upper end should then be rapidly wetted with the tongue and folded over once or twice to hermetically seal.

I once or twice persevered in the trial of small well-stopped bottles for charged points, and my experience was that the points will often be effective after two or three days; after twice that number will often fail. I have not much experience as to the tubes, having abandoned them a long time since for the want of success in their use. I should like to hear testimony to the excellence and usefulness of the plan mentioned by Dr. Ballard of making a few scratches with the lancet over a diameter of $\frac{1}{4}$th or $\frac{1}{5}$th of an inch of skin. This plan I have adopted many years, and it has the very obvious advantage of giving as many chances of effect as there are scratches, supposing the points to be well charged, and the virus in good condition.

Birmingham, June 7. I am, &c. William Hinds.

COMMUNICATIONS have been received from—

Mr. R. D. Welch; Mr. T. Logan; Mr. T. Ogden Fletcher; Mr. E. Ludlow; Dr. Stainthorpe; Mr. A. Temple; Mr. N. Alcock; Mr. W. J. Marsh; Dr. Charles Hogg; Mr. Samuel Solly; Mr. J. Willcocks; Dr. Hitchman; Mr. Pollock; L.R.C.S.I.; Caution; Mr. F. T. Roberts; Dr. Hinds; Dr. Lionel S. Beale; Mr. F. Churchill; Mr. H. Lee; Mr. G. Gaskoin; Mr. J. Chatto; Mr. T. Bryant; Dr. Ballard; Dr. B. W. Richardson; Mr. Biad; C.; Dr. Hughlings-Jackson; E. B. P.; Dr. J. Rogers; Mr. W. E. C. Nourse; Mr. T. M. Stone.

BOOKS RECEIVED—

Littlemore Asylum Report — Cauvet's Histoire Naturelle Médicale — Nisseron, de l'Urine — Falin, de l'Urticaire — Monthly Microscopical Journal, No. 6—Pepper's Cyclopædic Science Simplified—Indian Medical Gazette, May—Transactions of the Odontological Society, May—British Journal of Dental Science, February—Transactions of the American Ophthalmological Society—Glasgow Medical Examiner, No. 3.

NEWSPAPERS RECEIVED—

New York Medical Gazette—Chicago Medical Times—Brighton Times—Gazette des Hôpitaux—L'Union Médicale—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 5, 1869.

BIRTHS.

Births of Boys, 1080; Girls, 1020; Total, 2100.
Average of 10 corresponding weeks, 1859-68, 1921·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	683	672	1355
Average of the ten years 1858-67	621·1	568·2	1189·3
Average corrected to increased population	...	...	1308
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	...	1	6	1	12	6	5	...
North	618210	1	5	12	...	23	16	5	...
Central	378058	...	1	3	...	19	3	3	...
East	571158	1	8	24	1	18	5	6	...
South	773175	1	9	17	1	17	6	3	...
Total	2803989	3	24	62	3	89	36	22	...

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 5, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending June 5.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending June 5.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tens per Acre.
London (Metropolis)	3170754	40·7	2100	1462	1355	71·9	33·5	53·3	0·10	10
Bristol (City)	169423	36·1	118	76	*60	68·6	36·4	52·5	0·18	18
Birmingham (Boro')	360846	46·1	208	175	128	68·6	40·1	53·2	0·17	17
Liverpool (Boro')	509052	99·7	372	295	265	65·9	42·2	53·2	0·23	23
Manchester (City)	370892	82·7	276	210	*155	68·8	36·0	54·2	0·18	18
Salford (Borough)	119350	23·1	84	69	67	68·3	35·0	52·3	0·22	22
Sheffield (Borough)	239752	10·5	188	126	120	67·0	39·0	52·8	0·09	9
Bradford (Borough)	138522	21·0	94	71	54	64·5	40·5	52·8	0·10	10
Leeds (Borough)	253110	11·7	125	129	93	66·0	39·0	50·8	0·07	7
Hull (Borough)	126682	35·6	72	59	62	70·0	35·0	51·3	0·11	11
Newstl-on-Tyne, do.	130503	24·5	87	69	55	65·0	39·0	51·1	0·16	16
Edinburgh (City)	178002	40·2	135	86	143	62·7	36·0	50·0	0·80	81
Glasgow (City)	458937	90·6	398	268	343	63·3	34·5	50·3	0·65	66
Dublin (City and some suburbs)	320762	32·9	121	158	136	67·5	43·3	55·0	0·39	39
Total of 14 large Towns	6546587	35·5	4378	3244	3036	71·9	33·5	52·3	0·25	25
					Week ending May 29.	Week ending May 29.				
Vienna (City)	560000 (1863)	...	...	...	354	...	...	67·1	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·951 in. The barometrical reading decreased from 30·13 in. on Tuesday, June 1, to 29·74 in. on Friday, June 4.

The general direction of the wind was W.S.W. and S.W.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

June 12. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

Royal Institution, 3 p.m. Mr. Emanuel Deutsch, "On Semitic Culture."

14. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

Royal College of Surgeons of England, 4 p.m. Prof. Le Gros Clark's Lectures on Surgery and Pathology—Lecture VI.: Lesions of Abdomen (continued).

15. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Anthropological Society, 8 p.m. Meeting.

16. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

Westminster Hospital School of Medicine, 11 a.m. Mr. C. Carter Blake's Lectures on the Comparative Anatomy of Warm-blooded Vertebrata—Lecture II.: Zoology.

17. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

18. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

ORIGINAL COMMUNICATIONS.

STRANGULATED INGUINAL HERNIA.

By J. FAYRER, M.D., F.R.S.E., C.S.I.,
Professor of Surgery and Senior Surgeon, Medical College Hospital, Calcutta.

(Continued from page 579.)

Case 10.(a)—K. C. D., a Hindoo gwallah, aged 40 years, was admitted with right inguinal hernia on February 8, 1867. The disease was of one year's duration. It has been down in the scrotum, and symptoms of obstruction, passing into those of strangulation, have been present for five days; but, as they were not severe until to-day the friends, as usual, delayed bringing him to Hospital. The usual measures—enemata, hot baths, taxis with chloroform, and ice to the tumour—having failed, and the symptoms of strangulation becoming urgent, the operation was performed, and the stricture divided at the external ring without opening the sac. The patient did well, and was discharged on March 6.

In this case the hernia was of considerable size, and the stricture at the external ring had very gradually induced the condition of strangulation. It was not until the symptoms became urgent that the friends brought the patient to the Hospital, but fortunately before gangrene had set in. The relief afforded by the operation was immediate, and the patient recovered rapidly.

Case 11.—C. S., a Hindoo durwan, aged 40 years, admitted on February 18, 1867, with right inguinal hernia in a state of strangulation. The hernial tumour was of the size of an orange, and of about four years' duration. The symptoms of strangulation had set in about twenty hours before admission. He was in a very depressed state, with pulse hardly perceptible. He had vomited several times. The taxis was tried under chloroform, but without success, and the operation was at once determined on. There was an enlarged inguinal gland on the outer and lower side of the tumour, and the further complication of hydrocele and enlarged testicle so common among the natives of India. The stricture was at the external ring, and was readily divided, and the hernia reduced. The sac appeared perfectly healthy, and was not opened. His pulse improved under the chloroform, and he was much easier after the operation. I was rather surprised to hear at 3 p.m. (the operation was performed at about 9 a.m.) that he died three hours after the operation. The friends removed the body, so I had no opportunity of ascertaining the exact amount of disease. Gangrene probably had occurred, but it appeared probable that, being a feeble man, death occurred from exhaustion before the gangrenous condition had been thoroughly developed. In this case the delay in bringing the patient for treatment had fatal results. I have no doubt that if the stricture had been divided some hours earlier he might have recovered.

Case 12.—A. H., a Mahomedan moonshee, aged 42 years, a slight, rather delicate-looking man, was admitted on July 19, 1868, with symptoms of strangulated inguinal hernia of the left side. The hernia was of five years' standing. The symptoms of strangulation set in at 5 p.m. of July 19, and, all the usual measures for reducing it having failed, the operation was performed at 10.30 p.m. of the same day. The stricture was divided at the external ring; the sac was not opened, and the tumour, which was of considerable size, and distended the whole scrotum, was reduced without difficulty, and the symptoms were rapidly relieved. He had been brought in a native carriage from a distance of six miles, and was much exhausted by fatigue, heat, and pain when he reached the Hospital. The pulse was barely perceptible; extremities cold, with cold sweats over the surface of the body, and extreme restlessness. He improved under the influence of chloroform, and soon began to rally after the operation. He did well afterwards, and by September 25, the herniotomy wound having healed, the operation with the plug and ligatures for the radical cure of the hernia was performed. The plug was removed on the fourth day, and he did well subsequently, and was discharged apparently cured on November 28, having been put to all the usual tests of carrying weights and jumping a height.

Case 13.—B. R., a Hindoo servant, aged 40 years, was admitted September 11, 1868, with symptoms of strangulated inguinal hernia of the right side. He has had the hernia for five years. It began to show symptoms of strangulation on September 9, but he was not brought to the Hospital until the 11th, when, the symptoms being very urgent, the operation was performed without delay at 9 a.m. In this case the tumour was very small, not larger than a pigeon's egg. The stricture was in the neck of the sac, which was laid open and the constriction divided. The sac itself, as well as the gut, which were partially glued together by the products of inflammation, was partially gangrenous. The small intestine protruded in a knuckle of about two inches in length. This was opened and left in the wound; the gangrenous portion of the sac was removed. The gut was secured to the wound, and an artificial anus formed, out of which fæcal matter passed freely. The patient partially rallied, but soon after sank, and died at 7.30 of the same day. The abdominal cavity was opened after death, and the intestines were found to be greatly distended. A low form of peritonitis had invaded the peritoneal cavity, which contained a quantity of puriform fluid. A portion of the ileum and omentum were gangrenous. The hernia was a direct one.

This was a case of direct inguinal hernia of five years' duration, and not of large size. The symptoms of strangulation supervened, and gangrene must have occurred very rapidly. In this case the stricture was in the sac, which was laid open, and disclosed the disorganised condition of both sac and its contents. Much valuable time was lost, and he was not brought to the Hospital until it was too late. The severe symptoms appear to have set in rapidly at last, and had gone too far to leave much hope even from the operation.

Case 14.—On September 19, 1867, at midnight, I was requested to see a native gentleman, Baboo R. L., aged 70, who was suffering from strangulated inguinal hernia. The patient, though aged, was vigorous and healthy. He had been the subject of right scrotal hernia for several years, which had frequently been temporarily incarcerated, but never hitherto strangulated. On the morning of the 19th, the hernia came down. He was unable to reduce it, and it soon began to give him pain. When I saw him at midnight he was restless and in pain. The signs of strangulation were all present. The tumour was not larger than a large orange; it was painful, tense, and irreducible. Ice had been applied, the taxis under chloroform tried, warm baths, and all the usual measures applicable in such cases, but without success. His pulse, however, was good, and there was little sickness, and the umbilical pain not severe. I recommended the reapplication of ice. I also made a long and careful attempt to reduce the hernia under chloroform. Enemata of tepid water and oil were also ordered, and the continued application of ice: I directed that if any unfavourable change occurred I should be at once informed. At 4.30 a.m. I saw him again. The enemata had brought away a quantity of fæcal matter: but he was no better, the tumour as tense and painful as ever. He was weak, and his pulse was getting more feeble. There was hiccup and desire to vomit. The tumour was intensely painful at its neck, and the abdomen generally tender. One more attempt was made at the taxis, but without success. I therefore proceeded to operate, and for this purpose he was taken out on to the terrace roof, as the room in which he lay was small and hot, and, having put him under the influence of chloroform, I commenced the operation in the open air, the starlight and a few candles to illuminate the work. In dividing the integument, a large vein bled freely, and was ligatured to prevent the blood from filling the wound. The stricture was at the external ring; it was divided, and the tumour easily reduced without opening the sac. The wound healed rapidly, and he had perfectly recovered on October 3.

This was a case of old scrotal hernia, though not of great size. Hitherto reducible, it had become incarcerated, and symptoms of strangulation set in. I saw him early, and had the opportunity of watching him, so that no important change could take place without my knowledge. When it became obvious that the hernia could not be reduced, I operated with the best results. The stricture was at the external ring.

Case 15.—On the night of June 2, 1868, I was summoned to a case of strangulated inguinal hernia in a native merchant residing in the Burra Bazar. I found a very stout healthy-looking old Hindoo gentleman, with an oblique inguinal scrotal hernia of the right side, complicated with hypertrophy of the scrotum and enlarged testicle. The hernia had been down for some hours since morning, and the symptoms of obstruction, which had been distressing, were now assuming those of strangulation, and were very urgent. I could get no very satisfactory

(a) Cases 8 and 9 have not been received from Professor Fayrer. We may be able to publish them in a subsequent number.

information about the history of the case, but that strangulation was rapidly progressing there could be no doubt. The bowels were confined, the abdomen tense and painful, especially at the umbilicus and over the neck of the hernia at the external ring, which could be felt tense and hard through a thick coating of fat. I put him under chloroform and tried to reduce the hernia, but was unable to do so. I then ordered ice to be applied over the tumour, and copious warm-water enemata to be given. Some opium had been given internally before I saw him: this was at 9 p.m. I should note here that the suggestion of an operation was at once rejected. I requested to be informed if any change occurred, and was not sent for until the following morning, at about 8 a.m. The symptoms were not relieved, and he was constantly vomiting and in great distress. The operation was again urged and now consented to. He was put under chloroform, and I proceeded to operate. Making an incision through the thick layer of fat, I arrived at the hernial protrusion, and found that the stricture was at the external ring. The scrotal tumour was larger than an adult head, and the contracted neck as thick as an ordinary man's arm. On slitting up the external oblique tendon, the tumour was reduced, and soon after recovering from the chloroform he said he was altogether relieved. I saw him again in the evening. He was low, but free from pain; the bowels had not acted; no hiccup; no vomiting; very little pain, and that only round the wound and over the lower part of the abdomen. He had had no nourishment. This I had ordered to be given in small quantities, with stimulants, frequently. An opiate also had been ordered, but not given. He had voided no urine since the operation. A catheter was passed on the 4th, and only a few ounces of urine found in the bladder. He gradually sank and died at 5 p.m.

Death in this case was not the result, as I believe, of gangrene; for the hernia was too large, and the stricture not tight enough to have caused it so soon. Exhaustion, want of support—he was a bigoted Hindoo, and would take none—and probably some uræmic poisoning, perhaps the formation of cardiac coagula, were the causes of death. He was an old man, over 60, and very probably the subject of kidney degeneration.

Case 16.—September 7, 1868, I was asked to see a native gentleman, Baboo K. C., who was suffering from strangulated hernia, at Bhowanipore. He had been the subject of a small inguinal hernia for some years. On September 6, after a long walk, it came down into the scrotum, rapidly became painful, and could not be reduced. At about 5 p.m. he began to vomit, had severe umbilical pain, and great tenderness at the ring. He was then some distance from Calcutta. A warm bath and the taxis were tried without success. He was brought home in great suffering, vomiting in great pain, and the bowels constipated. At 7.30 a.m. I saw him, and found a right scrotal hernia with all the indications of strangulation. The symptoms were rapidly becoming worse. The operation was proposed after a careful attempt at reduction under chloroform had failed. He was then very low, pulse feeble and rapid, vomiting incessant, abdominal pain very severe. The vomited matter was not stercoraceous, but bilious. I operated at once, found the stricture at the external ring as usual, divided and easily reduced the tumour without opening the sac. He was immediately relieved of all the urgent symptoms, and fell asleep. He did well; the wound healed rapidly under the application of the carbolic acid dressing, and on September 23 he was able to wear a truss. I have suggested to him the advantage of submitting to the operation for the radical cure.

Case 17.—On April 20, 1869, I was requested to see Baboo N. C. M., who was suffering from strangulated inguinal hernia. It appeared that he had been the subject of left scrotal hernia for some years; that hitherto it had given him little trouble, excepting on one occasion about a year before, when it became incarcerated, and was ultimately reduced by taxis. On this occasion the hernia came down, and could not be reduced. Very shortly the symptoms of strangulation set in, and when I saw him the symptoms were very urgent. The taxis, under chloroform, and other measures, had already been resorted to without success. Under chloroform, I made an attempt to reduce the hernia, but failed. The operation was then proposed, and agreed to at about 5.30 p.m. The stricture was again at the external ring, and on being divided the protrusion was then reduced without opening the sac. He remained low after the operation, with symptoms of peritonitis, for which opium was freely administered, and hot stupes applied to the abdomen. Enemata of tepid water, with ʒ ij. of Condy's solution to the pint, were used to wash out the bowels, from which, after the operation, a quantity of grumous blood was passed. This continued for several days. The pain became less, and the pulse improved, and now on April 25 he is doing well.

The chief point of interest in this case was the passage of blood after the operation, due no doubt to the great congestion of the lining mucous membrane of the intestine, and showing how severe the strangulation must have been.

Of the seventeen cases of inguinal scrotal herniæ above recorded, eleven recovered after the operation for division of the stricture, and six died. Four of the eleven who recovered were also operated on for the radical cure with the plug and ligature, and were discharged apparently cured or much relieved.

The deaths occurred in cases where time had been lost, and gangrene of the intestine had supervened, or exhaustion and perhaps the formation of coagula in the right cavities of the heart had carried the patients off.

The seat of strangulation was found to be in twelve cases at the external abdominal ring, the pillars of the ring and the intercolumnar fascia constricting the neck of the hernia. In one case the stricture was within the sac, and in four it was both at the external ring and in the neck of the sac.

The fatal cases were one in which the stricture was at the external abdominal ring, and five in which it was in the sac, or in the sac and at the ring also. It is worthy of notice that the great number of these cases were of scrotal hernia, and that consequently the external abdominal ring must have undergone considerable dilatation during the gradual formation of the hernial tumour.

Calcutta, April 26.

LOW FEVER IN SPAIN.

By GEORGE GASKOIN.

(*Concluded from page* 626.)

I now proceed to ask myself what type of fever is this which is now afflicting Spain, and, following my English ideas, I find it very difficult indeed to arrive at any settled conclusion. The Spaniards and English of the present day are certainly looking at fever from two different points of view. Some few of the old school among ourselves may think that the last new doctrines have too pedantic a cut, and that the last word about fevers remains perhaps to be said. In England we part them into species, each bearing seed after his kind, each with an essential character that is very strictly definable. In etiology, in symptomatology, in anatomical lesions, they differ one from another, as we think, all which in Spain is denied. To the Spaniard fever is a unit of no definable shape or constancy, which quite accidentally, as it were, runs into modes, types, and varieties. The word typhoid, in his vocabulary, may apply to a hundred ailments, and the dothienenteritis of Bretonneau he is as likely as not to call typhus, especially when it ends in death.

The term nosocomial typhus which is used on this occasion might seem indeed to remove all doubt, and therefore we will allow that there is typhus fever now at present existing in Spain. A fever caught in gaol and Hospital, and which spreads among the population, must be either typhus or relapsing; but nowhere do I read of relapse, or know even of jaundice or ophthalmia accompanying or complicating this fever. Let us not suppose that in Spain dothienenteritis is well understood, or that their plagues of typhus of former days have passed out of recollection, as that of Vittoria in the war of the constitution, when the Spanish troops and Evans's legion suffered from it side by side, that of Sarragossa, and many others; and also relapsing fever has been within their recent experience. But whether the premises are different, or whether their teaching is less thorough upon this head of disease than, thanks to certain worthies, has been fortunately the case with us here, the Spanish Physicians refuse the distinction which is offered to them from abroad as to the intrinsic difference which exists between typhoid fever and typhus. They call this a futile distinction, and affirm, whether right or wrong, that dothienenteritis with them has far less abdominal complication than is found in the French descriptions; hence, they constantly appeal to the assertion and authority of Chomel that often very little indeed of the intestinal canal is damaged in this disease. What I find in the weekly returns and various other reports throughout the whole of the past year is very much in fashion following. Catarrhal and gastric fevers, which pass into typhoid and ataxic; or catarrhal and gastric fevers that turn to adynamic and nervous in their second period or week; or gastric and biliary and inflammatory fevers which pass into a typhoid condition, and that commonly very soon; sometimes they are bilious-

inflammatory (*bilioso inflammatorio*), but gastric have ever the predominance, if, indeed, we except the catarrhal, which, with the intermittent and rheumatic, are proper to the climate of Madrid. Sometimes the gastric fevers subside into an aguish type, but always they are then erratic or atypic, and then again, as winter draws near, especially in aged people, the gastric is wont to pass into what they call mucous fever. In default of post-mortem details the web could scarce be more puzzling than it is, and all along with these there are catching fevers in Hospitals and in the country districts.

To me it seems most likely that with typhus and typhoid fever there is also such simple continued as is observed in warmer climates without intestinal lesion. The extension of the fevers is more remarkable than their mortality. Soon after the great heats of July and August we read in the reports as follows:—"Acute disorders were chiefly the same fevers, called ardent by the ancients, showing less of the adynamic type, which, using a generic term, is spoken of in the present day under the name of typhoid or typhus." In the previous June (1868) it had been remarked that innervation was much perturbed, and in other disorders as well as fevers; the cerebral functions were much engaged in these latter, such disturbance being more apparent than what was seen of blood alteration. At other periods of the year the gastric fevers keep their primitive type till the eleventh or fourteenth day, or maybe they cease so early as the fifth and ninth, subsiding under expectative treatment, with nothing of the typhoid complication. As far as I can perceive, besides the drought and the weather, which is variable and unsettled, even more than is common in Madrid, the existence of this large amount of fevers is not dependent upon season.

The repeated meetings at the Academy of Medicine throw small light upon diagnosis. The discussion chiefly turns on the amount of support to be given in "typhoid" fever. The healthiest opinions of the English school are disguised in caricature. The names of Graves and Todd are suggestive of beef-steaks and brandy. This, indeed, is little to be wondered at. The English are confessedly eccentric, and their Physicians hold somewhat to the type. These discussions at the Academy at Madrid show fully as much ability as anywhere else may be found. The Spaniards still cling to their home experience. They have an excellent school of their own, which is opposed to the successors of Broussais. Of early authors they have many that write at large and excellently well upon fevers. They compare the admirable succinctness of their writers with the cumbrous octavos of the French. "Why," say they of the old school, "should we be eternally led astray by French books?" The *flamantes*, who are pushing from behind, have the French authorities at their fingers' ends; but these distinctions, say the others, may be found not constant or worldwide. Of authorities among the Spaniards, I may be excused for mentioning Andres Piquer, whose work, "Tratado de Calenturas," 1768, will be found in the British Museum. A prize has been offered by the Academy of Medicine at Madrid for his biography, etc., during the current year. Piquer got much of his experience in the fevers of Almacera, about half a league distance from Valencia. He is one of the most instructive authors on fevers that I have ever perused. Our typhoid fever with him is a quotidian, and not a semitertian. The special name it bears, that of mesenteric fever, is derived, I believe, from Baglivi. Some earlier writers than Piquer, as Luis Mercado and Heredia, distinguish wholly the mesenteric from either intermittent. He diagnoses it from the diary fever, which lasts but three or four days. This, the mesenteric fever, was a fashionable complaint in his time. On the evidence of a white tongue, people are far too apt to say of an illness that it is mesenteric fever. The affection is described well enough—its insidious approach, its long duration, and also its commonest incidence on children. Piquer is a great stickler for species, which his countrymen seem not well to have remembered. He appeals to botany very much, seed formation, and the lower forms of life, to show the succession of phenomena. He says they mix up sinocal and ardent with this the mesenteric fever, that it cannot turn to acute nor yet to inflammatory fever, but it can into intermittent or into slow fever or hectic. "Some there are who call this mesenteric quotidian an erratic fever; semitertians may be erratic as well." Pedro Miguel Heredia, a still more old authority upon fevers, himself experienced an erratic calenture; it terminated in Heredia by an erysipelatous œdema of the leg, which in our day is distinctive of typhoid. It is a pity he did not say which leg. Luis de Toro gives the best description of the typhus, spotted fever, or *tabardillo;* it is also called *tabardete, modorra, pintas, fiebre punticular.* Such fever they now call typhoid. It is said, perhaps erroneously, that it came into Spain A.D. 1557. Since then it has been common (*ordinario*) in the Peninsula, according to the account of Agnero, an author of the sixteenth century, which now lies before me. This fever came on insidiously with unequal pulse and great prostration; according to the "complexion" of the patient, it went into *sinoca* or *causon*. Masdevall, who was engaged in the fevers of Catalonia, 1783-4, is an author who, in proportion to his fame, far less repays perusal. The reputation of his opiate was immense, and only now is superseded. It was composed as follows:—Tartar emetic 18 grs., sal ammoniac and salt of wormwood, each a drachm; rub for a quarter of an hour, and add one ounce of cinchona bark. For use by mouth and glysters. The opiate contains no opium. He had an antimonial mixture beside.

These authors, for the most part, anathematise, in the strongest terms, the use of the lancet in fevers, and commend the use of food and wine, not otherwise, indeed, than Graves. In this, the reigning epidemic, the treatment at Madrid is various. Bleeding, calomel, quinine, mineral acids, and the expectative treatment are all more or less employed very much as in France and at Paris. Currie's cold-water treatment is used as a new German method. Diaphoretics have been found efficient, and gentle purging only at the commencement, or vomiting. The expectative treatment is said to be little else than starvation disguised in a fine phrase. Moderate feeding is the rule, with medicines, and broths, and wine. The treatment most approved is that of the antiseptic decoctions of the Spanish Pharmacopœia. The complete to be given at the commencement, and followed up by the incomplete. According to the edition 1841, the incomplete is formed thus:—"Sliced root of *Scorzonera Hispanica* (L.) ʒj., citron seed ʒij., water 6 pints; boil to four, and add, when hot, of best cinchona powder and contrayerva, each an ounce; strain, and add syrup of elder ʒiij. Dose two to four ounces. For the complete or purging decoction, take of the former, *minus* the syrup of elder, ʒiv., senna of Spain ʒj.; infuse for half an hour, and add syrup of pale roses and elder, each ʒij. M. Dose, two to four ounces.

This is all I have to say about these fevers. That drought is concerned in their production seems next to certain. Are they an inheritance from the cholera, since pestilence often follows pestilence? Perhaps any lesion, or shock, or act of malnutrition in bad times, bad weather, and faulty hygiene, is apt to symptomatise itself in fever.

7, Westbourne-park.

ON APHASIA AND THE LOCALISATION OF THE FACULTY OF SPEECH.

By NATHL. ALCOCK,
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I AM led by the study of Dr. Bateman's very interesting paper on the above subject, and more especially by his concluding suggestion, that "possibly the existence of miliary aneurisms in the minute arteries of the brain may serve as an element for the better understanding of certain functional disturbances of that organ," to offer the following case as illustrative of the subordination of the faculty of speech to the maintenance of equilibrium in the cerebral circulation, and also as evincing the necessity of dividing aphasia into two kinds—viz., loss of power of conceiving ideas, and inability to articulate the words thought of, the mechanism of articulation being to the orator what his right hand is to the author.

Private B. was in Hospital for nine days, with headache, without the development of any remarkable symptom, when, at the expiration of that time, he became rather suddenly and seriously ill—viz., on April 12—and died on the fifth day, April 16. The post-mortem revealed complete occlusion of the basilar artery by a recent embolus. His symptoms were as follows:—

April 12.—He was walking about the ward restlessly and talking excitedly; circulation sluggish; pupils acting and regular. Towards evening his utterance became indistinct and deglutition difficult; he cried hysterically, and remained sleepless during the night.

13th.—Perfectly conscious; symptoms same in kind, but aggravated in degree at 10 a.m. In half an hour afterwards was found to be paralysed on right side; respiration and circulation both slower than natural; temperature lowered.

14th.—Speechless, but conscious; pupils contracted; had not slept.

15th.—Slept a little, from subcutaneous injection of a small quantity of morphia.

16th.—Unconscious; died at 7 p.m.

The diagnosis was obscured throughout by the absence of the more prominent signs of cerebral hæmorrhage or compression of the brain, and the consequent want of a recognisable cause to which to attribute his condition. The cause being known, the effects were appreciable as necessary anatomical results. The gradual narrowing of the blood-current through the basilar artery rendered the transverse, anterior, and superior cerebellar arteries proportionately dependent on the communicating branches from the internal carotids for their streams, and, as these arteries almost complete the arterial supply of the cerebellum, and are more particularly responsible for the nourishment of the seats of origin of the ninth, eighth, and seventh nerves, the deranged nutrition of these was manifested by perverted action in giving rise to difficulty of articulation and deglutition, slowing of the respiration and circulation, and hysterical twitchings of the muscles of the face. The diminished stream in the posterior cerebral artery produced restlessness, excitement, and sleeplessness; and the final occlusion of the basilar before collateral circulation could be established gave rise to hemiplegia and death. Doubtless the development of collateral circulation is the remedial effort which effects so many more or less successful recoveries from hemiplegia.

A CONTRIBUTION TO THE THEORY OF DIATHESIS.

By DAVID J. BRAKENRIDGE, M.D., F.R.C.P.E.,
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In ancient as well as modern times various temperaments or diatheses have been recognised as exercising a most important influence on the origin and type of disease. Each of these exhibits a special proneness to certain forms of morbid action, and an equally remarkable immunity from others, while such maladies as are common to more than one are modified accordingly.

An intimate knowledge of these constitutional predispositions is of great importance to all accurate treatment and prognosis.

It is, however, probable that until we have some clear ideas regarding the origin and nature of these diatheses themselves their recognition will fail to have much influence on the advancement of our knowledge of disease and its treatment. The very possession of so many familiar pictures each bearing a well-known name and character is apt to blind us to the fact that underlying them is a mine of most valuable truth. The following views have for some years afforded to my own mind a satisfactory explanation of the probable nature of diathesis, and have frequently guided me in deciding upon the treatment to be adopted in particular cases. As they differ from any I have hitherto seen, I offer them in the hope that they may throw some light upon this obscure and interesting subject. In this paper I shall confine myself as much as possible to the general treatment of the subject, and to the influence of climate in the production of diathesis, as the principal, although by no means the only, modifying agent. The consideration of the bearing of these views upon the particular diathesis I reserve for a future communication. The subjects which I propose to discuss at present fall under the following heads:—

1. The functional powers of all animal organs are developed by exercise, being perfected in proportion to the amount thereof.

2. The means by which organs are thus educated are those conditions which call forth their activity; hence in the same body some organs may be highly developed while others are comparatively little so.

3. The constitution thus tending to become adapted to those external influences to which it is constantly exposed, modification of structure and function is, after a time, rendered so far permanent as to be more or less hereditary.

4. Relative health, under any given set of circumstances, depends upon the perfect adaptation of the physiological habits to those circumstances. Absolute health is to be met with only where the balance of development of the whole body is maintained.

5. The wider the range of the education, the more vigorous will be the health, and the greater the range of circumstances under which it may be preserved.

6. While this habitual condition of the constitution is the only one compatible with health in the circumstances under the operation of which it has been developed, under altered circumstances it becomes the predisposing cause of disease, and is thus manifested as a diathesis.

7. The conditions under which a diathesis is developed being the opposite of those under which the diseases depending on the diathesis are generated, the means employed for the treatment of the latter will be the opposite of those necessary for the alteration of the former.

1. *The functional powers of all animal organs are developed by exercise, being perfected in proportion to the amount thereof.*

Within certain limits the great importance of the law of habit in education and development is well understood. Did facility not come with frequent repetition, progress would be impossible.

To those who desire to become skilled artisans, musicians, gymnasts, tea-tasters, auscultators, microscopists, etc., the certain knowledge of such a law is unquestionably the stimulus to those arduous, and apparently fruitless, tasks which are so perseveringly undertaken. As this law in its most comprehensive sense will be often alluded to in this paper, I may, at the outset, state that when habit or the result of education or training is spoken of there is implied a power of performing an operation acquired by frequent repetition, and due to a gradual education of the presiding nerve centres in certain directions, and perfecting of the whole apparatus necessary for carrying out the operation, so that nerve-force acts more readily and effectually in such a channel than before, or than through any less educated media. In the examples given above, and many others, it is well known that the muscular apparatus or the special senses are capable of being trained to a remarkable extent. Almost every case of vital action which has come under observation demonstrates how invariably repetition is followed by increased power and facility of performance. But in many of those unseen processes which are constantly taking place within the body the same law has not been clearly recognised. Yet if it does apply to these, as well as to the more obvious acts of the body, the vast importance of such a fact cannot well be over-estimated. That the internal organs of the body do undergo an education and development in functional power proportioned to their exercise will, I think, appear from the following illustrations.

There is ample ground for believing that some lungs habitually do much more work than others. The amount of hydrocarbonaceous food which the Esquimaux consumes in order to maintain the normal temperature of his body, exceeds by many times that required by a healthy adult in our own country. The carbon contained in this, must, in the form of carbonic acid, for the most part pass off by the lungs in exchange for a proportionally large amount of oxygen. But as this exchange constitutes the chief function of the lungs, it follows that those of the Esquimaux do many times the amount of work done by ours. And the ability of their lungs to perform such work is, by training, rendered so many times greater than that of ours. This can be easily proved. Admit, for the sake of argument, that their habitual amount of respiratory work is only double ours—a very moderate computation—and assume that our respiratory power is equal to theirs. If the latter is true, one of our lungs will, if required, be able to perform without embarrassment the work of both lungs, or double its present work, the amount allowed to be habitually performed by the lung of the Esquimaux. Such being the case, when the function of one lung is suddenly and completely arrested by disease, the whole amount of respiration should be quietly taken up by the remaining healthy lung.

Experience, however, abundantly shows that the embarrassment produced by such partial arrest of function is so great as often to cause speedy death. Hence it must be granted that in cold climates the lungs are not only more active, but are proportionally more highly developed and stronger than in warm. We have, I think, a further proof of this in the results obtained by Dr. Edward Smith, in the admirable experiments made by him to ascertain the influence of season on the exhalation of carbonic acid. He found, not only that the activity of the lungs, measured by the amount of carbonic acid given off, was greater in winter than in summer, in cold than in warm weather, rising and falling with the fall and rise of the thermometer, but that the uniformity of this response presented the following anomaly, which we give in his own words:—"The effect of temperature was very marked, but it failed to account for the great variations which were observed, and it was abundantly proved that, with the same temperature in the spring and at the end of summer, the amount of carbonic acid evolved was far less at the latter than at the former period.

That mere degrees of temperature will not suffice to measure the results may be seen by noting the quantities evolved in various months with the same temperature—as, for example, 59°, when the quantities were 8·11, 9·13, 7·64, 7·3, and 6·76 grains per minute in April, May, July, September, and October, in their order." ("Cyclical Changes in Health and Disease," p. 153.) Here, doubtless, winter's use and summer's comparative disuse of the lungs, giving rise to a corresponding increase of power in the former and decrease in the latter season, sufficiently explains how, with the same demand made upon the lungs, one grain more per minute was exhaled in spring than in autumn.

In a paper "On the Influence of a Digestive Habit in the Production of Tuberculosis" (*Medical Times and Gazette*, June, 1868), I have endeavoured to show that the organs of digestion undergo a similar development in nature and degree proportioned to their exercise, a special education being required for every decidedly different substance. Without such a training, the power to nicely adjust a most complex process to the necessities of each case would be wanting, and perfect digestion of any substance would be impossible, although the necessary organs remained quite free from actual disease—just as the hand and eye of the musician, however perfect anatomically and physiologically, are quite incapable of transferring a difficult piece of music from the paper to the instrument without a power to do so, acquired by long and steady practice, existing in them and their presiding nerve centres. So special is this education that the training necessary for one fat or oil does not serve for all substances of the same class. Each requires a special modification of the powers; hence, as is well known, one form of fat or oil can often be taken when others are rejected.

Many phenomena connected with disease appear to me to come under this law, such as restoration to apparent health after the loss of part of an important organ.

"If one kidney," writes Sir Thomas Watson, "wastes, or is spoiled by disease, an increase of function devolves upon the other, and, by a beautiful law of compensation, the sound organ, without any alteration of its peculiar fabric, enlarges. The same is observed to be the case with the lungs." I do not, however, think that this enlargement—although it is undoubtedly an early result of suddenly increased function—sufficiently accounts for recovery in such cases. The following appears to me to be the most satisfactory explanation:—All organs of the body being capable of an almost unlimited amount of training and development, when a portion of one has perished, the remainder, if healthy and sufficient in amount to avert actual death, may, by education, become quite capable of taking up the work of the lost portion in addition to what it previously performed. The lungs and kidneys of the Esquimaux, although capable of performing many times the amount of work done by those of the negro, do not greatly exceed his in bulk. In like manner, when an organ has been partially destroyed by disease, we should anticipate recovery rather through an increase of power than of size on the part of the remainder.

2. *The means by which organs are educated are those conditions which call forth their activity; hence in the same body some organs may be highly developed while others are comparatively little so.*

However various or changeable the state of the surrounding influences may be, it is necessary to the maintenance of health that, within the body, uniformity of certain conditions should be preserved. For this purpose a most complex machinery is provided, having arrangements specially adapted for every kind of climate. It is owing to this admirable provision of a number of organs intimately related in function one to another, and presided over by closely associated nerve centres, that the habitual powers of the body are capable of becoming adapted to the most varying circumstances, and that man in a healthy state is to be met with in every region of the earth, however extreme its climate. As it is against the influence of external agencies that this highly efficient organic apparatus is intended to operate, the direction will be given to its activities, and consequent development and powers, by the prevalent conditions to which it is exposed. Should an equal amount of work be thrown by these upon each organ—as is probably the case in temperate climates—the balance of development will be preserved. In extreme climates it will not be so. Under the influence of such, a maximum pressure will be exerted on one set of organs, a minimum on the remainder, and the corresponding development and functional powers will be unequal. Hence the organs and functions most perfect under a cold climate, will be least advanced under a hot one, and *vice versâ*. Each variety of climate will give rise to an answering modification of the constitution.

That other circumstances than climate influence the type of constitution is unquestionable. Man's body is not merely a machine regulated by the physiological necessities imposed upon it by a surrounding atmosphere, but is, besides, the habitation of a governing mind not less peremptory in its demands. He has, moreover, in his position and surroundings in the social world another series of influencing circumstances to which he must become adapted. A powerful effect is thus produced upon the constitution by the restraints of poverty and the licence of riches, by occupation and its accompanying conditions, by social customs, and by the self-imposed restrictions and indulgences of religious or other belief. In our own land, a marked difference of configuration and constitution is observable between the extreme ranks of society. But the striking influence of even purely self-imposed conditions in antagonism to that of climate is well seen in the two following opposite examples. On the one hand, strictly different habits of thought and diet have, notwithstanding the influence of the same climate, for several thousand years maintained a striking difference of general appearance between the different castes in India. On the other hand, uniformity of customs and creed, dating from an even more remote period, has preserved the typical characteristics of the Jew against every variety of climate.

3. *The constitution thus tending to be more adapted to those external influences to which it is constantly exposed, modification of structure and function is after a time rendered so far permanent as to be more or less hereditary.*

From what has already been said, not only is it evident that the organs of the body must gradually come to harmonise in their habits with surrounding influences, but it is also most probable that what was originally an acquired property will become in each succeeding generation more and more an inherited part of the constitution. In animals we find that habits acquired by training are thus transmitted to the offspring. A certain race of dogs, for example, has originally been taught to point, and now the puppies of that race "may be seen pointing at swallows or pigeons in a farmyard." "The breed of shepherds' dogs," also, "often display an extraordinary hereditary sagacity respecting their peculiar avocations." Organs which have become educated and developed to an unusual degree by increased use and activity are also after a time inherited in this condition. Thus, in Europe, the constant practice of milking has gradually enlarged the udder in the cow, and this peculiarity is now inherited. In like manner, after prolonged subjection to climatic training, a race will come to inherit a special adaptation of organic power to the particular climate. After a time such adaptation will cease to be acquired by each individual, the infant being from birth so constituted. The rapidity with which this change is effected from the entirely acquired to the entirely inherited, depends chiefly on frequency of repetition. Hence, as climate imposes upon the body constant demands, which meet with an unceasing responsive effort, we can understand that the acquisition of inherited power will, in this case, be much more rapid and decided than in the case of any volitional act. The extent of the change from previous conditions, and the consequent amount of organic alteration thereby necessitated, will influence the time required, lesser modifications being more speedily established than greater ones. The power to perform habitual acts is never altogether a permanent attainment of those by whom it has been acquired, but is, on the contrary, maintained with difficulty, and, for the most part, readily lost. Some portion, however, of such acquired power is always retained, those who have once learned any difficult performance being able to reacquire it much more readily than those to whom it is entirely new. The amount of power transmitted to the offspring in such cases probably bears some relation to this permanent portion of acquired habit. In each succeeding generation, provided the training is kept up, this will be still further augmented and confirmed, until ultimately the perfect power will be inherited. Instinct may, in like manner, be habit originally acquired, and persistently cultivated through many generations, until structure has gradually become so modified to favour the easy performance of the particular act, that it becomes the most natural effect of outgoing energy. Acquired power must, in strength and permanency, fall far short of that which is inherited. The infant who inherits perfect adaptation to a particular climate, is thus a very differently constituted being from the infant of a stranger born in the same climate. The latter is, in this respect, in danger from the first; the former possesses from its birth immunity from risk; the latter has to be educated and developed, the former has merely to grow.

4. *Relative health under any given set of circumstances depends upon the perfect adaptation of the physiological habits to those cir-*

cumstances. Absolute health is to be met with only where the balance of development of the whole body is maintained.

A. Relative Health.—When the powers of the system are so developed as readily to respond to all the demands made upon them by surrounding agencies, the body is in a state of relative health. As each decidedly different locality varies somewhat from all others in climate, each will be represented by a different state of the organs in health. We have already seen that harmony of the habitual activities of the constitution with surrounding requirements depends upon an education which can be had only under the influence of the more or less continuous operation of these demands. Hence it may be safely assumed that, other conditions being equal, the most healthy persons in any given locality will be found amongst those who have spent their own lives there, and whose ancestors have dwelt there for many generations. These have inherited a constitution relatively healthy. It is evident that the body, as its various organs exist in definite and, it may be, different degrees of development, can only operate safely under such conditions as will exercise each organ proportionally to its power. Circumstances so completely harmonious with the existing state of the body are, however, not likely to be met with, except in the locality where the constitution has been formed. The popular belief in the healing virtue of the native air is founded upon the recognition of facts, of which the foregoing may be regarded as the explanation.

B. Absolute Health.—In body, as well as in mind, development, to be perfect, must be equal. Therefore, although it is true that the highest education of particular organs is to be met with in extreme climates, yet, as along with this there is the lowest development of others, the balance of all the organs is not maintained, and the animal is, as a whole, imperfect. This is, as we can understand, a condition incompatible with the greatest vigour and activity of the body; hence we do not find man in his highest condition in any extreme climate. The regions in which man has attained his highest development and made the greatest advances lie midway between the extremes, enjoying what, from its evident suitability to the human frame, has been called a temperate climate. Under the influence of such, although individual organs may be less advanced than elsewhere, the body, as a whole, is more perfect. Such an equal development is most compatible with that vigour and enjoyment of life which constitutes absolute health. Man instinctively craves such a state. It is not improbable that the periodical longing for change of air and locality experienced by most persons springs from some disturbance of the balance caused by local conditions. The satisfaction of such a longing is not essential to relative health, but it is in the direction of a higher and more perfect development. It is a familiar fact that, in marriage, opposite temperaments attract one another, and it is not unlikely that this arises from a similar intuition of a beneficial character, as we shall again see.

(*To be continued.*)

Very many believe water is the medium by which malarious poison is conveyed into the system, and this is by no means an idea of recent origin. It is worthy of remark that both Hippocrates and Rhazes asserted fever and enlarged spleen were caused by drinking impure water. Linnæus, in his thesis entitled "Hypothesis Nova Febrium," announced the true cause of ague to be *aqua scilicet argillacea*, or the use of water impregnated with organic matter while percolating through an argillaceous soil. Dr. Pidduck indeed states he has succeeded in curing intermittents simply by interdicting the use of any but distilled water. Again, the inhabitants of most tropical or malarious countries firmly believe that water causes fever. Dr. McLelland remarks on the prevalence of this belief. Marshall states the Cinghalese attribute fever to impure water. Dr. Lyell tells us, the inhabitants of the Yusufzye believe fever to be caused by cold, and by water which has been rendered impure by passing over rice fields. The inhabitants of the malarious plains of Troy believe their diseases to arise from the water they are in the habit of drinking. In Albania the shepherds not only will not drink themselves, but are careful to prevent their flocks watering at other than known healthy streams. Mr. Cornish, in his "Medical History of the Shervaroy Hills," states the inhabitants believe the water below the mountains produces fever. Throughout Rajpootana, the belief that the cause of fever exists in the water prevails very extensively, and particularly among the better classes of natives.—*W. J. Moore, Surgeon, Marwar Political Agency, on Malaria.*

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

FALL FROM A SCAFFOLD—SEVERE INJURY OF THE HEAD—SUBSEQUENTLY ALTERED SPEECH—RECOVERY.

(Under the care of Mr. CURLING.)

The notes of the following case are by Mr. H. W. Page, with the exception of those embodying the conversation on April 11, which are by Dr. Hughlings-Jackson, one of the interlocutors:—

A man, 27 years of age, fell off a scaffolding at 8 a.m. on April 6, and was admitted under Mr. Curling's care on the same day at 9. When brought in he was perfectly sensible, and did not think there was much wrong with himself. There was, however, bleeding from the ears and nose, and he vomited much blood after he came in. At 12 o'clock it was noted that his ideas were confused. His pulse was 56, respiration 17, temperature in axilla 97·8°; pupils widely dilated; facial paralysis beginning; and occasionally there was twitching of the lower limbs. 5.30 p.m.—He passed his urine voluntarily. 8 p.m.—Pulse 68, temperature 100·2°; he was now more conscious.

April 7, 1 a.m.—Has been calling out much, and complaining of pain in the back of his head. Asks for "baccy." Both pupils still widely dilated, the right more than the left. 10.30.—Says he is better, and that he enjoyed the bread-and-milk he had for breakfast.

8th.—Pulse 56; pupils widely dilated; no more paralysis perceptible; is still confused, and answers questions usually in the affirmative, "Yes, dear." He says he wants to go to his work. Temperature 99·8° in right axilla, 98·8° in left. 8.30.—More delirious; right pupil widely dilated, and fixed; left not so much dilated, and not so fixed; pulse 53; action of heart very irregular; temperature of right axilla 99·8°, left axilla 98°. He does not give a correct answer to any question, replying usually, "All right, dear," etc.

9th.—Pulse 51, more regular; temperature, right 98·2°, left 97·8. Less confused, though still rambling. He recognises his wife, which he did not yesterday. In the evening his pulse was 56, hardly perceptible. Answers most questions in a confused manner; but some questions—*e.g.*, if he had seen his wife lately, or if he wished to go to work—he answered correctly. He occasionally, when evidently going to reply correctly, uses a word having a similar sound to that which he ought to use. Temperature, right 98·2°, left 98·8°.

10th.—No marked paralysis, but the tongue on protrusion is pushed slightly to the right side. 8.30 p.m.—Has been restless for the last hour and a half, sitting on the edge of his bed, and refusing to get in again. In speaking he perpetually uses some particular phrase. To-day it is "Upon my word," yesterday he used the word "like," and the day before he incessantly said "Yes, dear."

On the morning of April 11 Dr. Hughlings-Jackson saw the patient, and wrote down the following conversation. The man's voice and articulation were clear. He did not speak except when questioned, and he "answered" questions quietly and in a natural tone. He did not stammer nor hesitate; indeed, to a person ignorant of the English language, the patient's tone, emphasis, and manner would—so far as such a person could appreciate them—have seemed normal:—"J.: "Where do you live?" P.: "It's all like in one, that's all." He gave the same answer when the question was put again. When repeated for the third time, he gave part of an address, and added "That's all," and next said, "My girl's got it." J.: "Got what?" P.: "Why, the way." J.: "What age is your wife?" P.: "That's all." J.: "Has your wife come to see you?" P.: "Yes, seven years; that's all." J.: "What day of the week is it?" P.: "The way like; that's all." J.: "How old are you?" P.: "Me, Sir? Yes, seven, Sir." J.: "No more?" P.: "No, Sir; that's all, Sir; third of that way, that's all." J.: "What is your work?" P.: "Just the same like, tin, thirteen, that's all." J. repeats the question. P.: "The way to do, that's all; in the fifth, just the same, just the same, just the same like, that's all." J.: "What is the name of the Queen?" P.: "I only know the one as I knows of, that's all; the one of ten, that's all; just

the same like, when we had the fair, just to cut like, we had the [word not caught] and twenty, in the cut way, that's all; just the same in the way here, just the same, makes no difference." J.: "What is *the same?*" P.: "I don't know." Here the nurse repeats the question. P.: "That's all he had, and of course we had, just word to fetch, and we had tuppence and plenty for him, that's all we had." J.: "What is your name?" P.: "My name, Sir? Edward Wallis." J.: "What is your wife's name?" P.: "Why, as last, seven worth, last twentieth, that's all." J.: "What is this place?" P.: "It is in different things [then came a number and name of a street], that's all, that's all; lived there twelve years. That's like on beth way, left way, and it comes on twenty-firf, that's all, just like coming like." J.: "Can you write?" P.: "Yes, Sir; a little." J.: "Have you any headache?" P.: "A little, that's all, a little; I wish I had a little, and then I could have gone somewhere."

Dr. Hughlings-Jackson notes further:—He wrote his name quickly, and in all ways well, and then under it E 78, 1853, the meaning of which, if it had one, I could not get from his wife. I asked him to write more. He began Ed— when I stopped him, and asked him to write something else. He seemed confused, and said "that's all," and some other words I did not succeed in transferring to paper, and then he wrote his name again. Next he wrote "Warch." I then said, "Write that," pointing to the words "date of admission" on his bed-ticket. P.: "Take in them, you mean." He wrote "Darte of d—;" then he stopped, and next began trying to patch the "d" into "ad." I, however, crossed all out, and asked him to write it all over again. He then wrote, "Date of admissinsn." He copied the word "Diagnosis" accurately and quickly. I asked him to write "Cat" (dictation). He wrote at once and very clearly "Daterial." I dictated the word "dog." He wrote "Daternial." The letter M had an extra pothook.

I asked him to read. He took the book very complacently, but all he did was to point to one word after another, saying "It's the other, and here's another, and thirdenly, and here's another, that's it." I point to a small word and ask what it is. He replies, "Why, that's another, and it, it ought to be." His wife says he was a good scholar.

12th.—Dr. Jackson remarks—"Articulation perfectly distinct. Speech about the same as yesterday." 10 a.m.—Pulse 66. No perceptible difference in his condition. 8 p.m.—Pulse 64. Has slept quietly for some hours this evening.

13th.—Pulse 60. "What have you had for breakfast?" "That's all, Sir—some tea, Sir, and three like, Sir—three trade like, slates like—that's all, Sir." "Have you any pain in your head?" "Me, Sir! I wish I had, for I could then ——." Ice to be discontinued, and to have a blister behind his right ear.

14th.—Seems much better. Answers most questions correctly. Pulse 64. 8 p.m.—Pulse 68. Is more rational, though his wife says he occasionally wanders. He remembers that one of his children had been to see him three days ago. He can tell the names and ages of all his children accurately.

15th.—"Pulse 72. Seems much the same. At 1 p.m. a small quantity of fluid of a red colour issued from the right ear. It looked like a mixture of blood and water." (Remark of the House-Surgeon.)

16th.—Pulse 60; temperature 98·4° F. There is no sign of any discharge from the ear. Answers questions reasonably and correctly. 8.30 p.m.—Pulse 64; temperature 98·8° F. He complains of pain on the left side of his head. The meatus of the right ear is filled with a clear fluid, which does not flow out. Is to have middle diet and milk.

17th.—Pulse 64; temperature 98·2° F. Complains of pain inside his right ear. The meatus is still filled with a watery-like fluid. Pupils act properly.

24th.—Complains of great pain in his right ear, which discharges a good deal.

From April 17 no report has been kept of the case, with the exception of one remark on April 24. No bad symptoms, however, subsequently presented themselves, and the man was discharged on May 8, able to employ perfectly correct sentences and words, and in all respects appearing to be well.

When this man was first seen by Mr. Curling, a few hours after his admission, some apprehension was entertained that the base of the skull was fractured, but his symptoms afterwards, and his complete recovery within a month after the accident, seem to show, Mr. Curling thinks, that the case was one of concussion affecting chiefly the middle part of the brain.

The case is of further interest as showing a strange disorder of speech. This disorder was not part of delirium, in the ordinary sense of the word at least. The man seemed quite cool and collected on April 11, the day on which the conversations above reported occurred. It is most important to give faithful accounts of the defects of speech which actually occur, although a great expenditure of time is involved, and much patience is required to obtain clear details. We must not be satisfied by saying of a case that it is one of "aphasia" or "loss of memory for words." In many instances, when elaborate notes of conversations have been taken, we are unable to complete the records of the cases by post-mortem examinations. However, the foregoing case is completed in a more interesting manner—by the recovery of the patient. Had he died, we could not expect to have discovered the minute changes on which the *disorder* of speech depended, although we might have inferred the wide region in which they lay by observing the position of bruises, lacerations, etc. The minute changes were doubtless secondary to such gross lesions. As it is, however, we can only speculate as to their position, and it is scarcely worth while to do so.

BRISTOL GENERAL HOSPITAL.

TWO CASES OF COMPLICATED COMPOUND FRACTURE OF THE LIMBS TREATED BY CARBOLIC ACID.—RECOVERY.

[Reported by Mr. Dobson, House-Surgeon.]

J. G., aged 14, admitted March 12, 1869, under the care of Mr. Coe, suffering from Pott's fracture of the left leg, with considerable effusion of blood round the ankle and up the calf, severe contusions of right leg, fractured left humerus, and had compound fracture of radius and ulna on the same side near the wrist, with considerable projection of both bones through the wound, with much contusion of the soft parts, and separation of muscular planes. The wound was on the front of the forearm, three inches in length, and transverse in direction. The radius was broken transversely; the ulna was also broken transversely, as well as split longitudinally; the upper fragment, which was sticking through the flexor carpi ulnaris, was nipped off with the bone forceps. The boy suffered a considerable amount of shock. Three stitches were put in the wound, and carbolic acid applied by means of strips of lint saturated in a mixture of the acid and olive oil in the proportion of one to five. He was put up with front and back splints, and made a rapid recovery in spite of his numerous injuries, no bad symptom occurring except an occasional bagging of pus. He left the Hospital in the first week of May quite well.

S. D., aged 12, admitted March 24, 1869, under the care of Mr. Marshall. He was run over by a baker's cart, and sustained a compound fracture of his right tibia and fibula about three inches above the ankle-joint. There was a large wound on the inner side of the leg, and about two inches of the tibia projected through the wound. He had lost a good deal of blood previous to his admission, and was still bleeding freely. The blood was found to proceed from the posterior tibial artery, which had been punctured by the broken bone. The artery was deeply placed, and, after enlarging the wound, it required a patient and prolonged search to discover the actual part wounded. When discovered, the House-Surgeon passed a thread above and below the puncture and secured the vessel; about three-quarters of an inch of the tibia was then sawn off, three stitches put in the wound, the limb dressed by carbolic acid cloths, and placed on a short outside splint, and his foot kept warm by cotton wool and a hot-water bottle. The next day the foot had recovered its natural warmth, and the boy made a speedy recovery with a limb scarcely at all shortened and but very little deformed, notwithstanding the severity of his accident. He was sitting up without a splint on May 21, two months after the injury, with the wound perfectly healed.

Remarks.—These two cases are good illustrations of Conservative Surgery. Both cases looked as if immediate amputation of the injured limb would be necessary, yet both made good recoveries with useful limbs. How much of their recovery may be due to the carbolic acid dressing I am not prepared to say, but I do believe that it aided to some extent the efforts of nature. I have had opportunities of seeing the "antiseptic cloths" used in many cases of compound fracture, as well as to stumps after amputation, and have had reason to be satisfied with the success of the mode of treatment.

THE Cardiff Infirmary being about £1100 in debt, a number of working men have held a meeting and formed a committee of thirty-five to raise sufficient money to clear it off.

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Medical Times and Gazette.

SATURDAY, JUNE 19, 1869.

THE NOMENCLATURE OF DISEASES.

The more one considers the work which has been issued by the College of Physicians, and which has now been forwarded to the majority, if not to all, of the Profession by "authority of the Registrar-General," the more one is struck with the immense labour such a work must have cost. But it must also be confessed that, after a careful examination of the volume, the subsequent conclusion is also forced upon one that a little more labour, especially of the critical kind, would have been well spent, and would have resulted in the production of a more valuable work than that which we now possess. The first to open fire upon the new nomenclature have been the Royal College of Physicians of Edinburgh, who publish a report on the volume in the June number of the *Edinburgh Medical Journal*. This report is not intended to be exhaustive, but rather to justify its own appearance as a kind of protest against the publication of such an important document, and its distribution to all members of the Profession at the expense of Government, whilst it is not as nearly as possible perfect.

The first ground of objection that the Edinburgh Physicians take is that the basis of the Nomenclature is too anatomical. Without doubt this is the case, but the imprimatur on the title-page, the "authority of the Registrar-General," explains this, for it is by him evidently intended rather as a catalogue of causes of death than of diseases affecting the living body. Nevertheless, this very difficulty has to a great extent marred the work, for it has occasioned the anatomical form of which the Edinburgh Physicians complain, and as a list of causes of death it is perhaps *more* extensive than it ought to be. Thus the Edinburgh College complain that of apoplexy only two forms are given, the congestive and sanguineous; and this statement of the varieties of apoplexy, they assert, is complete neither nosologically nor pathologically. Perhaps, however, the best illustration of the difficulties of our own College is to be found in that part of the work which deals with diseases of the stomach. Under the heading of the ills to which this portion of our flesh is heir we find such apparently incongruous titles as hæmatemesis, perforation, dilatation, stricture, dyspepsia, gastrodynia, pyrosis, vomiting. Surely we are not to accept all these as diseases of the stomach distinct from all others, and if they are merely set down that they may be registered as potential causes of death we may urge that a man does not die of pyrosis alone. The vomiting may be accepted from this point of view, as may also the hæmatemesis, but pyrosis must have been introduced for other reasons, and these conflicting reasons give rise to the incongruity complained of.

But the Edinburgh Physicians attack the Nomenclature on another ground which must really affect our College—viz., in its Latinity; they complain that it is too pedantic. Now, it is a well-known fact that the publication of the Nomenclature was deferred for some months merely to insure the absolute correctness of the Latinity taken by the Oxford standard; and now to be told that it is pedantic—well, that is a little too hard. Nevertheless, we are not prepared to deny that there is some little truth in the allegation of the Edinburgh College. Thus, the London Physicians have introduced the Latin phrase "febris rubra" to supersede "scarlatina," "cervix rigida" for "torticollis," and the words "iter sanguinis impeditum" for such an expression as "stenosis." In the first instance we should feel inclined to doubt the policy of this, and, in the second, object, as has been done by the Edinburgh College, that the system has not been uniformly and rigorously adopted. It is questionable whether it would be absolutely correct to write Medical Latin in Ciceronian phrase; certainly, the language in which prescriptions and directions are and have been written, even by the most elegant scholars, is very far short of the Latin of Cæsar and Cicero, or even of Livy and Tacitus. It is at all times unadvisable to substitute unknown words for phrases which, although incorrect, are well known and generally recognised; for thereby an ambiguity is introduced, and the chance of an error increased where ambiguities and the chances of error are all too common.

We may ask what is the meaning of *venena vegetabilia*. Does it mean growing poisons, or poisons that can grow? The word *vegetabilia* belongs to the same class of Latin as *gratitudo*, *desirabilitas*, and *retinabilitas*. It is not our object to follow the Edinburgh College all through their list of errata, so to speak; but we may be allowed to point to some of the more prominent omissions or inaccuracies, which they deplore. Thus,

Pigmentary degeneration is omitted.

Suppurative pericarditis is made a distinct disease, and not placed as a variety of pericarditis.

Neither cyanosis nor jaundice has any reference to their causation.

Capillary bronchitis is not given as a variety of bronchitis.

Peritonitis from perforation is not given among the varieties of peritonitis, and it may be added that there is nothing said as to indicating the cause of the perforation.

Condyloma is put down as a complication of gonorrhœa.

Many objections are taken to the nomenclature of diseases of the female sexual organs. Some have a very sound foundation, others are of a more trifling character. Thus, we perfectly agree with the authors of the report that a class of diseases of the broad ligament of the uterus is wrongly conceived, and, as is well remarked, the disease above all others not one of the broad ligament is periuterine or pelvic hæmatocele; yet this is so included along with other incongruous companions in the list headed as above.

Another well-founded ground of objection is that secondary hæmorrhage is omitted from the list of affections following parturition—that is to say, it is not made a distinct and separate affection from post-partum hæmorrhage, which alone is given.

Again, when dealing with sudden death after delivery, the Nomenclature mentions inpaction of coagula in the heart and pulmonary artery. This must be a misprint.

On the whole, therefore, we cannot but conclude that the Edinburgh College of Physicians have made good their point that the Nomenclature of Diseases is not perfect; but our experience in such matters convinces us that human life is not long enough to make it so.

Since 1862 the whole of the sewage from the Asylum, Hayward's-heath, has been applied by surface irrigation for the growth of Italian rye grass.

STATISTICS OF ST. BARTHOLOMEW'S HOSPITAL.

A SET of elaborate tables for the year 1868, showing the number of in-patients admitted, the kinds of disease treated, and the results, at St. Bartholomew's Hospital, has just been issued. We propose to notice these at a future time in comparison with the statistics of other Hospitals; for the present, we need only mention a few points that strike the reader at first sight.

In the classification of patients according to their occupations, we find the highest numbers as follows among the men:—Day labourers, 495; carpenters, 134; porters, 127; printers and compositors, 84; clerks, 81; boot- and shoe-makers, 71; carmen, 69; schoolboys, 61; sailors, 60;—and on the women's side, married women, 789; servants, 503; children under 14 years of age and infants, 176; needlewomen, 67; and Hospital nurses, 49. It is difficult to estimate the exact amount of improvidence which ought to be inferred from these numbers, and from the 166 smaller groups which go to make up the total of 5962 in-patients under treatment during the year. It may be suspected that one of the functions of a great Hospital is to relieve a large number of persons from the penalties incurred by their own negligence or faults. The last item quoted, however, the number of Hospital nurses, is certainly free from suspicion on this head. In another table, which gives the cases of disease contracted within the Hospital, the number of nurses and sisters attacked is set down at 25; so that the remainder of the 49 persons returned as Hospital nurses would appear to have been imported from other Hospitals. But even the number 25 can scarcely be considered satisfactory, when it is remembered that the sisters and nurses at St. Bartholomew's probably do not much exceed 100. That one-fourth of the whole should be prostrated by sickness every year is a result which strongly suggests the necessity of some amendments. The buildings of St. Bartholomew's are old, and the accommodation for the nurses is such as no one would think of proposing in the present day. Their rooms are small and dark, and have no outside windows. We are afraid to inquire what the cubic space afforded by them may be. Probably it will be enough to have suggested to the very able and benevolent governing body of the Hospital, that this is a point very urgently requiring consideration. Of the 25 cases occurring last year among the sisters and nurses, 2 are returned as small-pox, 1 scarlatina, 6 quinsy, 5 typhus, 4 enteric fever, 6 febricula, and 1 dysentery. These figures require no comment.

The number of cases in which post-mortem examinations were made is stated to be 397, and the number of deaths at 573. Of these deaths 392 are returned as Medical cases affording 310 Medical post-mortems. We confess to a little surprise at this result, seeing that the custom prevails at St. Bartholomew's, as at many other Hospitals, of obtaining the direct consent of the relatives before a body is touched. Is it possible that in only one Medical case in five the relatives refuse, or the Physicians think it unnecessary, to make a post-mortem? If there is no mistake in the numbers, it would appear that there is an unusually small amount of prejudice on this matter existing among the classes that furnish patients to St. Bartholomew's. In this case the Hospital would be justified in insisting on the condition which prevails in every other country—viz., that all patients dying in Hospital should be subject to post-mortem examination whether their relatives will or no. It must often happen that post-mortems are refused in the most important cases by the ignorance or stupidity of the deceased person's relatives. The percentage of deaths from zymotic disease, as compared with the total mortality in Medical cases, is given as 14, that from diathetic disease 31, from diseases of the circulatory and absorbent system 12·25, and from those of the respiratory system 12. But here it must be remarked that the numbers per centum of the total mortality given for the several classes of diseases, when added together, do not amount to 100, but to 96·5, so that probably some item is missing from the table.

The Surgical operations performed in the year amounted to 534, followed by 60 deaths. Among these there were 3 primary amputations of the leg, all of which were fatal; one death from primary amputation of the fore-arm out of 7, and one from that of a finger out of 17 cases. Of amputations of the thigh, one single secondary case was fatal; while of those performed for disease, 13 in number, 6 patients recovered, and 7 died. Ten amputations of the leg for disease resulted in 5 recoveries, 3 deaths, and 2 failures; while of 5 secondary amputations of the leg, 1 failed, 3 were followed by death, and 1 by recovery. The results of lithotomy are more satisfactory; 19 cases occurred, and all recovered. Of 4 ligatures of arteries for aneurism, 3 were followed by recovery, and 1 by death. An interesting table showing the results of 2665 operations, extending over six years, completes the series. The number of deaths is given as 337, or 12·64 per cent. Tables are also given showing the comparative frequency of diseases at various ages. We notice with some regret that no information is given as to the cost per head of this large body of in-patients, nor any estimate of the results and cost of the indiscriminate treatment of out-patients which is practised at St. Bartholomew's.

DONALDSON *v.* BARKER.

MUCH has been written of late on the grand *rôle* which the Anglo-Saxon race is playing in the world's history; of the Greater Britain, that is to include well-nigh every part of the globe worth inhabiting; and of the blessing of our English laws and English liberty, which are to be the magnificent inheritance the people of this island are destined to bequeath to those of the cheaper races they have not succeeded in improving off the face of the earth. Of course, this is vastly pleasant, and quite in consonance with the superlatively good opinion we naturally entertain of ourselves and theoretically of our institutions. Practically, however, and at home, we are not so satisfied with the legal code which we are generously bestowing on all the world. We have two Houses of Parliament constantly at work in making new or mending old laws, some of which, like our religion, seem

> "intended
> For nothing else but to be mended."

Nevertheless, Englishmen, wherever they go, boast of carrying with them their laws and their liberty, unmindful that if the law be unjust and the liberty merely a licence to injure others, the community wherein they are planted—be it colony or foreign state—is the loser by the importation.

If there be one unjust provision in the whole body of the English code, it is that which permits a patient in a public Hospital or charity to bring an action against an honorary Medical officer, and sue for damages on account of some supposed error in the treatment of the case. It must be recollected that an honorary Medical officer to a Hospital is, as regards the patients of the Hospital, quite in a different position from that of the private Medical Practitioner. The skill and knowledge of the Hospital officer are proved by the fact of his being chosen to fill the office, his anxiety to do Professional work is shown by his holding an honorary office at all, and, in the rare case of neglect, aggrieved patients can always lodge their complaints with the governing body of the institution. Then, again, the position of the Hospital patient is entirely different from that of the private patient. There is no such contract between the Hospital patient and the Hospital Surgeon as there is between the patient who pays and the Medical man who for payment renders his advice and assistance. But these distinctions are simply ignored by the English law. The law is so little careful to protect the most useful and self-denying of secular professions in the performance of its duties, that it offers facilities for any recipient of charity who is being attended by a Medical officer to bring an action against him for real or fancied error in treatment, and not only to inflict on the Doctor

the pain and anxiety of a lawsuit, but, whether loser or gainer, to mulct him in heavy costs.

We should have thought that such a legal provision might, at all events, have been kept for the persecution of Doctors at home. Not at all. It is part of the glorious inheritance we bequeath to our colonies, and it has been very lately in full force at Melbourne.

We wish we could say that this law was the only bad thing exported from England with our boasted Hospital system and its honorary Medical officerships. There is a practice amongst us at home which it requires all the force of Professional opinion to repress—a practice which is a scandal and disgrace to Medicine, and is unknown in all other liberal professions. We mean that of suborning Medical witnesses to support a case against a Professional brother, to criticise his treatment, injure his Professional character, and increase his pecuniary loss. We are glad to believe that amongst ourselves this practice is on the wane. We of the *Medical Times and Gazette* may fairly take to ourselves the credit of having worked with some success to abolish it, and we are certain that the large majority of British Medical men would refuse to enter a witness-box to injure another Practitioner. But the system is in full vigour in Melbourne. In the case of Donaldson *v.* Barker, the particulars of which we shall directly recount, four Medical men, one after another, got into the box to lay the blame of the unfortunate termination of the case on the treatment pursued by Dr. Barker, and thereby to damage his Professional career and character. Fortunately, there were other Medical witnesses, who took the Professional and scientific side. The jury gave a righteous judgment and exonerated Dr. Barker; but no thanks to the Medical witnesses for the prosecution.

The plaintiff Donaldson was a patient in the Melbourne Hospital for fractured patella. He was received into the Hospital on Tuesday, September 15. He was at first attended to by the Resident Surgeon, who placed the leg upon a back splint, applied a bandage from foot to knee, and another above the knee, leaving the knee bare. The patient was seen by Dr. Barker on the next day, when the parts about the knee were so swollen that it was impossible to determine the nature of the accident. The limb was elevated, and a poultice applied. On the following day (Thursday) the swelling had diminished, and a transverse fracture of the patella was detected. Dr. Barker determined on Friday to put the fracture up in a ring as the best and most recent mode of treatment. The ring, which was made according to his direction, did not fit, and it was not until Sunday that a suitable and well-fitting ring could be adjusted. This was fitted over the patella, and secured by four tapes fastened round the back splint. The ring was of course well padded. On Monday morning Dr. Barker saw the patient, and no complaint of the apparatus being too tight was made. On the evening of that day, however, he got a letter from the Resident Surgeon, saying that the leg was not doing well, and on going to the Hospital he found that the limb had been taken out of the apparatus, that it was discoloured and swollen, and that it was being rubbed by the wardmen. The process of rubbing had been carried, before Dr. Barker's arrival, to such an extent, that the cuticle had separated. Of course he immediately ordered it to be discontinued. Gangrene subsequently commenced at the toes, and proceeded rapidly upwards. The leg was amputated, in the sequel, above the knee, a portion of flap being obtained from the tissue over the patella.

Now, an impartial perusal of the evidence proves to our own minds that the unfortunate result was undoubtedly due to the bandaging of the leg, and not to the application of the ring; but even supposing that the case for the prosecution was well supported by fact, and that the application and fastening of the ring had anything to do with the gangrene, we do not see that Dr. Barker was at all responsible for it. Dr. Barker adopted the most modern and a very successful mode of treatment in these difficult cases. He superintended the case as far as a visiting Surgeon could do, seeing the patient every day. Under these circumstances it would be absurd to hold him responsible for an unfortunate result, even had he been in the position of a private Surgeon and Donaldson a private patient. If any one were to blame, it seems to us that the wardsmen and Resident Surgeon ought to have so watched the case that the first symptoms of danger to the circulation should have been perceived. At least, the Resident Surgeon should not have attempted to shift his responsibility by appearing in the box to support a charge of malpraxis against his superior officer. We think, therefore, that the verdict given by the jury was a very just one; for, whilst they entirely and absolutely acquitted Dr. Barker, they added to their verdict a clause to the effect that the administration of the Hospital demanded inquiry. We entirely agree with them. But although Dr. Barker has thus been relieved from all blame, he will have, as the plaintiff possesses no means, to pay his own costs, which will amount, we believe, to between three and four hundred pounds. This is British justice, which we are so proud of planting in our colonies.

THE WEEK.

TOPICS OF THE DAY.

It will be recollected that a medal was founded by the friends of the late Dr. Baly, in memory of his short but brilliant career as a Physician and Physiologist, which was to be awarded from time to time to persons who distinguished themselves in physiological science. A more fitting memorial to the translator and annotator of "Müller's Physiology" could not be conceived. The award was placed in the hands of the Royal College of Physicians; but corporate bodies are proverbially slow and deliberate, and up to the present time no physiologist has received the coveted honour. Now, however, we hear that the College of Physicians are stirring in the matter, and all we fear is that a long delay may be succeeded by a too hasty award. The medal is to be given to the physiologist who has most distinguished himself in the "two years particularly" preceding the award, which is to be made every second year. It is most important, for the sake of Dr. Baly's memory, for the value of the medal as a scientific honour, and, we may add, for the credit of the College of Physicians itself, that pains should be taken to award the medal fairly and honourably. If the first recipient be not in the first rank of physiologists, a precedent will be set, and the value of the medal will be damaged for ever. A medal founded in remembrance of such a man and awarded by one of the foremost Medical bodies in Europe, should be one of the most highly coveted honours in Medicine. We say in Medicine, because we think, considering the Profession and career of Baly, and the character of the awarding body, that a physiologist should be selected as the recipient whose chief distinction it is to have rendered signal service to the physiology which bears a practical relation to Medical science, and not to speculative or transcendental physiology, which is more tardy in conferring material benefit on humanity.

The position of the candidates for the honour of a seat in the Council of the College of Surgeons remains, we believe, unaltered. Much dissatisfaction is being expressed at the conduct which the managers of the *British Medical Association Journal* have thought it right to pursue with regard to this election. A journal which belongs to an association and equally to all its members ought certainly not to be made the organ of one member who is a candidate rather than of another. Where the interests of different members of the association are directly at stake, perfect impartiality ought at least to be observed in the publications issued by the body to which they all belong.

In the late debate on the Metropolitan Poor Act Amendment Bill, Mr. Goschen, when speaking of the introduction of the Dispensary system into London, said the difficulty in London

had turned upon the question whether the sick poor should be attended to at the Medical officer's Surgery or in a Dispensary; and, further, that a great many Medical officers said it was more convenient that the sick should attend at their surgeries; and, as the guardians of many unions agreed with them, there was great resistance on the part of the guardians to the establishment of Dispensaries. We own we were surprised at this statement, as we had always understood that the Poor-law Medical officers of London were anxious for the introduction of the Dispensary system, and that they regretted the delay in carrying out that part of Mr. Hardy's measure which referred to it. The Poor-law Medical Officers' Association have published a memorandum on the subject, in which they state that they have heard for the first time that many Medical officers are opposed to the establishment of Dispensaries, and they refer to a resolution passed at the last quarterly meeting of the Association—"That, in the opinion of this meeting, it is desirable that the clauses of the Metropolitan Poor Act, 1867, relating to the establishment of Dispensaries, should be put into general operation forthwith."

Dr. J. Burney Yeo and Dr. C. Kelly have been appointed Assistant-Physicians to King's College Hospital.

The Obstetrical Society is to have a special general meeting on Monday, the 21st, at 8 p.m., to consider the "union of various societies now existing in London for the cultivation of special branches of Medicine and the allied sciences." It is generally understood that the Obstetrical is the Society most likely to offer opposition to the scheme. The originators of that Society had for their end the vindication of the proper rank of Obstetric Medicine considered as a branch or department, and its claim to equal place, power, and privilege with the already recognised branches of Medicine and Surgery. The existing arrangements for teaching and examination in midwifery are not commensurate with its importance, representing, as it does, almost half of the avocations of the general Practitioner. Medical curricula are now engrossed by Medicine and Surgery; midwifery is confined to a short and incomplete course in the summer. These arguments scarcely need recapitulation, and, desirable as union undoubtedly is, it remains to be seen whether the authorities of the Obstetric Society will consent to be mediatised into *Nirwana* without seeing that there shall be no obstacle to the fulfilment of their original objects.

Mr. Morant Baker has been elected to the Chair of Physiology in the Medical School of St. Bartholomew's Hospital.

THE USE OF THE ANONYMOUS IN SANITARY OPERATIONS.

It is well known that the Legislature has passed a Workshops Regulation Act for the protection especially of women and children in the establishments of milliners, who, it must be confessed, needed it sadly enough. In this, as in many other instances of sanitary proceedings, the original information comes through anonymous letters. But here we notice a singular difference between the contiguous parishes of St. George, Hanover-square, and St. Marylebone.

"I have," says Dr. Aldis, "received fifty-eight complaints up to the present time against different establishments in St. George's parish, and although mostly anonymous, still nearly all contained more or less truth. Many of the workrooms were visited several times. I obtained convictions in five cases."

On the other hand, let us hear Dr. Whitmore, in St. Marylebone:—

"A large number of complaints of an infringement of the Factory Act continually reach me, all of which—without a single exception—are anonymous, but all of them are duly inquired into, and, as might be expected, there is scarcely one in twenty that is not altogether unfounded and untrue."

The difference extends to details. Dr. Aldis says:—

"I found at a house in Lupus-street six young women working in a scullery in the basement, where the chimney smoked so much that a fire could not be lighted in the winter, and, the room being dark, they always worked by gaslight. It contained a sink having a trap unsealed by water, with a water-closet adjoining. The cubic capacity was insufficient for six persons, but nine usually worked there, rendering the room almost unbearable. On remonstrating with the proprietor, he acceded to my request that he should provide a cheerful room upstairs and lessen the hours of work. He provided the room, but as he continued to employ the young women beyond the legal hours—on one occasion, before the Alhambra ball, until 12.30 at night, and on another after 4 p.m. on Saturdays—I was compelled to take proceedings."

Far different was Dr. Whitmore's luck:—

"Let me mention one—it is so unique as to merit notice. A complaint was made of overwork and great hardship endured by the young persons engaged at a milliner's in a very large way of business in the parish. The inspector, hoping to catch the delinquent *in flagrante delicto*, called at the house on Saturday, after the prescribed hours, and proceeded directly to the workroom; there he found, it is true, all the young women employed, but it was in eating cakes and drinking champagne—they were, in fact, celebrating their cruel mistress's birthday."

Strange is this diversity of experience. Does it lie in the facts or in the eyes or spectacles of the observer? Does one see *couleur de rose* and the other *couleur de deuil?* Why should one pitch on sinks and water-closets, and the other on cakes and champagne? Seriously speaking, we believe that the public would be astonished at the extent to which anonymous complaints are used in the administration of the Sanitary Acts, and of the means which the system furnishes of enabling servants or lodgers to annoy householders, and workpeople their employers.

STILL-BORN CHILDREN.

The Liverpool Northern Medical Society have addressed a memorial to the Secretary of State for the Home Department on the very unsatisfactory state of the law respecting the registration of children, but particularly with respect to those said to be "still-born." From inquiries made on an extensive scale, the Society state:—

"1. Many births escape registration in consequence of its not being made compulsory.

"2. That still-born children are not registered.

"3. That the interment of children reported as still-born amounted to 664 at four different cemeteries.

"4. That the regulations at all the cemeteries are far from satisfactory; the records of such interments are very incomplete, and in some cemeteries no records at all are kept. That at one cemetery only is anything like an inquiry made, and that by the coroner's beadle; and that this inquiry, though far from perfect, has resulted in the detection of many false certificates where children who had lived were certified as still-born. In one case where two children had been placed in the same coffin, and certified as one still-born, it was proved that one had lived some time; and another case where two names had been forged to a certificate.

"5. That, as the law now stands, there is no penalty for giving a false certificate.

"6. That all the cemetery officials consider the present arrangements most unsatisfactory, as they all feel certain that many children born alive are interred as still-born, partly to avoid the increased expense, and partly to avoid exposure when the child is illegitimate."

The Society recommend the following alterations in the Registration Acts:—

"1. That the registration of births should be compulsory.

"2. That all still births should be registered.

"3. That when a Medical certificate is not produced, the midwife in attendance, in conjunction with the father of the child or the occupier of the house, should register in person the still births, and should be liable to the usual penalty for making a false declaration.

"The result of such inquiries would be—we should then be able to estimate the proportion of stillborn children to children born alive in this country generally as contrasted with foreign countries, and the various proportions in different parts of our own country. Such inquiry would also be a great check

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upon a practice which, it is to be feared, prevails more than is generally supposed—viz., the procuring of abortion."

A reply favourable to the objects of the memorialists has been returned to the Society by the Home Secretary. Certainly it is high time that action should be taken in the matter. The recommendations of the Liverpool Society are reasonable and just, and, if carried out, would effect great good and prevent much crime.

RESTRAINT AND NON-RESTRAINT.

It is one of the common but unreasonable perversities of mankind that they will go on for ages suffering under most grievous evils, and groaning for redress; then, when the lucky time comes—when some genius arises who shows how to sweep away a whole mass of misery and suffering—if there be the slightest flaw in his system, or any contingent inconvenience, it is handled with greater severity, and made the subject of more bitter complaint, than the original grievance. Thus, some people forbear to groan over the ravages of small-pox, but solace themselves by loud complaints against the occasional inconveniences of vaccination. The wretchedness of unemployed negroes in Jamaica raises greater clamour than the original iniquities of the slave trade. So it is with insanity. Forgetting the horrors of the old cruelties, they show as much severity against the occasional shortcomings of the modern humane system as if that had not really been a great change for the better. Still, if there really be imperfections in the non-restraint system, let them, by all means, be brought into the light of open discussion. The allegations are, that violent depressing drugs, as tartar emetic, are administered; that violence is used; that baths of a cruel and exhausting nature, and that confinement in a padded room in filth, darkness, and cold, are sometimes resorted to; and that unnatural practices are allowed to go unchecked, when a simple straight waistcoast to muffle the arms and legs would control the patient easily and safely. On the other hand, there are the abuses of restraint, the old parent of negligence, cruelty, and filth. The more fully these questions are discussed the better, for so any little errors in the non-restraint system will be detected and removed. A reference to Dr. Kellogg's letter in our present number will explain our meaning.

"SHUT YOUR MOUTH."

There is a well-known story of his late Royal Highness the D—— of G——— that he once complained to his *aides de camp* that flies would get into his mouth. After listening respectfully, one of these functionaries ventured to suggest that if H.R.H. were to keep his mouth shut the flies could not get in. Mr. G. Catlin, the well-known traveller amongst the North American Indians, who is probably the most experienced anthropologist of the age, has taken "Shut your Mouth" for the title of a pamphlet published by Trübner, in which, with a little exaggeration, there is a good deal of sound truth. The moral characteristics of the open and shut conditions of the mouth differ *toto cœlo*. Firmness, self-respect, temperance, precision, calmness, strong will, the *nil admirari*, the power of endurance, of keeping secrets, the habit of thinking before speaking, and of examining before accepting a statement, generally go with a closed mouth and firmly braced *orbicularis oris*. Ignorant wonder, looseness of thought, word, and deed, the habit of emotion, of giving way to it and showing it, incontinence in all its degrees, from the most venial to the most sordid, are all associated with flabby lips and open mouth. As for the physical effects of the open mouth, they are the dry mouth and stertor during sleep, and the loss of the good effects of the nasal cavities in warming and purifying the air ere it reach the glottis. The author's views evidently have sound truth as their foundation, and what he tells us, trifling as it may seem, is well worth reading. The woodcuts with which the book is illustrated are only too telling.

HEALTH OF ST. GEORGE'S, HANOVER-SQUARE.

The annual report of Dr. Aldis, Medical Officer of Health, for the year ending March 27, 1869, shows that an apparently high rate of mortality prevailed in the parish, 21·3 per 1000, but that, if the deaths of 322 non-parishioners in St. George's Hospital and the increase of population be taken into account, the death-rate was 17·6. Zymotic diseases caused 366 deaths out of 1948 and amongst these there was but one from small-pox, 64 from scarlet-fever, and 89 from diarrhœa. No fewer than 613 deaths occurred under five years of age. A table is given of the cases of sickness attended at the Hospitals, dispensaries, and infirmaries, private and parochial, from which it seems that about 40,000 *cases* were attended, of which 20,000 were treated at St. George's Hospital, either as in- or out-patients, for the table does not say which. There seems to have been a sudden increase in the deaths from pyæmia at St. George's Hospital from 7 in the second and third quarters of 1868 to 13 in the fourth quarter, and 9 in the first quarter of 1869. There is enough valuable statistical matter in this return to make us wish that there were still more, somewhat more elaborate, and that there were a general system for such returns over London.

HEALTH OF ST. MARYLEBONE DURING MAY.

Dr. Whitmore's report on the health of St. Marylebone during May is another illustration of the diversity of size, date, and material of the sanitary reports issued in divers parishes, so that comparison is rendered impossible. Dr. Whitmore's reports are generally characterised by sound common sense, an absence of sensationalism, and a philosophical tendency to see things as they exist in the most favourable light. During the four weeks of May the mortality of St. Marylebone was at the rate of 22·7 per thousand, or about 1 per thousand in excess of that of the rest of London. Hooping-cough destroyed 24 lives, and scarlet fever 10.

FROM ABROAD.—COMPOUND FRACTURE OF THE LOWER THIRD OF THE LEG.

The discussion at the Société de Chirurgie on the "Treatment of Compound Fractures of the Lower Third of the Leg," which we noticed in our number for May 22, was resumed at a subsequent meeting of that body. Before it recommenced M. Verneuil laid before the Society a thesis by M. Bertrand, one of his pupils, which contained an account of nineteen cases of compound fracture treated by occlusion by means of collodium, seventeen of which recovered, and in one of the fatal cases death was due to causes independent of the fracture. M. Labbé detailed four cases which had recently come under his care; two died in twenty-four hours after undergoing amputation of the leg. In a third, occlusion by collodium was employed immediately after the accident, with a good result. In the fourth, in which he could not determine to resort to amputation immediately after the accident, such formidable symptoms were set up that amputation of the thigh was performed, thus far with good result. In his opinion, a certain proportion of these cases are attended with such serious symptoms that amputation must be resorted to. Indeed, although when appointed to the St. Antoine he had most decided views in favour of Conservative Surgery, experience has convinced him that as a general rule, especially in Hospital practice, immediate amputation should be resorted to, except in cases which we have an opportunity of treating by collodium from the very commencement, when most excellent results may be obtained. M. Tillaux observed that, in face of the completely opposite opinions as to resorting to immediate amputation or endeavouring to save the limb, which had been elicited in this discussion, it became very difficult to lay down a rule of practice. He wished the opinion of his colleagues as to the especial danger of this description of fracture when resulting from railway accidents, as compared with other causes giving rise to

identical lesions. In his own practice he has never met with a recovery after amputation practised for a railway accident, these patients seeming the subjects of a kind of "incapacity for reaction," caused, without doubt, by the nervous shock produced by the accident. M. Perrin attributes this more to the fact of the delay in resorting to amputation than to the severity of the traumatism itself. With railway accidents, as with gunshot wounds, there is less danger when amputation can be immediately performed. By this we cut short those hæmorrhages from the surface (*en nappe*) of the wound which plunge the patients into that condition of extreme anæmia whence incapacity for reaction is quite as likely to result as from nervous shock. M. Trélat could not exactly agree to this view of the effects of railway accidents. In his opinion the severity of the traumatism depends much on the shattering of the tissues produced by these accidents, which is often much greater and more extensive than it really seems. The Surgeon, not knowing how far this traumatic lesion extends, almost always practises amputation too low down, leaving in the stump tissues more or less seriously contused, whence afterwards serious symptoms arise. It is the traumatic accident itself which is the cause of the danger in these cases rather than the temporisation of the Surgeon. He attaches no value to M. Labbé's cases in proof of the greater utility of amputation in these cases. They simply prove that in this description of injury the Surgeon often meets with failure whatever course he may adopt; but they furnish no proof that amputation gives better results than preservation of the limb. This also is the view taken by M. Guyon, who last year had a series of cases which were most successfully treated by conservative means, which in the present year entirely failed in cases completely analogous. It is impossible to lay down a certain rule of treatment in these cases. He did not quite agree with M. Tillaux as to the exceptional gravity of lesions produced by railway accidents. In a case of this kind he amputated the leg successfully. M. Tillaux explained that he had not alluded to the cases of individuals injured by the violence of the shock, but to those who were caught between the rails and the carriages (these being, we may observe, the usual class of cases met with on the Continent, where the *employés* are the chief victims of railway accidents, not the passengers) *while the train is in motion*. It is under such circumstances as these that is produced the severe and deep-seated nervous shock that gives to these injuries their special physiognomy. In fact, while he has treated numbers of persons with success who have presented entirely similar lesions due to the wheelwork of ordinary machines, he has always failed when these have arisen from railway accidents. M. Lefort recalled attention to the fact that at the early part of the discussion especial allusion was made to those fractures resulting from indirect causes in which the upper fragment of the tibia penetrates the lower fragment, which splits off (*spiroid fractures*), without it being certain that the joint is penetrated. The Surgeon has a right to fear that this is the case, and then immediate amputation gives the best chance, while in other cases, unless the shattering is too great, conservative treatment should be tried. M. Guersant observed that in compound fractures of the lower end of the leg Dupuytren was in the habit of amputating as early as possible, and that the imitation of this practice had give himself excellent results. M. Verneuil reminded his colleagues that there was a point which they had as yet scarcely touched upon. In relation to prognosis and treatment, the consideration of the traumatism in itself and its intrinsic gravity is doubtless of great importance, but it is not everything. We have to bear in mind also the conditions inherent to the individual and the medium. The age, constitution, state of health, etc., of the injured person must be seriously considered; and it must not be forgotten that the greater portion of the inmates of the Paris Hospitals are more or less given to drunkenness. Every one knows the ill effects which alcoholism exerts on traumatic lesions, such patients for the most part dying, do what we will, amputate or not. We see them sinking rapidly after twenty-four or forty-eight hours, and at the autopsy we find degeneration of the kidneys and liver. The same observation holds good with regard to persons who are subjects of albuminuria, glycosuria, steatosis of the liver, etc. To found accurate statistics, one must distinguish the different cases and range them in categories. Then, again, there are the media. While in the Parisian medium, especially in the Hospitals, the mortality after accidents and amputations is considerable, the nosocomial and deleterious influence giving rise to erysipelas and pyæmia almost constantly abiding there, the provincial Surgeons, on the other hand, cure almost all their patients. M. Verneuil believes that rules may be laid down for the treatment of this accident, if this be not done too absolutely. Expectation should, he thinks, be rejected, for he has never met with a case in which it succeeded. When the wound is small, its occlusion by collodion may be tried; but if the joint be largely opened, amputation must be resorted to. Still, if the bones and soft parts have not been much shattered, this may be justifiably delayed, taking care to immediately occlude the wound and submit the limb to constant irrigation. At Lyons excision has been attended with satisfactory results. When the joint is largely opened, and there is great attrition of the tissues, every one agrees that we ought to amputate, and with respect to the period at which this should be done, M. Verneuil thinks that the practice of Dupuytren is that which should be imitated, this consisting in waiting until the effects of the shock (*période de stupeur*) have passed away, and then operating as soon as possible. Amputation should be performed neither during the period of shock nor that of inflammatory reaction, the opportune moment being seized between these equally dangerous extremes. This precept is especially applicable in cases of traumatism produced by railway accidents. What constitutes the danger of these latter cases, M. Verneuil agrees with M. Trélat in thinking, is the deep-seated and extensive shattering of the tissues, which compels us, under the penalty of failure, to go up very high in order to find the most suitable spot for the amputation.

M. Giraldès observed that, in relation to traumatisms produced by railway accidents, it is of importance to distinguish whether these are produced directly or indirectly. In the latter case there are in general large denudation of the skin, laceration of muscles, and vast suffusion of blood, accompanied by great general disturbance of the nervous system and modifications of the liquids. Still, death is not inevitable, M. Giraldès (who is attached to one of the most rapid railway lines in France) having succeeded in saving several individuals by amputation, taking care, agreeing with the views expressed by MM. Verneuil and Trélat, to practise it very high up. He has also seen individuals in whom the leg has been, so to say, ground up by *coups de tampon* of the locomotives, cured by means of irrigations continued uninterruptedly during three or four weeks until all tendency to inflammatory reaction has been completely subdued. By the same means he has also obtained some wonderful results in gunshot wounds.

At another adjourned meeting of the Society, M. Alphonse Guérin stated that he had seen a great number of these cases, and that he distinguished them accordingly as to whether the fracture is complicated with immediate or consecutive solution of the soft parts. In the first case, when the fracture penetrates into the joint, its importance varies according to the size of the solution of continuity, placing the joint in communication with the fracture. If there is a mere fissure, the complication is not a serious one; but when there exists a large communication at the seat of fracture on the one hand with the external air, and on the other with the joint, we must expect those interminable suppurations which sooner or later compel the Surgeon to sacrifice the limb he has been trying to save. In mixed cases, approaching one or other of these categories, it is for the Surgeon's sagacity to decide in each instance whether the limb can be saved or ought to be removed. Comparing this

fracture of the lower end of the leg with that of its middle part, the former usually is found to result from a fall on the feet, and the latter from a direct force. This last is transverse, while the other is oblique—the obliquity rendering the reduction and retention of the fragments very difficult. Muscular action is in constant opposition to this, and the fracture, for want of due adaptation of the fragments, will not heal without deformity. This, indeed, must not be sought for by the Surgeon, for fear of the movements of the fragments that may be caused preventing the prompt deposition of callus. The prevention of the mobility of the fragments is the most important condition of the cure, and to this point M. Guérin pays especial attention, both in the apparatus employed and in the careful mode of dressing the limb. When the solution of continuity is *consecutive*, resulting from the eschar produced by the pressure exerted by one of the fragments on the inner surface of the skin, a cure is often obtained just as if we had to do with a simple fracture—*i.e.*, if, at the time of the eschar, consolidation has already commenced. To secure this, the limb should, instead of being placed in a splint liable to involuntary movements, be secured in a fracture apparatus. Irrigation M. Guérin thinks objectionable, as it retards the formation of callus, thus preventing the consolidation of the fragments at the time of the fall of the eschar. When there is communication at the joint only by a narrow fissure, a cure may be then obtained without amputation, this only being required in cases in which there is a large communication with the joint and those in which there has been extensive contusion of the soft parts or great denudation of the fragments. When the contusion of the skin and muscles is slight and the fragments are denuded, M. Guérin has sometimes resorted to excision; but the result has not been satisfactory. The action of the saw tends to enlarge the fissure communicating with the joint. The patients only recover after seven or eight months' treatment, and only escape death after having run risks which could not have been greater had excision not been practised. M. Legouest observed that in the prognosis and treatment of this fracture both the lesion and its producing cause must be taken into account, and during the discussion the latter of these has not been sufficiently insisted upon. In fractures not communicating with the joint it could not enter into the mind of any Surgeon to resort to immediate amputation unless great shattering was present; and where such communication does exist we must distinguish the fractures produced by direct shock and those due to indirect causes. The latter, produced from a fall from a height on to the feet, which have been term *spiroid*, are more dangerous, not so much from penetration into the articular cavity as from the sudden violence done to the whole diaphysis of the tibia, between the resistance of the soil and the weight of the body. The symptoms of these fractures are sometimes obvious, sometimes dubious, and at others wanting; so that at the bedside we have to take into full account not only disorders produced which may not be very apparent, but also the intensity of the producing cause. If the fracture is comminuted, and communicates with the interior by a large wound, amputation must be performed, as it also must when the fracture, without being very comminuted, consists of several fragments, the most considerable of which extends to the joint, placing this in communication with the exterior by the wound of the skin. When the segment does not obviously penetrate into the joint, and the physical signs are obscure, we must derive aid from the signs of induction drawn from the circumstances under which the accident is produced and the intensity of the cause. When we have only such inductive signs to guide us, we should wait, for experience has shown that even with spiroid fractures patients may spontaneously recover. It is possible to guard against the danger of inflammation of the joint beforehand, by rendering the fractured bones quite immovable in a suitable apparatus, protecting the skin of the heel from gangrene and the os calcis from necrosis by taking all pressure from off it. Another precaution to be taken is the preventing, during the movement of sliding down in bed, the upper fragment penetrating into and affecting the lower. This is done by keeping the leg much raised, so that the sliding down of the patient gives rise simply to flexion of the knee, and not propulsion of the upper fragment. As to continuous irrigation and collodion, M. Legouest states that he has abandoned them, but for the last twelve years or so he has derived excellent results from the application of compresses wetted with alcohol three or four times a day. M. Legouest is not a partisan of excision in the continuity of bone, but he resorts to it when there is great difficulty in reducing the fragments. The excision of the articular extremity, he believes, is little likely to be attended with success, for he has seen patients so treated pass through such alarming phases as to lead him to question whether amputation would not have been preferable. On this point, however, he does not think that the cases are sufficiently numerous to be of much use as a guide to the Surgeon. In certain cases M. Legouest believes that life may be saved by secondary amputation, and, contrary to the opinion expressed by many of his colleagues, he agrees with M. A. Guérin that in a certain number of cases we may try to preserve the limb with success. M. Demarquay was unable to perceive that this discussion had advanced the question in the slightest extent. Apart from cases of compound fracture in which great shattering has occurred, and in which all are agreed as to amputation, no light has been thrown. You have a case of fracture of the lower end of the leg, caused either by a fall or the pressure of a heavy body, such as a wheel of a carriage; a wound of the integuments exists without tumefaction or considerable inflammatory action, and without apparently any very serious local mischief. You wait, and at first there seems every reason to feel glad that you have determined to do so, but about the eighth or tenth day formidable accidents burst forth, which terminate fatally. In such a case, where are the elements of diagnosis and prognosis? Where are the precise indications that should guide the Surgeon? But we are daily meeting with such cases, and not a Surgeon is there who can determine with any precision the exact description of fracture he has to do with, what will be the results, and what is the best mode of treatment. In a word, diagnosis, prognosis, and treatment are alike at fault, and it is difficult, not to say impossible, to guide oneself, as recommended by MM. Legouest and A. Guérin, by the general principles of Surgery. M. Lefort, without pretending to be able to establish precision in the diagnosis, is disposed to believe that when the fracture results from indirect causes — *e.g.*, from a fall on the feet—the wound of the integuments being made from within outwards by the upper fragment of the tibia, which perforates the skin, the fracture is very frequently of the *spiroid* description, which penetrates into the joint, and the danger of which cannot be disputed. Such danger is less dependent on the penetration and the inflammatory accidents produced in the joint than on the osteomyelitis which results from the inflammation and the largely opened medullary canal. In such cases M. Lefort is strongly in favour of amputation. M. Legouest repeated his proposition that in obscure cases we must take into serious consideration not only the amount of existing disorder, but also the cause by which it has been produced. If this has acted with great violence, we must decide on amputation even when the local accidents seem but slight. It is with regard to spiroid fractures as with fractures of the articular extremities of bones by firearms—their real danger bears no relation to their apparent signs. Diagnosis and prognosis are far less to be based upon the physical signs than on the rational and inductive signs which are the result of a consideration of the violence of the producing cause.

A PAUPER lunatic, named Ann Cook, who is now in the Garlands Asylum, near Carlisle, has become entitled to £15,000 under the will of a relative.

THE BLOOD-CORPUSCLES AND THEIR PHYSICAL PROPERTIES.

We have often insisted upon the importance of education in the physical sciences as preliminary and fundamental to the study of physiology, pathology, and of Medicine in general. Recently this doctrine was emphatically enunciated by the distinguished physicist Robert Grove in his address at St. Mary's Hospital, and, indeed, nothing can be more obvious than the fact that, step by step, physical science, in extending her boundaries, is encroaching continually upon the vague and hitherto incomprehensible realm of vitality, and giving us daily a firmer grasp and more perfect control over the phenomena of life, health, and disease. There are not wanting among us those who, supported by the history of the past, are sanguine enough to conceive that some day in the coming future the gradual progress of positive knowledge will enable us to compass and comprehend even the profounder mysteries of our common being. If such be in the nature of things possible, how much sooner might this coveted goal be reached by the systematic training of our body corporate in physical science and its methods of original investigation! Such reflections as these crossed our minds as we listened to a communication made to the Royal Society on May 27, "On the Laws and Principles concerned in the Aggregation of the Blood-corpuscles both within and without the Body," by Professor Norris, of Birmingham, a paper largely illustrated by experiments of a novel and interesting character, and constituting an able exposition of the subject from a physical stand-point. Unfortunately, the limits of our space do not permit us to give more than a brief and incomplete sketch of these important researches, or even to refer to the numerous and beautiful experiments with which they were illustrated, and we must therefore content ourselves with referring those of our readers who may wish to see the steps by which the conclusions have been reached to the original communication in the Society's *Proceedings* or *Transactions*. Suffice it to say, that the whole of the phenomena of aggregation displayed by the blood-corpuscles, whether forming rouleaux or masses of adherent spheres, were accurately imitated by artificial bodies, discs, vesicles, liquid globules, etc., placed under conditions analogous to those of the blood-corpuscles. Further, the existence of an attractive influence in all such cases was satisfactorily demonstrated, and proved to depend upon what might be justly designated double cohesion—cohesion, in the first place, between the rigid body and the liquid, and in the second place between the particles of the liquid itself. That this attraction extended its influence to the blood-corpuscles and was the cause of their aggregation the author held to be incontestably proved by the appearances observed in the spherical condition of the blood-corpuscles when in the act of grouping, the form of attraction here displayed being that exhibited by wetted films and plastic vesicles, and which, from its mode of operation, he termed progressive cohesive attraction. There were only two conceivable hypotheses by which this mode of union—the peculiarity of which is that in its action upon plastic bodies it converts curvilinear into plane surfaces—could be explained. The one was mutual attraction of the progressive order—*i.e.*, an attraction which commences at the point of contact and gradually extends itself in all directions till its force is counterbalanced by the limits of the elasticity of the body—the other mutual compression. An examination of the photograph of blood-corpuscles which had undergone the spherical mode of aggregation showed that the hypothesis of compression was unequal to account for the manner of the grouping displayed by those corpuscles which were isolated from the general mass; besides, the conditions of mutual compression are altogether absent in bodies submerged in liquid and free to move, as in the case of the blood-corpuscles, because they are subjected to equal pressure on all sides. On the other hand, the progressive form of attraction, above explained, covers all the phenomena, and allows them to be perfectly imitated. The general law of this attraction might be briefly stated as cohesion of like liquids submerged in unlike liquids or fluids, the rigid bodies or vesicles being simply localisers of one of the liquids. The intensity of the attraction was shown to be in the direct ratio of the cohesive dissimilarity or the neutrality of the liquids or fluids concerned. The application of this law to the blood-corpuscles involves the idea that the contents of the corpuscles and the liquor sanguinis have a cohesive dissimilarity—*i.e.*, are not readily miscible with liquor sanguinis. This is, of course, self-evident if, according to some modern views, we regard the corpuscles as "tiny lumps of a uniformly viscid matter," inasmuch as such matter must be insoluble in and immiscible with the liquor sanguinis. The explanation is equally easy if we accept the old, and probably the true, view of the vesicular character of these bodies, we have only to assume that the envelope is so saturated with the corpuscular contents as practically to act as such contents would themselves act—*i.e.*, to exhibit a greater cohesive attraction for their own particles than for those of the contiguous liquid.

The cohesive power of the blood-corpuscles varies with varying conditions of the liquor sanguinis, and this is doubtless due to the law of osmosis, for we can readily imagine that when the exosmotic tendency is in excess the corpuscles will become more cohesive, and, on the contrary, when the endosmotic current prevails, less so. In any case, the increased cohesiveness will be due to increased extension upon the surface of the corpuscular contents.

The author affirmed, in conclusion, that all that was required in the case of the blood-corpuscles to bring them under the law he had educed was a difference between their liquid contents and the plasma in which they are submerged, and that this difference was on all hands admitted. He did not contend that the difference was so great as between the liquids used in his experiments, but neither was the attraction so powerful. The power required to attach the corpuscles together was, on account of their exceeding minuteness, extremely small, as they were thus so much more removed from the influence of gravitation, and brought under that of molecular attraction.

THE NEW HOSPITAL FOR SICK CHILDREN.

On Tuesday last the Medical charities of London received an important addition by the opening of the Evelina Hospital for Sick Children, an institution which has been built and fitted up at the sole charges of the Baron Ferdinand de Rothschild, in memory of his late wife. The new Hospital is situated in the Southwark-bridge-road, and is thus surrounded on every side by a dense poor population, to which Medical aid can hardly come in any other way than by charity. In consequence of the form of the site, occupying the angle between two streets, the front of the building is slightly curved, and its plain and severe style gives no indication of the beauty of the interior, and of its adaptation to the purpose for which it was designed. It has been built by Messrs. J. Myers and Sons, under the guidance and according to the plans of the architect, Mr. Marsh Nelson, the specifications and requirements being chiefly furnished by Dr. Arthur Farre, to whom the Baron Ferdinand de Rothschild has also intrusted a large share of responsibility in making all the provisions for its opening and successful working. The Hospital contains four stories, besides the basement, in which last are the kitchens, store-rooms, etc., and, at the back, a dead-house and a post-mortem room. The ground floor is devoted chiefly to the apartments for the resident officers of the Hospital, and to the Board-room. The first and second floors contain the principal wards, and it is intended that they shall be appropriated, the one to boys, the other to girls. The principal ward in each floor is a magnificent room, 100 feet long by 24 feet in width, and 14 feet in height. Besides this, each floor has four other wards, equally lofty, and all of good size, of which one is to be used as a play-room for convalescents. A great feature of the Evelina Hospital is the lightness and airiness of its interior. The two principal wards above referred to have each nine windows towards the street, these windows opening horizontally in three compartments. They have also eight windows on the opposite side, entering into corridors, which run parallel with the wards. Thus it will always be easy to ventilate into the corridors, should the weather prevent the other windows being opened. The fourth floor is devoted to the sleeping apartments for the nurses, and to a small quarantine ward for the reception of cases which may arise in the house of a doubtfully contagious character. Additional provision will also be made for the accommodation of zymotic diseases. All the wards have a good

supply of hot and cold water, and communicate with the kitchens, etc., by means of a lift. The lavatories, etc., are placed at the side of the staircase, opening on to the corridors opposite to the wards. The out-patient department is situated in the rear of the Hospital, and consists of a large waiting-room, and of rooms for the Physician, the Surgeon, and the dresser. Between this and the body of the building is the Dispensary.

The following is the constitution of the Medical and Surgical staff:—Consulting Physician: Dr. Arthur Farre. Consulting Surgeon: Mr. Prescott Hewett. Physicians: Dr. Playfair, Dr. Hilton Fagge, Dr. Kelly, and Dr. Douglas Powell (the last two with care of out-patients). Surgeons: Mr. Willett and Mr. Morrant Baker.

In carrying on the internal management of the Hospital, Baron Ferdinand de Rothschild will be assisted by a committee of management. There are also lady visitors, among whom are the Baroness de Rothschild, Lady de Rothschild, Lady Herbert (of Lee), Lady Jane Taylor, Mrs. Gladstone, and Mrs. Lucas. The immediate supervision of the nursing has been intrusted to an experienced lady superintendent, who will have paid nurses under her, and who will also eventually be assisted by ladies practically interested in the work of nursing. The resident Medical officer is Mr. Goodhart, lately House-Physician to Guy's Hospital.

The Evelina Hospital for Children will, when its wards are all opened, contain at least 100 beds. It will be ready for the reception of in- and out-patients on Monday next.

A permanent endowment of this Hospital is in contemplation, but it remains at present the private property of the founder, who has arranged that a sum of money sufficient to maintain it in full efficiency, with from thirty to forty beds, shall be placed at the disposal of his managing committee for the first three years as an experiment, in order to test the working efficacy of the institution, and as a means of judging of the probable permanent cost of the whole establishment when all the wards shall have become fully occupied, and when others, it is hoped, will aid in the liberal work which has been thus so auspiciously commenced.

REPORT ON CLINICAL INSTRUCTION IN THE GERMAN UNIVERSITIES.

ADDRESSED TO THE MINISTER OF PUBLIC INSTRUCTION.

By Professor WURTZ,
Dean of the Faculty of Medicine of Paris.

I. *On the Administration of the Clinics and on the Relations of the Hospital Administration to the Teaching Body.*

The mode of administration of a Hospital is not without influence on the favourable direction of the clinics within its walls. It will more or less second the interests of instruction according to the nature of the relations which regulations, traditions, and social intercourse establish between the administration and the teaching body. The patients are the objects of clinical instruction, the administration disposing of them and the professors needing them. In what manner and to what points do legal dispositions or custom satisfy this legitimate want? That is the question which it will be useful to examine.

The administrative regulation of the clinics is very different in the German Universities according to the importance of the cities in which they are established. In towns of a secondary importance, such as Greifswald, Würzburg, etc., the necessities of instruction demand and absorb the greatest portion of the resources at the disposal of the Hospitals, which then become true Hospitals for instruction, which are fed not only by the town itself, but by the whole adjacent country. At Greifswald patients flow in from the whole of the province of Pomerania, the various communes having entered into contracts with the State, by virtue of which they pay eight thalers per month into the treasury of the Hospital for every patient treated within its walls. Moreover, each Clinical Professor has five beds at his disposal, which he may fill gratuitously with patients who come to consult him, and whose cases he deems interesting for the instruction of the students. I may add that the Greifswald Hospital is administered by a functionary who is directly dependent on the Clinical Professors, MM. Bardeleben and Mosler, the directors of the Hospital. At Würzburg I met with a different arrangement. Indigent patients of that city and of the ancient bishopric of that name are admitted gratuitously into the Julius Hospital, which has considerable revenues at its disposal, and is administered by a special commission nominated by the government. This commission manifests great consideration for the teaching body, the director, who is appointed by the Minister of the Interior, placing liberally at the disposal of the Professors all the material means, instruments, reagents, etc., which they may need. At Munich the General Hospital, in which are established the clinics, is a municipal institution, which receives patients on the payment of an insignificant sum. The director is nominated by the King, and at the present time this office is held by M. Lindwurm, a clinical professor, having under his orders a municipal inspector charged with the details of the material administration. The director prepares and carries out all important matters, and reports on them to the municipality. Belonging himself to the Faculty, he favours, within all just and possible limits, the interests of instruction.

In most of the German Hospitals the assistance given is not entirely gratuitous. Patients possessing some resources pay a certain sum, generally an inconsiderable one, for their residence in the Hospital; and when they are not in a condition to do this their patrons and masters, or, in general, those who employ them, are expected to furnish the means; paupers who can make no claim of this kind on any one being paid for by the commune. When this regulation is established in an Hospital, it is the rule that the indigent patients treated in the clinics are so at the charge of the Minister of Public Instruction, the Hospital administration opening an account with him, which is discharged from the resources of the budget of the State. This is the case at Vienna, Prague, Leipzic, etc. At Vienna the clinics are established at the general Hospital—a vast establishment, occupying an immense space in the old faubourg. It is in the possession of a private revenue, which is administered under the authority and control of the Minister of the Interior; but as this does not cover the expenses of the establishment, the patients are admitted on payment, as already mentioned. According to the amount of this they are divided into three categories. In the clinics the indigent persons under treatment receive the attentions which are due to patients of the second class, while the University only pays the charges for the third class. At the General Hospital at Prague, as well as that of Leipzig, analogous regulations are in force, the assistance given not being entirely gratuitous, and the Minister of Public Instruction contributing to the expenses caused by the attendance bestowed upon the indigent in the clinics. At Leipzic the three Clinical Professors have at their disposal sixty free beds, which they can fill with patients at their option, the expenses of the sixty beds being defrayed by the department of Public Instruction. In the three towns mentioned above the Hospital administration is independent of university authority; but this is not the case at Berlin. In that capital most of the clinics are established at the Charité Hospital, and at the head of this Hospital is placed a director, having as full powers in its administration as the Professors have in the instruction, and who, like them, is appointed by the Minister of Public Instruction.

It will be observed from the above statements that the rights of Medical science and the needs of instruction are protected in different modes in the German clinics, both as regards the relations established between the direction and the university authorities, and the latitude left to the Professors in the admission of patients to a certain number of beds—as also, as we shall presently see, by the right they possess of recruiting cases from among all the patients who present themselves at the Hospital.

II. *General Clinics.*

Among the clinics established in the German Faculties of Medicine some are general and others special. I shall first treat of the former—that is to say, the Medical and Surgical clinics, which constitute the great school for the future Practitioner. In so vast and important a subject various questions present themselves to our notice, and I propose treating of them in the following order:—The number of beds devoted to the clinics; the choice of cases; the methods of instruction; the assistance given to the Professor; the autopsies; and the attendance at the clinics by the students. These are the points to which I have directed my attention.

1. *The Number of Beds devoted to the Clinics.*—As a general rule, this is not very considerable. If, at the Julius Hospital at Würzburg, M. Bamberger has at his disposal 200 beds for the internal clinic and that of diseases of the skin and syphilis, and if M. Linhart has 120 beds in the wards employed for the

Surgical clinic, this may be said to be an exceptional circumstance. In the largest German clinics, the number of beds is in general less considerable. Professor Frerichs has only from seventy to seventy-five in his two wards in the Berlin Charité, and Professor Oppolzer has but forty-eight in his clinic in the Vienna General Hospital. At the Prague General Hospital, the number of beds devoted to Professor Halla's internal clinic does not exceed thirty, and is found sufficient. The Clinical Professor is also Physician to a division of the Hospital, and in that capacity disposes of 120 beds. He has not only the right of selecting from the division all cases possessed of interest for the clinic, but also of discharging from the clinic all convalescents and patients suffering from chronic diseases as soon as these have ceased to be instructive.

2. *Choice of Cases.*—At the General Hospital, Vienna, the following arrangement secures the recruital of the clinics. The patients present themselves for admission at an office where they are examined by one of the primary or divisional Physicians of the Hospital. To this office the Clinics send in turn their Assistant-Physicians, whose duty it is to select and reserve for instruction the cases of interest. This right of selection is of great importance in relation to the successful direction of these establishments. While, on the one hand, it allows of the presentation within a relatively limited space and time of a great variety of pathological cases, it also furnishes the opportunity of assembling together similar cases which yet, in their details, exhibit certain differences or individual peculiarities which it is of importance to make known. It is obvious that this double advantage could only be attained on condition of such a privilege being attached to the clinics in regard to the choice of patients. It prevails not only at Vienna and Prague, but at Berlin and other Universities.

I will not quit this part of the subject without adding that, in well-constructed Hospitals, the wards, even those devoted to the clinics, in general contain only a small number of beds. At Greifswald each ward holds but five or six. And a more important matter still is that the Clinical Professors have tents and sheds at their disposal, the latter receiving a greater number of beds than the wards, because the ventilation is more complete. The employment of these lighter constructions for the shelter of the patients is assuming an ever-increasing extension and importance, being resorted to not only in the treatment of wounds and operations, but also for that of internal diseases, such as typhoid or typhus fever.

3. *Methods of Instruction.*—The clinic is the demonstration of disease on the patient, and exacts more than oral development on the part of the Professor, and more than mere listening on the part of the student. It is requisite that the latter should be in a condition to see by himself, and to examine closely. The Hospital visit ought to be for him a true practical exercise, the most important of all. That it is so understood in Germany is shown by the name given to the most advanced students who take part in clinical exercises. They are called *praticirenden*, and do not at once attain this position. During the first *semestre* they are registered as auxiliaries—a period of preparation preceding that of activity. Although the instruction imparted in all the clinics is essentially practical, the method employed is not everywhere the same. Sometimes the Professor examines the patient, and makes the *praticirenden* examine him before all the students assembled in the theatre, and sometimes the visits take place, as with ourselves, in the wards of the Hospital, the students following the Professor. The first mode is in operation at Berlin, Greifswald, and other Prussian Universities, and the second prevails at Prague, Vienna, Würzburg, and Munich.

I will describe what takes place at Berlin in the internal clinic of Professor Frerichs. The lecture is delivered from 11 to 12, 150 students being assembled in a well-lighted theatre. As soon as the Professor enters, a patient is brought in lying on his bed. The Assistant-Physician reads the history of the case as it has been made out by a preliminary interrogation and examination, and then calls two *praticirenden*, who place themselves at the foot of the bed. The exploration of the various organs and a summary examination of the urine are commenced, the Professor desiring the *praticirenden* to conduct it, directing and correcting them, and questioning them as to the nature of the symptoms and the mode of treatment. Frequently he passes round graphic representations indicative of the phases of the pulse and temperature. The demonstration being exhausted, another bed with another patient is brought in, and the same exercises are conducted by two other *praticirenden*. In this way three, four, or five patients may be examined in succession, and, so to say, passed under the eyes of the whole audience. The students are also expected to attend the evening visit, which is made by the Assistant-Physician. It must be admitted that this obligation to submit to a prolonged and sometimes a painful examination, and to be present during the development to which it gives rise, may become for many patients a source of inconvenience and anxiety. For this reason, without wishing to deny that this mode of instruction may have its advantages in certain special cases, I do not think it should serve as a model or a rule. It is, however, in favour with many Professors, and does not give rise, as I was assured, to complaints on the part of the patients. With regard to the latter, it must be supposed that their dominant idea is to get cured, and in this point of view the minute examination to which they are subjected is both a guarantee and a consolation.

The method in operation at Prague, Vienna, Munich, and Würzburg resembles that in force among ourselves. The examination of the patient takes place in the wards, each of the *praticirenden* having charge of several beds. During the visit they are allowed, under the control of the Professor, to take part in the exploration of the organs, giving explanations as to the nature of the case, and receiving the requisite elucidations. When necessary, they visit the patient again during the day, accompanied by the Assistant-Physician. The Professor frequently enters into extended developments, either at the foot of the bed or in the middle of the ward surrounded by his pupils. This address corresponds to the clinical lecture which is given with us in the theatre after the visit.

4. *Assistants.*—During all his labours the Professor is most efficiently seconded by the Assistant-Physicians who are placed under his orders. They correspond to our *chefs-de-clinique* and *internes*, and are nominated by the Faculty on presentation by the Professor. They are all Doctors, the possession of a diploma being one of the conditions of their employment, and their emoluments are superior to those of our *chefs-de-clinique*. Each clinical chair has generally two Assistant-Physicians attached to it, or one and an *Unterarzt*—as, for example, at Greifswald. At least one of them lives in the Hospital. According to the exigencies of the service and personal agreements, the clinical Professors have the right to appoint, besides these official assistants, auxiliary volunteers (*freiwillige Hilfarzte*). Professor Oppolzer has at the present time at his disposal, in his internal clinic and the polyklinik, four Assistant-Physicians, two official and two volunteers—these last being selected from among the special Professors. Each has his distinct duties—one being especially charged with laryngoscopic observations, and others attending to electro-therapeutics, diseases of the ear, diseases of women, etc. All confer upon the students the advantage of their special experience. I need not detail the duties of the Assistant-Physicians, the most important of these being the preliminary examination of the patients, administering to their most urgent needs, visiting them in the evening, and drawing up accounts of their cases. I may add that all the cases occurring in the Prussian clinics are recorded, and that a general survey of these is annually forwarded to the Minister of Public Instruction, together with a report by a competent Professor.

5. *Autopsies.*—The Assistant-Physicians of the clinics are not charged with these, nor does the Professor himself take any direct part in them. He may be present, but he does not conduct the autopsy, this devolving on the Professor of Pathological Anatomy. He fulfils the duty in presence of the pupils with all the authority derived from a special competency and an elevated position. This mode of instruction, which it would be difficult to introduce into France, has become general in the German Universities, and has been the source of incontestable progress accomplished by pathological anatomy and histology. To become convinced of this, we have only to cite some of the names of the Professors. For forty years Professor Rokitansky has conducted the autopsies in the mortuary attached to the Vienna Hospital; and where did Professor Virchow acquire his great authority, if not in the dead-houses first of the Würzburg Hospital, and then of the Berlin Charité? It is in these "laboratories of the dead" that younger men, as Max Schultze at Bonn, Recklinghausen at Würzburg, and Wagner at Leipzig, are following the course pursued with so much distinction by their predecessors, and are initiating their pupils in the knowledge of organic changes, often so difficult to verify. The intervention of such masters secures for the practice of autopsies guarantees of competence, exactitude, and impartiality. Still, it must be allowed on the other hand, in relation to clinical instruction, this mode of dealing with the autopsies may give rise to some inconveniences which should be signalised. Thus, it may place the Clinical Professor in a somewhat delicate position, inasmuch as his diagnosis is submitted to an extrinsic (*étranger*) criticism, and

sometimes a denial. This may give rise to personal differences, which must be borne in mind, although experience has shown that they are not of any serious account. But there is another objection of greater significance, because it goes to the root of the matter. In confiding the autopsies to a Professor of Pathological Anatomy, who is in pursuit of a special object in purely scientific paths, a risk is run of establishing too rigid a line of demarcation between the clinic and pathological anatomy. The latter science, then, takes on an independent development, and, in place of being the auxiliary of the clinic, becomes a branch of natural history. Is it, in fact, a rational course to trust the examination of the body to any other than the Practitioner who has treated the patient? and do not the pathological deductions derive their true importance from their very application to clinical observation? And who could better apply the history of morbid developments—that is, of pathological physiology—than the clinical Professor who has observed the symptoms and the course of the disease?

The force of such objections cannot be denied, and yet they have not prevented most of the German Faculties adopting the mode of conducting the autopsies that has been described. Their weight is diminished first by the consideration that the greatest clinical improvements of these later years have been due to independent discoveries in pathological anatomy, and also by the obligation which the *clinicien* is under of furnishing an account of the case to the Professor who opens the body. Here is what I myself observed at Berlin. A patient dies in the clinic, and his body, after remaining some time in the mortuary of the Pathological Institute, is carried into a small theatre with the seats one above the other disposed in a semicircle around the table. The Professor or, if he is prevented, an Assistant-Physician proceeds to open the body, having been made aware of the direction in which his attention should be principally directed by the account of the history of the case and its diagnosis furnished him by the Clinical Professor. After placing aside any parts that may require a more attentive examination, the organs or pathological productions are passed round to the students, in order that they may first observe their general structure and external appearance. In another room, especially adapted for the purpose, the same parts are submitted to microscopical examination, the microscopes passing from one to another along a little railway. This ingenious contrivance, devised by Professor Virchow, renders possible the examination of a great number of specimens in a relatively brief space of time, still allowing the Professor to furnish the necessary explanations concerning each. Independently of these daily demonstrations, he has to fulfil another task—that of teaching pathological anatomy in a special course of lectures. For this methodical instruction, analogous to that given in our own Faculty, he produces and passes round to his audience either specimens preserved in the collection or such as the daily autopsies may accidentally furnish in a fresh condition.

It will be thus seen that the mode of conducting the autopsies as it is organised in Germany becomes the occasion of serious study on the part of the masters and of solid instruction for their pupils. It has therefore been thought desirable to separate it from the clinic properly so called, and form of it an object of special instruction, which, while remaining attached by close ties to the clinic, is yet taught in a separate establishment termed the Pathological Institute. In reality it is a laboratory, and as such will be described in detail in my general report. I will only add that, many cases requiring a chemical examination either during life or after death, a chemical laboratory is attached to the institute, in which a professor or his assistants execute or direct the analyses that may be required, initiating, at the same time, a certain number of students in the methods of pathological chemistry. I may make the general observation that this organisation of the autopsies not only offers precious resources in a scientific point of view, but it gains in dignity. I was struck with the decency and cleanliness that prevails in the dead-house of the Vienna Hospital and other establishments of the same kind, and it would seem that the suitableness of the dispositions that are adopted must exert a favourable influence over the pupils themselves. In one of the amphitheatres of which I have spoken basins with cold water and clean towels are at the disposal of the students who have been handling the specimens sent round. These are so arranged as to be, when covered by their hinged lids, on a level with the desks at which the students take their notes, the supply of water passing beneath the tables.

6. *Attendance of Students on the Clinics.*—The students are only admitted to these when sufficiently prepared for the instruction they afford, which is in general at about the mid period of their studies. In Austria, where these are continued for five years, they are obliged to attend the clinics for two years before they can be examined for the Doctor's diploma, which in that country confers the right of practice. In Prussia the *examina rigorosa*, on passing which the Faculties confer their diploma, are followed by a State examination, which is a severe and obligatory trial for the Doctor who desires to practise. To be admitted to it he must produce his Doctor's diploma and a certificate of his having attended the clinics during two *semestres*. In the regulations of the Bavarian Faculties there does not seem to be any compulsory attendance on the clinics in order to be admitted to examination. All are admitted who, having completed eight *semestres*, have during each of these attended at least one course of Medicine. The State examination cannot take place before the end of the fifth year, which is especially devoted to practical instruction. The candidates, already Doctors of the Faculty, are admitted to this examination only on condition of having attended during a year as *praticirenden* the various general and special clinics. The attendance on his lectures is verified by the Professor himself, who knows the names of all those who have entered. These lectures are not gratuitous, and the obligation to pay is a stimulus to the zeal of the student, as, indeed, it is to that of the Professor. The attendance is, in fact, so zealous that the precaution of ascertaining the daily presence of the students becomes superfluous and disused. At the end of the *semestre*, the Professor enters a certificate of attendance in the lecture-book (*index lectionum*) with which every student is provided. These certificates are of equal value as regards the examinations, whatever the rank of the Professor—ordinary, extraordinary, or private. In no case is the duty of ascertaining the attendance on the clinics left to the Hospital administration, but is always managed by the Faculty. In consequence of the numerous clinics which are founded in the same university, the students would find difficulty in attending them all within a given time, if the Faculty did not take care so to distribute the hours at which the lectures succeed each other. The following is the daily distribution of the clinics in the Universities of Berlin and Vienna, those only being mentioned which are official, leaving out those which are also delivered by private Professors:—

At Berlin, from 8 to 10, Professors Traube, Medical Clinic; 9 to 11, Von Graefe, Ophthalmological Clinic; 9.30 to 11, Jüngken, Surgical Clinic and Ophthalmology; 10 to 11, Martin, Obstetrical Clinic; 11 to 12, Frerichs, Medical Clinic; 12 to 1, Ebert, Clinic and Polyclinic of Diseases of Children; 1 to 2 Griesinger, Polyclinic of Mental Diseases; 2 to 3, Von Langenbeck, Surgical Clinic; 5 to 6, Martin, Obstetrical Polyclinic.

At Vienna, from 7 to 9, Professors Skoda and Oppolzer, Medical Clinics; 8 to 10, Jager, Ophthalmological Clinic; 10 to 11, idem, Operations; 9 to 11, Dumreicher, Surgical Clinic; 9 to 11, Billroth, Surgical Clinic; 10 to 12, Arlt, Ophthalmological Clinic; 11 to 12, Braun, Clinic of Diseases of Women and Obstetrics; 2.30 to 4, Hebra, Clinic of Diseases of the Skin; 4 to 5, Sigmund, Clinic of Venereal Diseases.

(*To be continued.*)

REVIEWS.

Principles of Human Physiology. By William B. Carpenter, M.D., F.R.S., etc., Registrar to the University of London, etc.; and Henry Power, M.B. Lond., F.R.C.S., Examiner in Physiology and Comparative Anatomy in the University of London, late Lecturer on Physiology Westminster Hospital, Ophthalmic Surgeon to St. George's Hospital, etc. Seventh edition. London: John Churchill and Sons. Pp. 1032.

It is difficult to estimate aright the intrinsic value of such a work as that now before us, but of its importance to the student of physiology there cannot be the slightest question. In certain branches of our Profession it is the fashion now-a-days to decry anything like book work. For instance, in Medicine and Surgery we are constantly being told that a man must learn his profession at the bedside. No doubt this is true in the main, as it is of certain other branches of knowledge; but to our mind a knowledge of principles, only to be obtained by books or lectures, is equally necessary. In physiology we have to deal with the applied sciences as bearing on the phenomena of animal life, and a knowledge of these is absolutely essential to one who would not be a mere routine Practitioner or a worse empiric. It is all very well to tell a student to go to the bedside and study disease. He cannot study physiology in the same way; he must have something to guide his steps. The fact that so many opinions prevail on one point appa-

ıently simple enough, and the variety of results obtained by different investigators, all tend to show that some code of doctrine is necessary for the student, and hence the necessity for such volumes as Carpenter's "Human Physiology." That the book has served its purpose this way is plain enough from the number of editions through which it has passed, and the amount of labour entailed in editing a book like this cannot be easily conceived by those ignorant of the toils of authorship, still less by those who have not attempted to follow the course of modern physiology. To say that the book has sustained its popularity under the editorship of Mr. Power is no small praise; but those who have examined it and seen the careful way in which every research has been incorporated in it, or its influence in some other way exhibited, will be inclined to place Mr. Power's labours on even a higher level.

It is extremely difficult to criticise a book of this kind, except as to its completeness or incompleteness, and the accuracy or inaccuracy of its modes of stating the views of other authors. From the former point of view we have carefully examined the volume and have to report it more complete than heretofore, by the addition of certain chapters, brief enough no doubt, but useful, on the minute structure of the connective tissues and on the chemical constitution of the human body. Further, since the work last appeared several important changes in scientific opinion have been brought about. One of the most important works—from its influence in this way—which have been published has been Kühne's "Physiological Chemistry," and this has considerably modified our views in more than one respect, but especially as to the changes albumen undergoes in the alimentary canal. These investigations have been carefully incorporated throughout this work, as have the same investigator's researches on the effects of pancreatic juice as a digestive agent; but his views as to the effects of the bile acids in the assimilation of fat are scarcely noticed.

Probably the most important change in physiological opinion has been effected by the researches of Fick and Wislicenus, by Frankland, Parkes, and Haughton, who have completely overthrown the notions formerly prevailing as to the destination of different kinds of food and as to the nature of muscular motion. This was a subject too important to be overlooked, and the results of these investigations have been fully discussed in the present volume.

One of the most interesting questions now undergoing discussion, if it be not equally important with that to which allusion has just been made, is still a matter of curiosity to physiologists. The true function of the liver, one would have thought, must have been settled long before this time; nevertheless, both structure and primary function are still *sub judice*. On the whole, Dr. Beale's views have not been very favourably received, and the notion advocated by Henle that the bile-ducts and their blind extremities are the organs whereby the bile is secreted, and that the cellular portion of the liver is concerned more in the production of glycogen than in that of bile, is not without supporters. A gentleman, with the unpronounceable name of Chyzonszczszewsky, has introduced a plan of injecting living animals and of freezing specimens, whereby he obtains sections from which a good deal may be learnt as to the structure of many tissues. Unfortunately, none of his drawings are here given.

Of late years, also, many important investigations have been made into the processes of respiration and circulation. The invention of the sphygmograph has done much to forward our knowledge, especially in the latter direction. Marey and Sanderson have given much attention to the subject, and their results are here detailed, as are those of Cyon, Ludwig, and Thiry on the innervation of the heart. The researches of Traube and Czermak as to the causes of the respiratory movements are also among the additions.

In no section of physiology have there been greater advances made of late years than in that relating to the nervous system. The brilliant researches of Beale on the nerves of the tree frog, or Hyla, have totally changed the aspects of many questions previously incapable of solution, or only of being answered in a clumsy, unsatisfactory, and, as it proves, an erroneous way. The discovery, which has since been amply confirmed, of the double roots of ganglionic nerve-cells, and the existence of such cells at the peripheral extremities of nerves, has altered the whole aspect of nerve function. Nor are the researches and painstaking dissections of Dr. J. L. Clarke of less value. His elucidations of the structure of that most complex region the medulla oblongata are worthy of all praise. Whatever has been done by these gentlemen, as well as by others whose names are perhaps more familiar on the Continent than with us, has not been overlooked; it will be found in this volume.

The chapter on muscular tissue has also been considerably extended, and many things, relating to both their structure and chemistry, have been added. Marey's researches as to the movements of muscles, as observed by his myograph, have afforded additional material for this chapter. Not much change has been made in the chapters relating to generation and development, departments which would seem to have attracted comparatively few inquirers of late years.

We have given but a short account of the additions, and we have said nothing of a still more delicate and difficult part of an editor's duty—viz., excision. It will, however, be readily seen that an enormous amount of work must have been gone through by Mr. Power. Even this, however, gives one only a faint notion of physiological research during the last few years, which have been periods of unusual activity. The footnotes and references, which are plentiful, we might almost say, on every page, impress this notion far more forcibly on the mind. It is certainly satisfactory to find that all this labour has not been wasted, nor even misspent, and that the work now stands the best treatise of this kind in our own or any other language. In Germany the two most popular treatises are perhaps those of Ludwig and Ranke. Ludwig is intensely heavy, and Ranke's work is less catholic in its scope than that of Carpenter and Power.

The Baths and Wells of Europe; their Action and Uses, with Hints on Change of Air, and Diet Cures. By JOHN MACPHERSON, M.D. With a map. London: Macmillan. 1869. Pp. 336.

WE are always glad to read anything of Dr. Macpherson's, because he is of all men the least likely to be seduced into unsound speculation, or to be beguiled by the fallacious theories of the hour. Whatever he writes has been passed through the crucible of a somewhat sceptical common sense; and there is no subject that needs this ordeal more than that of baths and wells. The main idea of the book is evidently to treat the subject of baths without the humbug usually found in books of the class, and to account rationally for the cures produced by them. It is divided into four parts; the first analyses the elements of treatment. It commences with a short account of bath life, in which, if there be not much novelty, we recognise much truth. It then discusses change of air, and especially the effects of mountain air. The latest investigations make it pretty clear that, practically speaking, the quantity of carbonic acid expired on the top of lofty mountains does not differ materially from that expired at the level of the sea; and there are some facts which would seem to show that while acute chest attacks, and consumption sometimes, are common at great heights, cases of hæmoptysis have benefited by being sent to them. But Dr. Macpherson's chief conclusion is that exactly identical effects are attributed to sea and to mountain air, and that therefore a complete reinvestigation of the subject is required. The effect of the mountain air of many spas is kept in view throughout the work. In the next two chapters the effects of cold and of hot water in baths, various hydropathic practices, hot-air and hot-vapour baths are discussed, and the main effect of both is declared to be sudation, of which some account is given. The general doctrine that the skin scarcely absorbs any water seems to be the one most generally adopted. After some account of the effects of the internal use of waters, and of certain effects of them which have been termed bath fevers, the author throws out a few notions respecting the chemical composition and the sources of mineral waters, concluding with some good observations about their classification.

Proceeding to Part Second, we find him declaring "indifferent and earthy baths" (as Bath, etc.) to owe little to the presence of their mineral constituents, which are certainly not absorbed. These are the waters used *par excellence* in affections of the nervous system, Gastein, Wildbad, Plombières, Teplitz, standing at their head.

Next come baths of sulphur waters, which, although the theory of their operation is uncertain, are undoubtedly useful in skin complaints, in rheumatism, and in secondary syphilis and metallic poisoning. Another chapter handles the extensive subject of salt baths, including the various baths of different degrees of concentration, with practical observations on sea bathing. We observe that the author recommends to the notice of the public San Sebastian and other Spanish sea-bathing places near it.

There is more of novelty to most English readers in the chapter on artificial baths and inhalations than in any other. Short accounts are given of arenation, peat baths, and those of

pine balsam, of gas baths and inhalations, especially of carbonic acid, and some account is given of the use of baths of compressed air. The author has evidently no very high opinion of inhalations, at least of any portion of them except the warm aqueous vapour they contain.

The drinking waters are discussed in the third part under the heads of indifferent and earthy, sulphur, salt, alkaline, purgative, and iron waters. In the introduction to each chapter an attempt is made to explain the chief effects on the economy of the prevailing mineral constituent of the water, first on the system when in a state of health, and next when it is suffering from disease.

The brief chapter on the presence of minute quantities of salts appears to us to be one of the most interesting in the book. The author has no faith in the effects of the minute quantity of iodide and of bromide of potass sometimes present, and is sceptical about the resolution of uterine tumours often hoped for from Kreuznach and other waters containing a little iodine.

We can barely notice the contents of the last part, which is divided into two chapters. There is some account of various popular cures, and a tolerably full one of the gripe cure. The writer concludes with a complete account of the milk and whey cures. We observe that milk is more of a favourite with him than whey, and that he advocates its use in various forms of chronic disease in ordinary practice, and has also a high opinion of the milk cure at moderate elevations in threatened phthisis.

We almost think that Dr. Macpherson is too favourable in his verdict on the hydropathic treatment, although he states, as the confession of "intelligent hydropathists," that they have contributed a large number of patients to lunatic asylums. He also says that in this climate it is very possible to catch severe cold after hot air or vapour baths, and that he has seen hæmaturia thus produced.

Whoever wants to know the real character of any health-resort must read Dr. Macpherson's book, where he will be sure to find the grain of truth stripped of the chaff of exaggeration and prejudice, and this by a man personally familiar with most of the bath resorts in Europe. He is equally at home with bath literature, which gives material for some sarcastic quotations, and he evidently has read that charming account of *La Ville de Doux Repos*, and of the proceedings of Dr. Anglicide and Dr. Polycarpus Gastenfanger, which we have lately quoted in these pages.

Miscellaneous Contributions to the Study of Pathology. By John W. Ogle, M.D. Reprinted from the *British and Foreign Medico-Chirurgical Review*, January and April, 1868.

Upon certain Morbid Conditions of the Appendages of the Liver. By John W. Ogle, M.D.

Blood-cysts situated within the Arachnoid Cavity in Cases of General Paralysis of the Insane. By John W. Ogle, M.D.

A Series of Fatal Cases of Poisoning. By John W. Ogle, M.D.

On a Case of Death from Hæmorrhage into the Pericardium. By John W. Ogle, M.D.

On some of the Rarer Varieties of Abdominal Tumours. By John W. Ogle, M.D.

On Morbid Growths in connexion with the Brain and Spinal Cord. By John W. Ogle, M.D.

We have before us a series of pamphlets by Dr. John W. Ogle, most of them reprinted from the *British and Foreign Medico-Chirurgical Review* and from the *St. George's Hospital Reports*. Dr. Ogle has set an excellent example to the Hospital Physicians of London—and, in fact, of the whole country—by turning to good account the hitherto buried clinical and pathological treasures which the archives of St. George's Hospital contain. He has selected and arranged several series of cases bearing on some of the most difficult and recondite points in Clinical Medicine, and were this his only merit, he would deserve the thanks of every student of disease. But, as we shall presently see, he is not only a laborious collector and arranger of cases, but he fulfils the higher functions of a commentator with no little ability and judgment. In our limited space it would be impossible to notice *seriatim* the pamphlets the names of which we have quoted. The series of cases of abdominal tumours includes some of those pathological rarities which are so important in practical Medicine and diagnosis from the fact of their establishing possibilities. Thus the second case in the collection is "Distension by serum of the smaller omental cavity, which was converted into a shut sac by closure of the foramen of Winslow." Case 15 is one of so-called polypus or pedunculated fibrous tumour growing from the inner surface of the small intestine, causing invagination of the bowels and death. Both these cases are as remarkable as uncommon.

Dr. Ogle's collections, however, form not merely a museum of rarities. The first pamphlet on the above list contains a very valuable collection of fatal and non-fatal cases of chorea, with a commentary thereon.

This series of cases and Dr. Ogle's deductions derive immediate and exceptional interest from the attention with which the connexion between chorea, rheumatism, and heart-disease is now being studied both in France and in this country. In the former M. Henri Roger has lately contributed to the *Archives Générales de Médecine* a paper thereon, and amongst ourselves, since the admirable and most original papers published in the *Medical Times and Gazette* of June, 1863, by the late Dr. Kirkes, the theory of the embolic origin of chorea has received much support, especially from Dr. Hughlings-Jackson, and from Dr. Tuckwell, of Oxford. Dr. Ogle groups together sixteen fatal cases of chorea, fourteen of which were those of females. Two of the sixteen patients were under the age of ten, three were of the age of twenty and upwards, the rest were of intermediate age. With regard to complications, in two cases there were headache and drowsiness; in one there had been epilepsy; in one chorea and convulsions followed scarlatina; in two cases there were hysteria-like symptoms, and in one delirium and affection of the sphincters. In two cases mania was present; in two there was phlegmonous or erysipelatous inflammation; in five cases the catamenia were defective; in two pregnancy existed. In eight out of the sixteen cases, fright or other emotion was supposed to have produced the chorea. Rheumatism was present doubtfully in two cases; decidedly in four; and cardiac affection, probably of rheumatic origin, existed in four others. With regard to pathological appearances, congestion of the nervous centres was met with in six cases. In two there was alteration of the substance of the spinal cord, and in one softening of the brain. In no less than *ten* of the *sixteen* cases, fibrinous deposit or granulations were found upon some parts of the heart's valves or lining membrane. In one case old pericarditis existed, in another there was evidence of recent pericarditis. Now the embolic theory of chorea is of course that molecular fibrinous deposits from the cardiac valves, or elsewhere, get washed into the current of the blood, are thence conveyed to the cerebral and spinal arteries, which become plugged. Altered nutrition of portions of the nervous centre follows, and, as the result of this condition of imperfect nutrition, chorea is developed. There is no doubt that in a large number of fatal cases of chorea, and in many of the non-fatal cases, there exists evidence of the deposition of fibrine on the heart and valves. In a much smaller proportion of fatal cases, there is an appearance of softening in some parts of the nervous centres. But these facts are not sufficient to establish the embolic origin of chorea. The theory does not suit all the phenomena of the disease. On this point Dr. Ogle has some specially valuable remarks. He writes:—

"Supposing that chorea were owing to the presence of molecular fibrinous material in the blood, circulating in all directions and parts, as fibrine would do in this form of mechanical subdivision, I would ask how we could find an explanation of the fact that chorea (under conditions operating so generally) is so frequently unsymmetrical and one-sided as it is, or even confined, it may be, to certain muscles or series of muscles. Should we not of necessity get other and graver motor symptoms than merely defective harmony of associated movements?" (P. 25.)

Again, the experiment of injecting minutely divided fibrine into the blood-current does not produce symptoms at all comparable to those of chorea. Lesions such as would result from mechanical impediment are not encountered in the greater number of cases. In other cases where we have reason to suspect capillary embolism, the post-mortem reveals the appearances of pyæmia or of gangrene. Dr. Ogle says he cannot call to mind a single instance of acknowledged capillary embolism which was attended by phenomena which could even suggest chorea.

"Again, it might be asked if there was merely a mechanical cause (which, of course, would be constant in operation), such as embolism. Why should the movements be so decidedly and almost universally interrupted during quiet sleep? Or why should certain peculiarities as to age or sex be considered as predisposing influences?" (P. 27.)

Dr. Ogle suggests that a general hyperinotic condition of the blood may be the common antecedent of chorea and fibrinous deposits, and he asks whether the slight fibrinous deposits on the valves may not often be formed in the dying state.

But our space is exhausted. We may not follow our author through the series of non-fatal cases, or through his other groups of disease. In reference to chorea we may note that he records one instructive case where the disease was evidently caused by the presence of a tape-worm, and was cured by the oil of male fern. In taking leave of Dr. Ogle, we would emphatically repeat that this series of tracts are in our opinion a very valuable addition to the literature of pathology and Medicine, and are creditable both to the industry and acumen of their author.

GENERAL CORRESPONDENCE.

RESTRAINT AND NON-RESTRAINT IN ASYLUMS.

LETTER FROM DR. A. D. KELLOGG.

"To the Editor of the Medical Times and Gazette."

SIR,—The veracity of certain statements made in my "notes" on foreign asylums has been called in question by the editors of the *Journal of Mental Science*, and by Dr. Holland in a note appended to his report of the Prestwich Asylum, and I am called upon for names and localities. In these notes I have tried to tell "the truth," and, as far as my space would permit, "the whole truth," and most assuredly "nothing but the truth."

My opponents seek to answer my statements by simple contradiction. In reply, I emphatically reassert that these things came under my personal observation, and if my *exposé* has tended to remove them, sufficient good has been accomplished.

Insanity, as far as our observation extends, is the same the world over, and British patients are in all essential particulars the same as those of other nationalities. A Briton insane and deluded has not lost all his natural characteristics. Whatever he makes up his mind to do he will accomplish, right or wrong, if he can. If he makes up his mind to be nude, nude will he be unless he is compelled to be clothed, and so to the end of the catalogue of insane impulses. I asserted in my notes, and still maintain in common with all European, American, and many British alienists, that there are insane persons who would be naked—entirely nude—from month to month, and others who would destroy much valuable property unless restrained mechanically. We gave illustrative cases that have come under our observation at home and abroad, but our opponents, with questionable gentility, give the lie to our assertions. We do not feel particularly hurt at being included in these sweeping denials and denunciations, but comfort ourselves with the thought that we have a jury of alienists quite respectable in character, as well as numbers, not only in America and Europe, but indeed in England, to whom we can appeal as to the probable credibility or incredibility of our assertions.

We do not propose to give names, and shall not without further warrant furnish that of the young Physician we are charged with libelling in the extracts from the notes given in the *Journal of Mental Science*.

All Medical men who have charge of the insane in England, whether old or young, have enough to contend with, between their worst cases to be treated without mechanical restraint on the one hand, and the watchfulness of commissioners on the other, without having their names brought before the public unnecessarily. The "young Medical man," however, will recognise the conversation, and can make such explanatory remarks on the passage to which his attention has been called as he may see fit, over his own signature.

Of Dr. Holland, however, of the Prestwich Asylum, near Manchester, who stops his report in press to add a note attacking our veracity, we need not be as tender, but state distinctly that the locality of the nude patient so loudly called for was at the asylum of which he is superintendent. The patient was seen there by me June 3, 1868, and the account given in my notes was substantially that furnished me and noted down at the time. If the Doctor sees fit to deny this, we have nothing further to say.

As to the "refractory bath," the locality of which is demanded by the Commissioners, we are sure we never could have imagined such a thing in our waking moments or dreamed of it while sleeping; but we repeat emphatically that, unless we suffered very strange optical and aural illusions, we not only saw it at several places, but heard it so designated. The localities we could give if necessary, but at present we do not see fit to do so. If we really laboured under an illusion, we were not the first, for so recent, accurate, and authoritative an observer as Dr. Fredk. Norton Manning, acting under a commission of her Majesty's Government of New South Wales, and whose able, voluminous, and exhaustive report made last year we would warmly commend to the attention of our British brethren, seems to have suffered in the same way. Dr. Manning on page 122 speaks of this bath, and so describes it that its identity with that seen by me cannot be mistaken.

"The warm bath," says Dr. Manning, "is employed medically in most British and American asylums; but in many it is only used very occasionally, and in none is it prolonged beyond half an hour. [We were differently informed.] In most Continental asylums it is a prominent and much-used remedial agent. During its use cold cloths are applied to the head, or the douche or shower-bath used at intervals, and, to judge by the writhings and contortions of the patient, and his frantic yells as he rolls over and over in the bath, in which he is restrained by a locked lid, leaving the head only free, this treatment is in the highest degree painful." Dr. Manning has not given the localities of this strange machine, the bare mention of which by me has so startled our British brethren from their staid propriety. He doubtless thought with others that the Commissioners, with their usual vigilance, should be able to find them without special localities being pointed out to them by foreign observers. As to the imputation sought to be cast on my manner of obtaining information, as illustrated by my experience at Hanwell, I will merely say that I took thankfully such as was offered there by one who spoke of himself as, at the time, "the only Physician in charge of one thousand patients." This, it will be admitted, was a pretty fair index to the Medical efficiency of this famous Hospital at the time of my visit, and I did not feel inclined to lessen such efficiency by any special demands of my own.

We sympathise entirely with the editors of the *Journal of Mental Science* in weariness of this subject of non-restraint, but cannot coincide with the view expressed, that it has for ever been set at rest by Dr. Conolly, much as we revere the name of this great and good man. Dr. Manning, in the report already quoted, page 119, says:—"During the last few years there has been a certain reaction in the feelings of superintendents of asylums on this subject; in quite half of the asylums visited, although restraint was not practised, its advantage in certain cases was distinctly admitted, and it does not meet with that all but wholesale condemnation which was accorded to it some few years ago." If its advantages in "certain cases" are distinctly admitted, as they were to both Dr. Manning and myself, why refuse these "advantages" in worship of an idea and in obedience, as we have said in another place, to a maudlin public sentiment and reverence for a great name? Dr. Wilkes, once Medical Superintendent of the Stafford County Asylum, and now a Commissioner in Lunacy, says:—"With every disposition to advocate the disuse of mechanical restraint to the utmost extent, I am compelled to admit that the results of my experience in this asylum, up to the present time, lead me to the conclusion that cases may occur in which its temporary employment may be both necessary and justifiable." Dr. Sutherland expresses a similar opinion, and we might give the names of many others to show that the question is not "for ever set at rest." People in England are too sensible to worship for ever an idea. "The reaction against bodily restraint," says Dr. Workman, Superintendent of the Provincial Asylum, Toronto, Canada, "appeared to me to be a perfectly legitimate sequence of anterior abuses. The pendulum of public sentiment will always swing as far to one side of the line of gravitation as to the other; but when the moving power ceases to operate, it assumes the true perpendicular." "When in England, in 1859," continues Dr. Workman, "it was my impression that there was a strong undercurrent of recusancy that time would bring to the surface." Time has done its work, as the Doctor predicted, and superintendents, as we have seen, are now speaking out boldly, and the true "perpendicular" the Doctor speaks of will soon be reached.

We sympathise with the *Journal of Mental Science* that "it is indeed a weary and heartless work going over the old objections to the non-restraint system," especially in the light of the actual state of things; but *vera pro gratis*.

I am, &c. A. D. KELLOGG, M.D.

State Asylum, Utica, New York, U.S.A., May 20.

DR. GEORGE SMITH, of Barnsley, has had his collar bone dislocated by being thrown from his gig.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JUNE 2, 1869.

Dr. GRAILY HEWITT, President, in the Chair.

THE following gentlemen were elected Fellows :—Mr. T. Biddulph Goss, Bath; Dr. J. T. Griffith and Dr. Dudley, Kingsford.

The PRESIDENT gave some particulars of the recent deputation to the Home Secretary. He stated that the Council of the Society had waited on Mr. Bruce on May 11 in order to represent to him the necessity for removing a defect in the constitution of the General Medical Council arising from the absence therefrom of teachers or authorities on the subject of Obstetric Medicine. A memorial had been drawn up and was then presented to the Home Secretary. The deputation was kindly introduced by Dr. Lyon Playfair, M.P., and accompanied by several other members of Parliament. He had further to state that the representations they made were carefully listened to by the Home Secretary, and he believed that the attainment of the object the Society had in view would be materially advanced in consequence of the interview.

Dr. ROUTH exhibited a new Vesico-vaginal Speculum Holder made by Mr. Coxeter. An instrument for the same purpose had been devised by Mr. Weiss, at Dr. Savage's instigation and under Dr. Rogers's direction, which was exhibited by Mr. Wells as used by him before the British Medical Association. This was a very ingenious instrument, but it had certain disadvantages which he thought did not apply to the instrument now shown. In Weiss's instrument there were, in fact, but two movements allowed, one upwards and downwards, and the other forwards and backwards. In this one there were four movements, a circular motion of the speculum, and one from side to side, as well as the two possessed by Weiss's. Its construction was also much more simple. These two additional movements enabled a more ready exposure of the fistula for operation, if not in the middle line, which, in some cases, was most important. Another advantage in this instrument was that the buttock piece was flatter and wider, and so more comfortable to the patient. Again, by means of two straps, it could be used when a woman was on her side. Lastly, owing to the movement upwards and downwards being effected by a slide instead of a slow-working screw, it was most readily applied and removed. He (Dr. Routh) had also added another portion to it, by which an ordinary speculum could be fixed *in situ* in lieu of Sims's speculum, and which could, when so placed, play or be fixed in all the four positions before named. In private practice, with lack of assistants, for purposes such as the application of the actual cautery or leeching, etc., its advantages would be at once recognised. One other reason he had for bringing it before the Society was, not only was it more simple in construction, but less expensive.

Dr. J. F. ROGERS exhibited a specimen of Conjoined Twins, and gave particulars of the delivery. The mother, a primipara, was confined on May 17. The presentation was footling, and the delivery was effected by the aid of steady traction without much difficulty, the head of the posterior child passing first through the pelvis. They were stillborn. Both were females. The connecting band between them extended from the upper end of the sternum to the umbilicus. Into this band one umbilical cord entered, common to both. The mother made a good recovery.

Dr. PLAYFAIR said that Dr. Rogers's paper was valuable because, although cases of conjoined twins were by no means rare, an accurate description of the mechanism of delivery was rarely given. This particular instance well illustrated a remark he had made in a paper on the subject in the eighth volume of the *Transactions*, that presentation by the feet was by far the most favourable that could be met with. For not only did this allow us to diagnose the cases more readily, but the bodies were able to pass through the pelvis without much difficulty, and then by lifting them well over the abdomen of the mother, one of the heads became engaged in the cavity, while the other remained in utero. If, therefore, we are able to determine the nature of the case soon enough, we should convert it into a footling presentation by turning. If one of the hands passes first, it is necessary that the body belonging to it should undergo a process of spontaneous evolution, involving a very tedious and hazardous termination.

Dr. BARNES described and demonstrated a new method of Embryotomy, by which a mature fœtus could be extracted through a pelvis measuring not more than an inch in the conjugate diameter. He observed that the rule of conduct justifying embryotomy was the same in extreme cases of deformity as in slighter cases. In the case of a pelvis contracted to three inches in the conjugate diameter it was justified by the presumption that by it the mother was saved from danger. So, in the case of contraction to two inches or one inch, it was on the same principle justifiable. The difficulty was to carry out the proceeding with reasonable safety to the mother. He had long felt that if the problem how to extract a mature fœtus through a pelvis narrowed to one inch without injuring the passages were put to any of our great engineers, a solution would be found. He felt that the problem ought to be solved, so that the Cæsarian section, if not eliminated, might at any rate be still further restricted. Van Huevel's forceps-saw cut up the child's head by making a chain-saw travel up from the shanks of the forceps blades. But in extreme distortion there was not room for the blades to pass. His (Dr. Barnes's) operation consisted in passing a loop of strong steel wire over the head by means of Weiss's écraseur, and then making sections. Dr. Barnes showed the operation. He regretted that a pelvis having nearly two inches diameter had been sent instead of one with only an inch, and that he had only been able to procure a seven months' fœtus; but the operation was quite feasible under the conditions he had stated. Dr. Barnes first perforated the head, then introduced the crotchet to steady it, then passed the wire loop into the uterus, which could be done by compressing it; and when the loop was sufficiently high, by removing the compression it opened by its elasticity, and was made to seize the head in its circumference at the occipital end. Then, by working the screw, the wire made a clean section of the head, taking off all the posterior part; this part was then removed by craniotomy forceps. Then the wire was reapplied in the longitudinal direction of the head, seizing under the jaw and ear, and another section made through the base of the skull. This was commonly enough. The remains of the head were then seized by Dr. Barnes's craniotomy forceps, and easily drawn through the pelvis. Then there was the body, often opposing great difficulty. This he overcame by perforating the chest, by hooking the crotchet in the axilla of one arm to draw it down within reach of the embryotomy scissors to cut off; then the chest walls were cut up by the embryotomy scissors and drawn through the pelvis, either cutting off the other arm previously or not. The operation had this great advantage over the old crotchet and craniotomy forceps operations—that it involved little or no pressure or contusion, or dragging upon the uterus or other soft parts. The wire buried itself immediately in the head, and no bulky instruments or manœuvres bruising the soft parts were necessary. In answer to Dr. Tyler Smith, Dr. Barnes said he had not yet performed the operation on the living subject.

Dr. CLEVELAND remarked that in estimating the dimensions of a pelvis through which a child could be extracted, sufficient regard was not paid to the probable size and osseous development of the latter. Thus, though it might be comparatively easy to drag a small immature fœtus, such as that just exhibited, through a narrow passage, it would be very difficult, or almost impossible, to do the same with a firmly ossified child weighing 8 or 9 lbs. He thought that in cases of high distortion, after removing the bones of the cranium, the real difficulty had still to be encountered, for, in a recent case of the kind to which he alluded, he had, after long perseverance, removed every particle of the skull, as well as all the cervical vertebræ, and was then foiled in the attempt to bring down the rest of the body within operative reach. After death the child was found to weigh about 8 lbs., without its head, and the shoulders, when compressed into as small a space as possible, were out of all proportion to the size of the pelvic inlet.

Dr. BARNES could but repeat his conviction, based upon experience, that he could bring not only the head, but the trunk of a mature fœtus, through with nearly as much facility and accuracy as the Fellows had seen done in the experiment performed before them.

Dr. HICKS considered the Society to be much indebted to Dr. Barnes for his careful demonstration of his new method, which was certainly a clear means of reducing the head to a minimum.

The PRESIDENT observed that the value of the procedure suggested by Dr. Barnes must of necessity be tested by experience, but one thing at all events was certain—viz., the originality of the operation, and for this Dr. Barnes deserved the greatest credit.

REPORT OF THE INFANT MORTALITY COMMITTEE.

The PRESIDENT stated that the paper about to be read was of a peculiar character. Some time since Dr. Farr, of the Registrar-General's office, communicated to the Society his desire to obtain information as to the treatment and management of infants in this country, with a view to ascertaining the extent and causes of infant mortality, and requested the Society to use the resources at its disposal for obtaining this information. His request was at once acceded to. The Council appointed a committee on the subject, which since then had been at work. A series of questions was drawn up, printed, and a copy sent to each Fellow. A considerable number of answers had been obtained, and Dr. Gervis, one of the hon. secs. of the Society, had, at the request of the committee, drawn up an analysis of the replies thus elicited, and the paper now to be read was the analysis in question. The Council had decided to bring the matter thus far advanced before the Society, the subject being a highly important one, and in order also that those Fellows of the Society who had not yet contributed information on the subject might be induced to do so.

The report was then read. After some introductory remarks, it proceeded to consider the answers given by those Fellows of the Society who replied to the circular. The first question asked related to the proportion of births attended by Medical men and by women respectively, to the amount of instruction possessed by the women, and to the mode of procedure adopted with the infant immediately after its birth. From the replies given the following general statements were deduced. That among the poor population of villages a large proportion, varying from 30 to 90 per cent., were attended by midwives. That in the smaller provincial towns attendance by midwives prevailed (with a few exceptions) to a much less extent, not more than 5 to 10 per cent. That in the large provincial towns, and especially in the large manufacturing towns, it occurred in almost as large a proportion as in the agricultural villages. And, lastly, that in London attendance by midwives varied in amount according as the replies came from the east or west end or the suburbs, in the east of London rising as high as 30 to 50 per cent., in the west amounting to but 2 per cent. or even less, and in the suburbs it averaged about 5 per cent. To the question, "Are the women instructed?" answers in the negative came from all parts of the country with very few exceptions, and from many districts the replies indicated not merely a want of any special education, but gross ignorance and incompetence. In London, on the other hand, it appeared that there were many women practising midwifery who had received a certain amount of instruction at various institutions, and who were fairly competent in ordinary cases, but still quite unequal to any of the emergencies of obstetrics. Under the third section of the first question, that relating to the mode of procedure with the infant after birth, nothing new or of much interest had been ascertained. The general management of the cord is that usually followed. An abdominal binder is commonly applied, and it would seem that it often is applied too tightly, so as sometimes even to induce convulsions. The custom of giving an aperient to the infant shortly after birth still largely prevailed, more so in the country than in London. The aperient varied much in kind. Butter and sugar, milk and sugar, gruel, castor-oil, treacle, a teaspoonful of cold water, were among the favourites. No report was received of any great delay being common in putting the child to the breast. The second question had reference to lactation and feeding. Among the married poor suckling appeared to be the rule, and was often unduly protracted, but artificial food was generally also given from an early date. Illegitimate children were rarely suckled. In both cases, however, the food given was generally improper either in quality or quantity, of too substantial a consistence, and too exclusively farinaceous. Among the upper classes it appeared that the tendency for mothers not to suckle their children was on the increase; but either from wet nurses being employed, or from the food given being much more judiciously arranged, the injurious results of improper feeding were not seen as among the lower classes. On this topic Mr. Curgenven remarked that a large number of women in London failed to properly suckle their children through a deficient secretion of milk. The third question related to the mode of life adopted for infants in various districts. Both in agricultural and manufacturing districts it would appear that the custom prevailing among the poor of letting their children spend the greater part of the day in the open air, compensated to some extent for the smallness of their dwellings, but that during the night the evils resulting from overcrowding and ill-ventilation were very serious. Sleeping was encouraged to the utmost attainable extent, and by means some of which, such as the administration of cordials and narcotics, were most injurious. Washing during the earlier months of infancy was fairly attended to. In dress the error was on the side of insufficiency, especially in winter. Much additional evidence was also returned in the answers to this question on the question of food, and no doubt can be entertained that much of the fatal bowel and mesenteric disease prevalent among infants is directly due to the effects of improper feeding. The fourth question referred to the immediate effects of putting children out to nurse, and from the answers received it would appear that, except in the case of illegitimate children and the children of the poorer class of mill-workers, this was not a very prevalent practice. In agricultural districts it scarcely prevailed at all. Baby-farming, in the sense of an accumulation of babies in one room or house, did not out of London appear to be much carried on; where it was, in London and its neighbourhood, the testimony was invariable as to its prejudicial effects on the children. From answers to the fifth question it would appear that in the country there is much less ill-treatment of children, desertion, concealment of birth, and infanticide, than in London. In the case of country villages this appears partly to arise from the willingness of the father to marry the mother of the child where possible; and in the case of the large manufacturing towns it was to some extent due to the shamelessness with which illegitimacy is regarded, it being very common for one or other of the grandparents to attend to the illegitimate child or children of the daughter. Of indirect ill-treatment, however, there was much everywhere to complain of—of the ill-treatment, that is, arising from the poverty, ignorance, and intemperance of the parents, from the want of comforts and necessaries in their houses, and from consequent exposure, insufficient or improper feeding, and neglect. One variety of this indirect ill-treatment, to which attention was called by Mr. Fowler, of Wakefield, consisted in the neglect which prevailed in some towns to call in Medical advice in the case of the illness of the infants until Medical advice was too late, the only object of the Medical man's visit being to secure the necessary certificate in case of the child's death. The desertion of illegitimates in London was frequent, less so in the large provincial towns, still less so in the small towns and villages. With respect to concealment of birth and infanticide, again, the replies from the country intimated that neither of these crimes was common, while, in London, on the other hand, there was too much reason to fear that the opposite was nearer the truth. The first section of the sixth question referred to the annual number of illegitimate births known to the Fellows of the Society in their respective districts. A large amount of information was thus obtained, but of unequal value, through not being given (as requested) on a common basis. The returns, however, from Cornwall and Norfolk confirmed the previous impression which existed as to their pre-eminence in illegitimacy among English counties; and as regards towns and villages in this branch of the inquiry, country towns appeared to have the advantage over villages, and even probably London itself, and between sparsely populated agricultural villages and densely populated manufacturing towns it was difficult to decide. The second portion of this question asked information as to the number of illegitimates who live over one year, and, in spite of such an exception as Padstow in Cornwall, where Mr. Marley reports that half the illegitimates die under one year, in the strictly rural districts it would appear that the lives of illegitimate infants are as good as those of the legitimate—that in the manufacturing towns at least 35 per cent. die under one year of age, and in London as many as 75 per cent. The circular lastly dealt with the possibility of preventing so large a mortality among infants, and invited suggestions from the Fellows on the subject. These were arranged under two heads, the first including those suggestions in which all agreed, the second those which were advocated by particular Fellows. The first dealt chiefly with questions of improved hygiene; the second included numerous and valuable suggestions, tending for the most part to an improvement in the law. Some concluding observations expressed the wish of the Council to receive from the Fellows present any suggestions they might be inclined to offer, so as to incorporate them in their final report, and expressed their opinion that there were few subjects to which the Society could devote its attention and influence more usefully than that which formed the subject of the present inquiry.

After some remarks on the interesting character of the report from Dr. Barnes, Dr. FARR said that the result of the inquiry had fully realised what he had hoped to ascertain through its medium. The treatment of children at an early age was most important, adult health depending largely upon the state of

health in childhood. Infant mortality was much higher in the southern countries of Europe than in the northern. It was greatest in Italy, lowest in Norway. He would have liked to have heard more details as to the dress of infants, particularly as this report would doubtless be widely circulated on the Continent, in many parts of which bandaging was carried out to much too great an extent. He wished to return thanks to the Society for this important contribution to the natural history of the British baby.

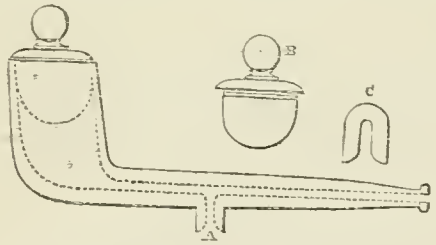
Dr. Rogers moved, and Mr. Gaskoin seconded, the adjournment of the discussion, on account of the wide extent and importance of the subject.

The President, in putting the resolution (which was carried unanimously), said he judged from the manner in which this paper had been received that the time and money expended in the production of the information now conveyed to the Society would prove not to have been thrown away. The Society had successfully inaugurated a new work from which humanity would greatly benefit.

NEW INVENTIONS.

MR. BIRD'S NEW INHALING PIPE.

Mr. James Bird, Surgeon, of Seymour-street, Connaught-square, has recently invented a novel little instrument for inhaling the vapour or smoke of various medicinal substances and preparations, which, from the simplicity of its construction and the facility with which it may be applied to the administration of a number of important remedies by the air-passages, promises great advantages, and commends itself at a glance to most favourable notice. The use of Mr. Bird's "inhaling pipe" is likely to lead to a great extension of the practice of inhalation, and to important therapeutical improvements; and we understand that it is in use among the out-patients of the Victoria-park Hospital, and the report thus far is "decidedly good." It is also undergoing a very satisfactory trial at the Consumption Hospital at Brompton. The diagram shows the form and configuration of the pipe, and also the method of using it.



A, Air-passage; B, Top and sponge; C, Section at A.

For the relief of asthmatic or anginoid paroxysms, neuralgia, tic douloureux, toothache, etc., as well as for any affection of the mouth, fauces, or air-passages, any of the following formulæ that may be considered appropriate may be inhaled by means of this pipe; and for throat fumigation it will only be necessary to remove the felt sponge, and any suitable preparation of mercury or iodine may be smoked over either ignited tobacco, hemlock, or stramonium, with the greatest facility, and the fumigation continued far more persistently than by any other of the usual methods. Many of the formulæ given below have been tried very successfully, and they are suggestive of many other combinations that will be found equally or even more effective as time and experience may hereafter dictate:—

℞ Chloroformi ♏x., sp. vini rectif. ♏xxx. M.
℞ Chloroformi ♏v. ad ♏x., sp. camphoræ ♏xxx. M.
℞ Chloroformi ♏v. ad ♏x., tinct. pyrethri ♏xxx. M.
℞ Chloroformi ♏v. ad ♏x., tinct. tolu ♏xx. M.
℞ Chloroformi ♏v. ad ♏x., sp. camphoræ, tinct. pyrethri, āā ♏xv. M.
℞ Chloroformi ♏v. ad ♏x., tinct. opii ♏x. ad ♏xx. M.
℞ Acidi carbolici ♏j. ad ♏ij., sp. vini rect. ad ♏xx. M.
℞ Chloroformi ♏v., tinct. daturæ tatulæ ♏xx. M.
℞ Chlorodynii ♏x. ad ♏xx.
℞ Chloroformi ♏v., tinct. humuli ♏xxx. M.
℞ Creosoti ♏ij. ad ♏viij., sp. vini rect. ♏xx. M.
℞ Acidi carbolici ♏j. ad ♏ij., acidi acet. glac. ♏iv., sp. vini rect. ♏xx. M.

Each of the above formulæ represents a medium dose for an adult for one period of inhalation, which may be renewed at stated intervals as deemed necessary.

We shall revert to this subject from time to time, as the administration of remedies by the air-passages is very suggestive. In fact, there is as great a number and variety of pharmaceutical and chemical preparations suitable for inhalation as there are disorders for which they are peculiarly applicable. Thus there is a vast field for Medical observation, research, and practice, which has hitherto been but sparingly and unsatisfactorily investigated for the want of an inexpensive, convenient, and efficient instrument, such as Mr. Bird's inhaling pipe.

Fig. 1.—Œsophagus Forceps.

Half of the beak, placed at the concave portion of the instrument, remains fixed, so as to facilitate prehension of the foreign body. The greatest amount of movement scarcely separates the branches.

Fig. 2.—Forceps for the Extraction of Foreign Bodies from the Urethra.

Here also, though the mouth of the instrument be largely opened, the branches are hardly separated. The same model, only longer, and curved like an ordinary sound, may be made to enter the bladder.

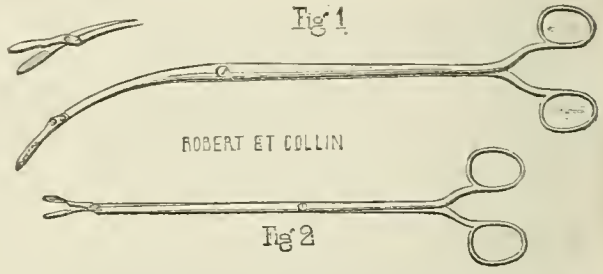
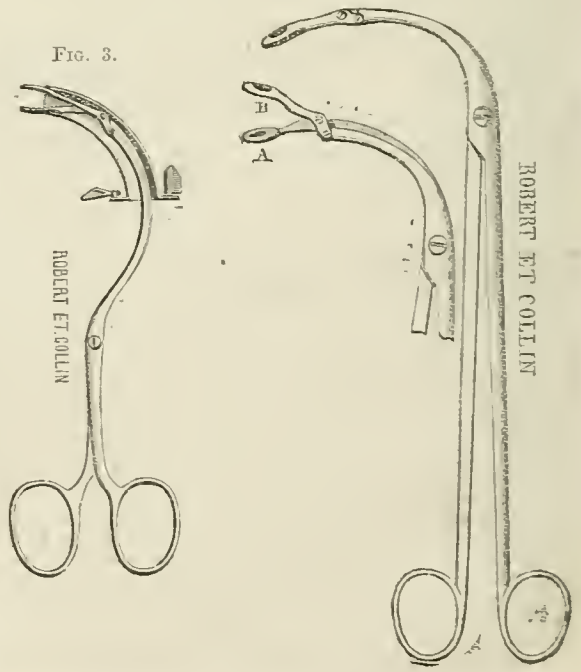


Fig. 3.—Forceps for Extraction of False Membranes after Tracheotomy.

In using this instrument it is not necessary to withdraw the canula—the curve is such as to pass any size.

These three instruments are constructed after the plan of Dr. Cusco's forceps for polypus of the larynx (Fig. 4).

Fig. 4.



CALVERT'S CARBOLIC ACID SOAP.

Messrs. Calvert, of Bradford, Manchester, have sent us samples of various kinds of soap impregnated with carbolic acid. One for toilet use, especially for nurses and other persons who are in attendance on patients with cholera and other communicable diseases, and for the patients themselves; one for household purposes, for washing the clothes and bedding of the sick. Again, there is a kind prepared for such skin diseases as the Practitioner may desire to treat with carbolic acid, and a soft soap for washing cattle. This, we are promised, will keep off not only fleas and ticks, but flies also. There is is some reason to hope, it is said, that mosquitoes will be scared by the smell of the toilet soap.

NEW BOOKS, WITH SHORT CRITIQUES.

My First Start in Practice. By a London Doctor. London: Robert Hardwicke, 192, Piccadilly. 1869. Pp. 44.

*** We should be very sorry if this book were to fall into the hands of any one who could really suppose that it was written by a member of the Medical Profession, or that it depicted any possible stages in the career of a Medical Practitioner. It is a clumsy hoax, which may have been written by a police reporter one of the personages who describe every drunken scamp as a "Medical student", or the barman at a public-house in Smithfield, or a dissecting-room porter, or by some one else who is just able to pick up some Medical slang and to attempt a feeble imitation of the Bob Sawyer style, but we are sure that no educated Medical Practitioner would care to avow the authorship. Who was the printer, and why he did not correct the spelling, are not evident. After an account of a drunken orgie to celebrate the passing of his examination, the hero pretends to describe his "struggles," which, after all, were the consequence of his own idiocy, too great to be imagined. He is swindled with eyes open into buying a worthless practice on a "death vacancy." He gets no patients, and one day, coming home after a few hours' absence, finds that the widow has stripped the house and absconded with the furniture; and, to add a fitting climax, intimates that he marries a charwoman, the mother of the boy that sweeps the surgery. We must apologise to our readers for taking up so many lines in denouncing this rubbish, but it is really a monstrous libel on Medical students and Medical Practitioners that it should be offered to the public as an example of Medical life, education, or manners.

Nouveaux Eléments d'Histoire Naturelle Médicale. Par Dr. Cauvet, Docteur ès Sciences Naturelles, Professeur-Agrégé à l'Ecole Supérieure de Pharmacie de Strasbourg.

New Elements of Medical Natural History. By Dr. Cauvet, Doctor of Natural Science, Adjunct-Professor in the Superior School of Pharmacy at Strasbourg. 2 vols. Paris and London: Baillière. Pp. 521 and 770.

*** These volumes will be found of considerable use to the student, as they contain those portions of zoology, of botany, and mineralogy which bear specially on Medicine. There are also certain general notions given of these sciences introductory to the portion specially Medical. He first deals with zoology, giving some introductory notice of the subject, then proceeding to discuss the mammalia, birds, etc. The most important parts of the volumes are those relating to botany, which is dealt with at considerable length, both generally and with regard to the special classes of plants. The portion dealing with mineralogy is short. The principal feature in these volumes is the illustrations, which are very numerous and on the whole good. Those in the zoological portion are after such authors as Chauveau, Mogines, Tandon, etc.; those in the part relating to botany are mostly after Duchartre.

The State of the Medical Profession. By William Dale, M.D. Lond., M.R.C.S.E. Dublin: Fannin. Pp. 76.

*** Dr. Dale competed for the Carmichael prize, and, as we know, was not successful, the prize having been adjudged to Dr. Mapother. Owing to the peculiar circumstances connected with the award, Dr. Mapother offered to publish the essay of any one dissatisfied with it. This, it seems, Dr. Dale was, and he has called on Dr. Mapother to fulfil his engagement. Dr. Mapother has done so, but has cruelly allowed no corrections or alterations. Perhaps Dr. Dale is satisfied—Dr. Mapother must feel so.

De l'Urine. Nouvelles Données Séméiologiques. Principaux Réactifs employés au lit du malade. Par F. L. Nisseron, M.D., ancien externe des Hôpitaux de Paris.

On the Urine, etc. By F. L. Nisseron, M.D., formerly *externe* of the Paris Hospitals. Paris: Baillière. Pp. 208.

*** It seems that the author's object is "to convince the majority of Physicians of the importance of a clinical examination of the urine." That such a process of convincing is at all necessary seems to us more than doubtful, so that we may look upon a considerable portion of the work as useless. Certain portions, however, as those which deal with the reactions generally employed at the bedside for ascertaining the composition of the urine, will prove useful enough. The illustrations are wretched.

A Course of Six Lectures on the Chemical Changes of Carbon. By William Odling, M.B., F.R.S., Fullerian Professor of Chemistry Royal Institution. With notes by William Crookes, F.R.S., etc. London: Longmans. Pp. 162.

*** The peculiar scientific character of the present age has no doubt been to a considerable extent induced by the minds of men like Faraday. He first introduced these lectures for children at the Royal Institution, and his wonderful skill made them a great success. Nor have his successors been behindhand with their great predecessor, as the present volume will show. The chemistry of carbon is the chemistry of organic life, and no better or plainer introduction to this study could be found than the volume which lies before us. One of the best series ever published were those wonderful lectures on a candle, but the present series goes beyond the former one, being really, as hinted above, an introduction to organic chemistry.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, June 10, 1869:—

Holland, Neville, St. Ives, Hunts.
Kidd, John George, Shepherdess-walk, N.
Roberts, Robert, Barcelona, Spain.

As an Assistant in compounding and dispensing medicines:—

Holt, William Henry, Altrincham, Cheshire.

The following gentlemen also, on the same day, passed their First Examination:—

Allnutt, William, King's College.
Morris, John Edward, St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BUZZARD, Dr. THOMAS (late Assistant-Physician).—Physician to the National Hospital for the Paralysed and Epileptic.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—The following appointments have been made:—Dr. G. Monteath, Assistant-Surgeon, to the *Lion*; Robert Grant, Acting Assistant-Surgeon, to the *Elk*: Dr. Alexander Rattray, Surgeon, to the *Bristol*; and Ahmuty Irvin, Surgeon, to the *Trincomalee*. The undermentioned officers have been promoted to the rank of Surgeon in her Majesty's Fleet, with seniority of June 2, 1869:—Andrew Mullan, Esq., Edward Brereton Broster, Esq., and Richard Carr M'Clement, Esq.

WAR OFFICE.—The following appointments have been made:—16th Foot: Staff Assistant-Surgeon Robert Mark Bradford to be Assistant-Surgeon, *vice* Robert Coleman Eaton, appointed to the Staff. 37th Foot: Staff Surgeon James Ekin, M.B., to be Surgeon, *vice* Surgeon-Major James Lewis Holloway, appointed to the Staff. 44th Foot: Staff Assistant-Surgeon Alexander Haldane Stokes, M.B., to be Assistant-Surgeon, *vice* Highgate Henry Phillips, M.B., who resigns.

MEDICAL DEPARTMENT.—Surgeon-Major James Lewis Holloway, from the 37th Foot, to be Staff Surgeon-Major, *vice* Staff Surgeon James Ekin, M.B., appointed to the 37th Foot; Assistant-Surgeon Robert Coleman Eaton, from the 16th Foot, to be Staff Assistant-Surgeon, *vice* Robert Mark Bradford, appointed to the 16th Foot; Edward Alexander Henry Roe, gentleman, to be Staff Assistant-Surgeon, *vice* Frederick Mackenzie Skues, promoted.

BIRTHS.

BROSTER.—On June 9, at 64, Wood-street, Woolwich, the wife of Edward Brereton Broster, Assistant-Surgeon, Royal Navy, of a daughter.

CHESTER.—On June 12, at Penally, Pembrokeshire, the wife of Assistant-Surgeon Chester, F.R.C.S., of a son.

MACNAB.—On June 7, at Bury St. Edmund's, the wife of Robert Macnab, M.D., F.R.C.S. Edin., of a son.

MACTIER.—On June 11, at Strone House, Blairgowrie, Perthshire, the wife of W. F. Mactier, M.D., late Bengal Service, of a daughter.

MARRIAGES.

BENSLEY—SHEFFIELD.—On June 3, at St. Marylebone Church, Edwin Clement Bensley, F.R.C.S., H.M.'s Indian Army, to Catherine, youngest daughter of Henry Sheffield, Esq., of Avenue-road, Regent's-park.

HILL—EPPS.—On June 8, at St. Marylebone Church, Roland, eldest son of John Hill, Esq., Stock Exchange, and 19, Tavistock-square, to Louisa, third daughter of Dr. George N. Epps, of 20, Devonshire-street, Portland-place. No cards.

HILL—HALL.—On June 10, at St. Mary's Church, Eastbourne, the Rev. Thomas Prince Hill, M.A., to Anna Brodie, eldest daughter of the late David James Hall, M.D., of Eastbourne, Sussex.

LINDER—BUCK.—On June 10, at St. Mark's Church, Kennington, Joseph, only son of Joseph Linder, Esq., of Brooklyn-house, Mapperley, Notts, to Selina, youngest daughter of the late Thomas Buck, M.D., of Kennington-park, Surrey.

MCGREGOR—GOULD.—On June 10, at St. John's Church, Notting-hill, Charles John Skardon, second son of the late W. L. McGregor, Esq., M.D., of the H.E.I.C.S., to Ellen Mary, eldest daughter of Charles Gould, Esq., of Lansdowne-crescent, Kensington-park, and Calcutta.

MYERS—ROBINSON.—On May 27, at North Somercotes, Lincolnshire, Charles J. Myers, Esq., Surgeon, to Mary Lucy, eldest daughter of Wm. Robinson, Esq., both of North Somercotes.

SANDIFORD—COSSINS.—On June 9, at St. Mary's, Stoke Newington, George Tyson Sandiford, M.D., F.R.C.S., of Bengal, to Caroline, only child of the late Henry Cossins, Esq., of Cambridge.

WILKINS—JAKINS.—On June 10, at the Wesleyan Church, King's-cross, London, John Canning Wilkins, M.R.C.S., of Brixton-road, to Emma Vosper, eldest daughter of Isaac Negus Jakins, M.R.C.S., of Osnaburgh-street, N.W.

WOODMAN—COOKE.—On June 10, at Clifton Parish Church, Charles Edward Somerville Woodman, Commander, R.N., son of the late Dr. James Woodman, M.D., of Chichester, to Ellen Mary, eldest daughter of George Cooke, Esq., of Clifton.

DEATHS.

ANDERSON, HARRIETT KATHERINE, youngest daughter of Inspector-General A. Anderson, M.D., C.B., at Douglas, Isle of Man, on June 13, aged 12.

JOHNSON, Mrs. CHARLOTTE, widow of Dr. James Johnson, Physician Extraordinary to the late King, at New Lodge, Hendon, on June 13, in her 84th year.

MACKIE, JAMES, M.D., at 6, Ardgowan-square, Greenock, N.B., on June 9.

WHITE, ELIZA JANE, wife of F. B. White, Esq., M.D., at Bradley-hill, Wotton-under-Edge, on June 8, aged 71.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BIRKENHEAD BOROUGH HOSPITAL.—Assistant House-Surgeon; must have at least one legal qualification. Applications and testimonials to the Chairman of the Weekly Board on or before the 21st inst.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon; must be a Member of one of the Colleges of Surgeons of England or Ireland. Applications and testimonials to the Chairman of the Medical Committee on or before July 3. Election on July 13.

BRITISH LYING-IN HOSPITAL, ENDELL-STREET, LONG-ACRE.—Honorary Physician. Applications and testimonials to the Secretary.

DOVER HOSPITAL AND DISPENSARY.—Resident Medical Officer; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to the Secretary, 27, Castle-street, Dover, on or before June 30.

HARTLEY WINTNEY UNION, HANTS.—Medical Officer for the Farnborough District. Candidates must be legally qualified and registered. Applications and testimonials to W. Brooks, Clerk to the Guardians, Odiham, on or before the 24th inst. Election on the 25th inst.

KINGTON UNION.—Medical Officer for the New Radnor District; candidates must be duly qualified. Applications and testimonials to A. Temple, Clerk to the Guardians, on or before July 2. Election on the 3rd.

LINCOLN COUNTY HOSPITAL.—Physician; must be F. or M.R.C.P. Lond. or Edin., or be F.K.Q.C.P., not practising pharmacy. Applications and testimonials to the Secretary on or before July 5. Election on July 8.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE, BLOOMSBURY.—Assistant-Physician; must be F. or M.R.C.P.L. Applications and testimonials to B. B. Rawlings, Esq., Secretary, on or before the 24th inst.

NEWCASTLE-UPON-TYNE INFIRMARY.—Senior House-Surgeon and Junior House-Surgeon. The Senior House-Surgeon must have both Medical and Surgical qualifications. The Junior House-Surgeon must be duly registered and have one qualification. Applications and testimonials to the Secretary on or before June 22. Election on July 1.

NORTHAMPTON GENERAL INFIRMARY.—House-Surgeon's Assistant. Applications and testimonials to the Secretary, on or before the 28th inst.

READING MEDICAL DISPENSARY.—Dispenser; must be duly qualified. Applications and testimonials to the Secretary on or before June 17.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL, ST. GEORGE'S-CIRCUS, S.E.—Honorary Surgeon; must be F.R.C.S. Applications and testimonials to the Secretary, on or before July 5.

ST. GEORGE, HANOVER-SQUARE, DISPENSARY, 57, MOUNT-STREET.—Physician; must be M.R.C.P.L. Applications and testimonials to the Hon. Sec., on or before June 28. The election will take place on the next day at 5 o'clock p.m., when personal attendance will be required.

SHEFFIELD GENERAL INFIRMARY.—House-Surgeon's Assistant; must be M.R.C.S. or a Licentiate of the Faculty of Physicians and Surgeons of Glasgow, and L.S.A. Applications and testimonials to the Secretary on or before June 19. Election on June 25.

SPALDING UNION.—Resident Medical Officer for the Moulton District. Candidates must possess the qualifications prescribed by the orders of the Poor-law Board. Applications and testimonials to A. Maples, Clerk to the Guardians, Spalding, on or before June 21.

ST. PANCRAS AND NORTHERN DISPENSARY.—Honorary Physician; must be M.R.C.P.L. or Graduate in Medicine of one of the Universities of Great Britain or Ireland. Applications to S. S. Wigg, Esq., Hon. Sec.

SUNDERLAND INFIRMARY.—House-Surgeon; must be legally qualified. Applications to the House-Surgeon, C. D. Hildbury, Esq., M.B.

TAIM UNION, ATHBOY DISPENSARY DISTRICT.—Medical Officer. Candidates must have the qualifications prescribed by the orders of the Poor-law Board. Applications and testimonials to P. M'Cann, Hon. Sec., Athboy, on or before 12 o'clock on the 24th inst. Election on the same day.

UNIVERSITY COLLEGE.—The Professorship of Medical Jurisprudence will be vacant at the end of the present session. Further information may be obtained of the Secretary.

YORK DISPENSARY.—Resident Medical Officer; must possess both Medical and Surgical qualifications. Applications and testimonials to the Secretary, Dispensary, York.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Hawarden Union.—The Second District is vacant; area 9285; population 1670; salary £20 per annum.

Knighton Union.—The Knighton District is vacant; area 24,094; population 3641; salary £40 per annum.

Merthyr Tydfil Union.—Mr. Rees Miles has resigned the Town District; area 3297; population 16,840; salary £25 per annum.

Newmarket Union.—Mr. Joseph Packard has resigned the Ninth District; area 4976; population 1925; salary £75 per annum.

APPOINTMENTS.

Aysgarth Union.—Jonathan A. Harrison, M.B. Glas., M.C. Glas., L.S.A., to the Higher District and the Workhouse. Matthew Willis, M.D. Edin., to the Lower District.

Highworth and Swindon Union.—John K. Kenyon, M.R.C.S.E., L.S.A., to the Third District.

Weobley Union.—William H. Kerbey, M.R.C.S.E., L.S.A., to the Workhouse. Charles F. Empson, L.R.C.P. Edin., M.R.C.S.E., L.S.A., to the Weobley District.

DR. COOK has been elected Medical Officer to the Gateshead Dispensary.

ROYAL COLLEGE OF SURGEONS.—The last report of the proceedings of this institution was as usual suspended in the hall yesterday for the information of Members. From this document it appears that the report of the committee on Mr. Erasmus Wilson's proposal to found and endow a Professorship of Dermatology was read and adopted by the Council, and the draft deed for carrying out its provisions was also approved, and four members of the Council elected trustees. A letter from Mr. B. E. Brodhurst, honorary secretary to the Medical Teachers' Association, enclosing a report from that body, was read, and the report ordered to lie on the table. The following resolution, proposed by the President and moved and seconded by Messrs. South and Hancock, was carried—viz.: "That application be made to the proper authorities that the following be made a by-law, viz.:—'The Council shall have power to accept from any candidate, in lieu of his being required to be examined in anatomy and physiology for the diplomas of Fellow or Member, any degree, diploma, licence, or certificate of any University, College, or other public body whose degree, diploma, licence, or certificate the Council shall decree to be equivalent to the passing of the said examinations.'" A resolution moved by Mr. Hawkins, and seconded by Mr. South, was carried:—"That in any year in which the Jacksonian Prize is not adjudged the interest arising from the Jacksonian Fund be added to the principal of the fund." A subsequent resolution by Messrs. Hancock and South was also carried:—"That in future the Jacksonian Prize shall not exceed the income accruing from the trust."

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—At the ordinary monthly meeting of the Society, held on Monday, June 7, J. H. Barrett, Esq., in the chair, Mr. Alfred Coleman read a paper "On the Treatment of Periodontitis by Replantation," and Mr. Snape, of Chester, read a paper "On Electricity as a Local Anæsthetic."

ANTHROPOLOGICAL SOCIETY OF LONDON.—At the meeting on June 15, Dr. Beddoe read a paper "On the Stature and Bulk of Man in the British Islands." Dr. Beddoe's paper was based on very extensive materials, derived from the recruiting returns of the United Kingdom, collected from volunteer corps, or from prisons, lunatic asylums, and other public institutions; or supplied by about 150 private investigators scattered throughout Great Britain. He found the tallest men (averaging 5 ft. 10½ in.) in Upper Galloway, the heaviest (199 lbs.) in Berwickshire, and the smallest (5 ft. 1½ in.) among the Spitalfields weavers. His paper indicated the existence of a process of degeneration in stature and bulk in the town populations of England and Scotland, and even in some of the rural districts of the south of England. Further information on this point was promised.

MONTHLY RETURN OF THE DEATHS REGISTERED IN THE EIGHT PRINCIPAL TOWNS OF SCOTLAND.—The deaths of 2662 persons were registered in the eight towns during May, of whom 1334 were males and 1328 females. This is the greatest number registered in any month of May since the Act came into operation; and, allowance being made for increase of population, it is 329 deaths above the average of the month for the last ten years. The zymotic (epidemic and contagious) class of diseases proved fatal to 653 persons, thus constituting 24 per cent. of the mortality in the eight towns. The rate was slightly exceeded in Glasgow from the prevalence of measles and fever, and greatly in Leith from that of measles. Fevers caused 164 deaths, constituting 6·1 per cent. of the mortality. Of these 164 deaths, 127 were attributed to typhus, 32 to enteric, 1 to relapsing, 2 to simple continued, and 2 to infantile remittent fever. The next most fatal of the epidemics was measles, which caused 138 deaths, or 5·2 per cent. of the mortality. In Leith, 18·3 per cent. of the deaths were from that cause.

PREHISTORIC MAN.—We have heard lately almost too much about the prehistoric man, and the supply of flint implements, perforated shells, and split marrow-bones begins to exceed the demand; but a recent discovery in the Département de la Dordogne of human skeletons coeval with the mammoths and undeniably appertaining to the earliest quaternary period presents features of such unusual interest that the French

Government have sent M. Lartet, the distinguished palæontologist, to make a report on the subject. He reports that the bones of five skeletons have been discovered, and that they belong to some gigantic race whose limbs, both in size and form, must have resembled those of the gorilla. But the simian origin of man must not be inferred from these analogies, as the skulls, of which only three are perfect, afford testimony fatal to this theory, having evidently contained very voluminous brains. The skulls are now in the hands of a committee of *savants*, who are preparing an exhaustive craniological report.—*Pall-mall Gazette.*

Water Supply of Simla.—Dr. de Renzy, the Sanitary Commissioner of the Punjab, has just reported on the unsanitary condition of Simla, and especially the unhealthy water supply of that queen of Indian sanatoria. It is just fifty years since Lieutenant Ross built the first house on the present site of Simla, and now the population in the season consists of 1200 Europeans and 18,000 natives. The former live in 290 houses, at an annual rental of £23,560. The rainfall is the same as that of Calcutta, or between 60 and 70 inches. The death-rate of the whole population is 24 per mille, but nearly a half of the deaths, or 41 per cent., are of children. The year 1867 was the most unhealthy in the history of the sanatorium; 29 males and 100 females died. June and July are the least healthy months. The settlement is supplied with water from eighteen perennial springs. The two best of these, under Jako, yield supplies which, on analysis, prove to be 11th and 16th class waters. The truth is that the sewage of the station trickles down to the rivulets. Even at the chief places of supply, at Combermere-bridge, where there is a filter, Dr. de Renzy found what he thus describes:—"Fæcal matter, bones, old shoes, empty sardine boxes, preserved soup tins—in fact, the refuse and filth of the club overlooking it. The soil about the spring was a rich compost, formed by the decay of leaves and the excremental accumulations of years deposited from the club. The fæcal matter and the compost were being gradually worn away by the current and carried into the reservoir for distribution to the residents in their drinking and cooking water." The Governor-General's supply, from a spring below Peterhoff, is described as worse. The Sanitary Commissioner recommends the covering of all reservoirs, the placing of a tank on the roof of every house, as at Gibraltar, and the enclosure of several acres on the top of Jako, from which to collect the water for public and general use. All this is pointed out, in greater or less detail, every year, but Simla belongs to a few houseowners, who rule the municipality.—*Times Calcutta Correspondent.*

Foul Water the Cause of Malaria.—Mr. Bettington, of the Bombay Civil Service, after thoroughly investigating the subject, has brought forward good reasons for concluding that the use of stagnant water containing decomposing vegetable matter, as is the case with all the wells and tanks of India, is an exciting cause of malarious disease. It has been found that villages deriving their water supply from tanks only are much more unhealthy, and the inhabitants more liable to fever than where the supply is drawn from wells. Of the truth of this remark of Mr. Bettington's I have had frequent ocular demonstration. Dr. Parkes also mentions various places in India, in France, and even in England, where ague ceased after good wells were constructed.—*W. J. Moore, Surgeon, Marwar Political Agency, on Malaria.*

Dr. Bakewell, of Trinidad, reporting on a newly introduced treatment of leprosy, says:—"Dr. Beauperthuy is a highly intelligent and educated Physician, possessing the diploma of Doctor of Medicine of the University of Paris, probably the most distinguished Medical degree in the world. He has been settled in Venezuela about thirty years, and during the whole of that time has been engaged in the investigation and study of leprosy and other diseases peculiar to the tropics. It having been brought to my notice, through the medium of the public journals, that he claimed to have discovered a method of curing leprosy, I deemed it my duty, being then Medical superintendent of the Leper Asylum, to communicate with him on the subject. He replied to me, repeating the statements as to the cure; and these letters, together with some others on the subject, were published in Spanish in the Official Gaz tte of the State of Nueva Andalucia. On my arrival I found that Dr. Beauperthuy had completely cured five cases, and that ten more were then under treatment. One of the latter was discharged cured during my residence at Cumana, and the treatment of another was commenced. Of the five cases I examined four. On one point alone he refused to be explicit, and that was on the remedies he employs. The method of treatment consists in the administration, during the whole period of cure, and for two or three months afterwards, of an internal remedy and the application to the tubercles, or the part suffering from anæsthesia, of an external agent. Baths are also ordered, but I should say very rarely used, as most of the patients were exceedingly dirty. A system of nourishing diet, with entire abstinence from salted fish or meat and pork, is insisted on. This last order is, I fear, but rarely carried out in its integrity, as most of the patients are poor people. But I observed that whenever the patients were in a condition to take a nourishing diet, the progress of the cure was much more rapid than in the other cases. The action of the external remedy on the diseased parts is most peculiar, and may be fairly called specific. The first application produces, after the lapse of from twenty-eight to forty-eight hours, a copious exudation, which, drying on the skin, forms a thick crust or scab. In the course of from eight to ten days this scab or crust falls off, leaving the skin underneath quite sound. There is no ulceration or sore produced. This first application was never, in any of the cases I saw, accompanied or followed by pain, unless, as in the last case I shall relate, applied over such an extent of surface that the mere mechanical pressure of the scab caused it. The second application even in some bad cases failed to awaken the dormant sensibility of the diseased parts. But in every case the third application is followed by a diminution in the thickness and hardness of the tubercle. The effect is invariably produced more rapidly in those parts of the body, like the trunk and thighs, covered from the light, and is invariably slowest in the face, neck, and ears. The applications after the first are followed by less and less exudation as the tubercles diminish in thickness; the third or fourth is probably a thin scab, and at length it becomes a mere scale, such as that formed by a slight blister; this last is transparent. When the application produces this effect the tubercle is cured. But the most remarkable point is that on the healthy skin the application never produces any effect. It peels off, and causes no inflammation or exudation whatever." Dr. Bakewell then gives an account of fifteen cases, which we need not here detail; but as the report of a well-known and painstaking observer the paper is of great value.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Souvenir of Pooa E——.

Many of our readers will recognise the author of the following lines—a Surgeon of brilliant promise and high attainments, who once seemed to be on the sure road to Professional success, but, alas! whose career was blighted by a train of misfortunes which ended in an early death. On one occasion he called on the editor of the *Medical Times and Gazette* in great distress, and received a little money, and what no doubt the poor fellow thought a disproportionate quantity of good advice. Later in the day he sent the following *jeu d'esprit*:—

A propos des Bottes; or, a Cheque on Drummond's.

I wandered all night, and, of all things, I thought
Of the May and the spring and its fruits.
I'd to think all alone till the kindly sun shone
Upon me and my ramshackle boots.

We were not worth a song, but we plodded along,
And I thought of Greek verbs and their roots;
But I shunned decent people, so bashful we were,
Myself and my ramshackle boots.

Pretty service they'd done, tramp'd miles many a one;
But all cads, once so civil, were mutes.
We were quite of a pair, though I felt all alone;
They were scorned, my old ramshackle boots.

A brother appeared with a wise face and beard,
And said, "They're of folly the fruits:
Put on a new pair ere you stir from this place.
Fie on you and your ramshackle boots!

"And in the new pair which I give you to-day
I know you're, as any, astute)
Walk to church, and, when there, you must kneel down and pray
That you mayn't have a ramshackle boot.

"For a ramshackle boot means a ramshackle head:
The disease often springs from the foot.
But perhaps while you're kneeling there may be wiped off
The old marks of your ramshackle boot."

So to Drummond's I went—it was there I was sent—
Got sovereigns and shillings to suit;
And, please God, for the future my footsteps won't be
The sad marks of a ramshackle boot.

Alpha.—Dr. Ballard's essay on vaccination.

Dr. Abrath.—We hope to be able to find room soon.

Before Dr. Drysdale can expect his communications to be noticed in a respectable journal he must learn the first law of literary comtesy, which is not to credit any person with the authorship of editorial articles that appear in a public journal. The views of the *Medical Times and Gazette* are sufficiently known upon the subject, which Dr. Drysdale is pleased to call "curious."

Query.—There is no doubt about the genuine character of Pulvermacher's chains and belts. Their electricity is of a kind different from that employed in faradisation, and does much good in appropriate cases. A Practitioner must be employed to select these cases.

The Water in Belgium.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I am advised by my Medical man to write and ask you if you will kindly inform me the state of the water at Ghent, in Belgium. I am going there on account of the Engineer's College: therefore I am anxious as regards the health of the place. Will you also advise me whether I ought to take a filter or condenser if the water is impure?

June 14. I am, &c. S. H.

*** A report published by the Dutch Government gives the quality of the water of most of the towns in Holland, but we have no information respecting that of Belgian towns. We would advise our correspondent to take out a good filter—Spencer's, or one of those of the Water-purifying Company—and a good supply of Condy's finer permanganate.

Mr. F. Lowndes (Liverpool) is thanked.

Every one who has to write much knows how greatly the labour of composition, the flow of ideas, and the wear and tear of brain are affected by trifles, such as a good pen and easily flowing ink, or the reverse. Messrs. Macniven and Cameron have sent us specimens of pens which they call the "Owl" and the "Waverley," distinguished by a peculiar curvature of the nib. We find the "Owl" excellent.

Indignans.—The filthy little pamphlets which are circulated by the quacks, we believe, would be regarded as coming under the class of publications prohibited by Lord Campbell's Act. Our correspondent would confer a service on society by presenting himself at one of the police courts, and stating the facts of the reception of the dirty production by his daughter in his absence. The mischief inflicted upon the rising generation by these obscene and dangerous *brochures* is incalculable.

The Blood after Electric Discharge.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In Dr. Richardson's interesting researches at the Polytechnic, he points out in his first lecture what appears to have been an error in the statement made by John Hunter—viz., that the blood does not coagulate after death by electrical shock. In his second lecture, when noticing the phenomena of arborescent marks, he relates the experiment of directing the charge of the Leyden battery through the ear of a white rabbit, and says, "The blood in these cases undergoes arrest of its motion, expansion, and possibly decomposition, by which some of the colouring matter is liberated."

Now, I would suggest that this experiment may serve to explain Hunter's observation. As the blood in the rabbit's ear undergoes a sort of sudden decomposition from the sharp tense discharge of the Leyden jar, so, in the cases adduced by the great physiologist, the lightning stroke may have been of peculiar character (and it should be borne in mind that the amount of discharge or destructive force of natural or atmospheric electricity must sometimes far exceed anything that can be produced artificially) so as to arrest the motion, and cause instantaneous decomposition and non-coagulability of the entire mass of the circulatory fluid.

June, 1869. I am, &c. W. F. Cleveland.

West Bromwich.—The movement going on in this town with respect to the new Hospital is not creditable to the governors of that institution. It appears that the small infirmary at present in the town has two Surgeons attached to it, and who are in receipt of a small salary. At a recent meeting it was suggested by one of the governors that the Surgeons to the new Hospital should be unpaid, and one speaker went so far as to propose that "outsiders" should be brought into the town to fill these offices, provided the resident Medical Practitioners declined to act without salary. Another speaker went even beyond this, and in reference to some works which pay £9 per annum to the Birmingham Hospital, and £100 to a Surgeon, he considered they would be justified in discontinuing those payments if they took part in the new Hospital movement. In an excellent leading article in *Aris's Birmingham Gazette* of Saturday last, the subject of gratuitous Medical advice is treated with much ability by the writer, who shows with much force the great injustice inflicted upon Medical Practitioners by the system at present in vogue, and he severely criticises the proposition of the West Bromwich governors. We should be glad to know what is to become of the Surgeons in such towns as Bromwich if propositions of the kind are to be carried out. It is really time that a stop should be put to this nefarious mode of robbing the Doctors of their incomes. As the attention of the general press is being now directed to the evil, it is to be hoped that a remedy of some kind or another will be found to do away with that "genteel pauperism" which does not hesitate to accept alms from the hands of a Medical Practitioner, but would consider it an insult if offered a loaf of bread from a baker or a mutton chop from a butcher without payment. Yet it may be asked where is the essential difference between the alms received in the one case and that received in the other?

Willie will do well to pause before taking the step he contemplates.

D. is eligible for the appointment.

A Father.—The present annual payment is £40. The education is of a superior kind, and equal to that of any public school in the kingdom.

Mrs. F. (King's-road, Chelsea) will obtain the information she requires by application at King's College, Strand.

Lex.—The 40th clause in the Registration Act is so framed that it would not be difficult, to use O'Connell's phrase, "to drive a coach and six through it." The ablest lawyers disagree as to the exact meaning implied by the framers of the statute. As, however, it is a penal clause, the judges will construe it literally, and will certainly not take into account the "intentions" of the law-makers. In any amendment of the Registration Act, this clause must be taken into serious consideration.

Professor Corfield on Hygiene.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Your last issue contained an abstract of a lecture on hygiene by Professor Corfield. I am much surprised, however, to find that his lecture is an exposition of measures for the prevention of disease, and not of measures for the preservation of health, as the title of the lecture led me to expect.

His definition of the term hygiene "as the science which studies the causes of disease and points out the means of avoiding them," and again, in another part of his lecture, "as the study of prevention of disease," is quite at variance with the generally received meaning. It is no doubt true that whatever preserves health is so far a preventive of disease; still they are distinct things, and the distinction is observed in the language of science. Vaccination is cited by Professor Corfield as a hygienic measure, but, I venture to think, erroneously. I should, on the contrary, class it as a prophylactic.

A desire to preserve intact the meaning of terms must be my excuse for protesting against Professor Corfield's use of the term hygiene in the lecture to which I refer. I am, &c.

Ore, near Hastings, June 16. William Campbell, L.R.C.S. Edin.

Corpulency.—Mr. Alfred Wm. Moore, a highly respectable Medical Practitioner in South Belgravia, has addressed to us a letter in which he complains, with some bitterness, that the public press "gave the wrong person the credit for the successful treatment of this ailment (corpulency) during the autumn of the year 1863 when Parliament was in recess, and the *Times* was looking about for hobbies to take the place of the debates." Now, we beg leave to remind Mr. Moore that it has been held, and no one can doubt justly and correctly, that priority of claim to any invention is founded on priority of publication. If it were not so, how could we arrive at a just conclusion as to the value of the pretensions of any improver or inventor? *Componere magna cum parva.* Suppose, for instance, after the publication of Newton's discovery of the law of gravitation, some "philosopher" of his time had stated that he knew about the law before, but he had not given his knowledge to the world, would he have had a right to assume the title of its discoverer? Certainly not. If Mr. Moore is in a condition to show that he made public the system of treating corpulency advocated and published by Mr. Banting before this gentleman had given his experience to the world, then we will give the right person the credit of the discovery. Failing this, Mr. Moore may complain, but his complaint will not receive attention. We shall rejoice if Mr. Moore can produce conclusive evidence to sustain his claim, for it will enable him to exercise his benevolence in a way which all must admire. "Should the Medical press," says our kind-hearted correspondent, "do me the justice to give me a proper position in respect to being the first who originated a successful and safe cure for extreme obesity, I would devote half the proceeds that may arise from consultations for the support of two good old Medical charities—viz., one quarter to the Royal Medical Benevolent College and one quarter to the Society for the Relief of Widows and Orphans of Medical Men;" and then he adds with much significance, "I would be like the Medical man who was glad to shut up his open surgery and cease making a trade of Medicine, so will I then cease advertising in a popular journal, trying thereby to secure my rights." We are convinced that the Profession, as a body, will hail with great satisfaction the proof of Mr. Moore's claim to be the discoverer "of a successful and safe cure" for obesity.

The late Strychnia Case at St. David's.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Along with this letter I send you a copy of our local newspaper, which contains an article copied from the *Medical Times and Gazette* of the 5th inst. As that article contains statements entirely opposed to the real facts, I hope you will do me the favour to read the enclosed copy of a letter which my mother (Mrs. Hicks) has just sent to that paper. Perhaps you will not deem it too much to add a correction in your next issue.

I am, &c. Henry Hicks, M.R.C.S.

St. David's, Pembrokeshire, June 15.

"To the Editor of the Dewsland and Kemes Guardian.

"Sir,—The article copied into your paper of the 11th inst. from the *Medical Times and Gazette* by request may mislead those who were not present at the inquest. It was there distinctly proved that no mistake in the strength of the solution had been made. Dr. Taylor's report (read at the inquest on May 6) was most decided on that point, and Mrs. Williams stated repeatedly at the last inquest that the solution always taken by Mr. Williams was of the strength of one grain to one drachm, and that these were the proportions asked for when the bottle was sent to St. David's. Mrs. Williams further stated that she gave him three grains, meaning of course that quantity in solution, and that he had been in the habit of taking that quantity for a dose for some time. The bottle sent for the

medicine by Mr. Williams himself a Medical man, and legally authorised to have it of whatever strength he wished had been already labelled by a Brighton chemist 'Solution of morphia one grain to one drachm,' and addressed to Mr. Williams. As this was exactly in accordance with the London Pharmacopœia, I, as a chemist, had no alternative but to follow the prescription. Had the solution been ordered after the proportions in the British Pharmacopœia, it would have been so dispensed, for I do happen to know of the existence and use of that 'legal standard'—legal, but not obligatory, if the prescription of a qualified Medical man should happen to be in accordance with the old London *Pharmacopœia*, as in this instance. The writer of the article in the *Medical Times and Gazette* should have been more careful to obtain the facts of the case before penning his remarks. You state that the article was copied into your paper by request. It is, I fear, too evident to all what were the motives of the individual who made the request, especially as all persons in any way connected with the affair, or present at the inquest, or who read the report in your paper of the 5th inst., must have known that such a mistake had not been made. I can, therefore, only regard the act as a wilful misrepresentation on the part of some kind friend, whose taste for mischievous meddling is quite irrepressible. It is, of course, exceedingly painful to me to touch upon this sad subject at all, but I feel it to be due to my own character, as well as to the public, once for all to make this simple statement of facts. "I am, &c. "ANNE HICKS.

"St. David's, June 15."

*** The report we received made no allusion to the circumstance that the solution ought to have been of one grain to the drachm. We are glad to do justice to Mrs. Hicks in this respect. The reference, however, by Mrs. Hicks to the London *Pharmacopœia* was at best unnecessary, and likely to mislead.—ED.

A Provincial Fellow.—The fault is your own, as, from inquiries we have made of the officials, it appears that notices of the election of Fellows into the Council have been sent to all whose addresses are known at the College. Write to the Secretary.

A Guardian.—The result of the examination in Arts just concluded at the College of Surgeons cannot be known until at least three weeks, owing to the great number of candidates—nearly 300.

COMMUNICATIONS have been received from—

Dr. FAYRER; Mr. HESLOP; ALPHA; Mr. ELWIN; Dr. CLEVELAND; Mr. GASKOIN; Mr. J. HUTCHINSON; Messrs. LETTS and Co.; Mr. W. COTTLE; Mr. JOSEPH TEALE; Messrs. CALVERT and Co.; Mr. A. W. MOORE; Dr. WHITMORE; Mr. DAVID BLACK; Dr. E. CASEY; Mrs. HUTCHINS; Dr. ABRATH; Mr. C. J. FOX; Mr. E. T. HALE; Mr. R. CAMERON; Dr. MORIARTY; Mr. HICKS; Dr. RUSSELL; Mr. R. M. STUART; Mr. F. R. WILSON; Dr. ARTHUR FARRE; Mr. JAMES BIRD; Dr. D. J. BRAKENRIDGE; Dr. J. HUGHLINGS-JACKSON; Mr. W. CAMPBELL; Mr. W. J. SMITH; Dr. B. W. RICHARDSON.

BOOKS RECEIVED—

Aldis's Report on the Sanitary Condition of the Parish of St. George, Hanover-square—Laxton's Tables for Workmen's Wages—The Disinfectant Question—Process for the Preservation or Embalming of the Human Body—Sussex County Lunatic Asylum Report—J. Hughes Bennett's Researches into the Action of Mercury, Podophylline, and Taraxacum on the Biliary Secretion.

NEWSPAPERS RECEIVED—

L'Union Médicale—New York Medical Gazette—Aris's Birmingham Gazette—Dewsland Guardian—Newcastle Daily Chronicle.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 12, 1869.

BIRTHS.

Births of Boys, 1002; Girls, 938; Total, 1940.
Average of 10 corresponding weeks, 1859-68, 1862·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	687	618	1305
Average of the ten years 1858-67	589·8	565·8	1155·6
Average corrected to increased population	...	...	1271
Deaths of people above 80	..	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	...	4	4	...	13	3	3	...
North	618210	4	4	8	...	26	8	5	...
Central	378058	...	3	13	...	9	2	1	...
East	571158	1	6	21	..	29	18	...	...
South	773175	3	11	8	3	19	8	2	...
Total	2804289	8	28	54	3	96	39	11	...

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·962 in.
Mean temperature	59·0
Highest point of thermometer	87·5
Lowest point of thermometer	40·7
Mean dew-point temperature	50·1
General direction of wind	Variable.
Whole amount of rain in the week	0·00

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 12, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending June 12.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending June 12.	Temperature of Air Fahr. Highest during the Week.	Temperature of Air Fahr. Lowest during the Week.	Temperature of Air Fahr. Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London Metropolis	2170754	42·7	1249	1462	1305	87·5	40·7	59·0	0·00	0
Bristol City	169423	36·1	93	76	*69	84·3	40·3	58·1	0·02	2
Birmingham Boro'	360846	46·1	233	175	168	84·8	42·2	57·4	0·00	0
Liverpool Boro'	509052	99·7	369	295	250	75·0	44·7	53·8	0·01	1
Manchester City	370892	82·7	241	210	*193	82·2	41·3	57·1	0·00	0
Salford Borough	119350	23·1	78	60	55	79·8	39·0	54·4	0·00	0
Sheffield Borough	239752	10·5	149	125	94	83·0	41·5	57·0	0·00	0
Bradford Borough	138522	21·0	101	71	65	79·6	45·0	57·1	0·00	0
Leeds Borough	253110	11·7	208	129	95	83·0	42·0	57·9	0·00	0
Hull Borough	126682	35·6	73	59	46	81·0	40·0	54·8	0·01	1
Nwestl-on-Tyne, do.	130503	24·5	91	69	63	63·0	43·0	51·5	0·00	0
Edinburgh City	178002	40·2	120	85	121	66·7	38·0	54·4	0·00	0
Glasgow City,	458937	90·6	347	268	327	65·8	38·5	54·0	0·35	35
Dublin City and some suburbs	320762	32·9	182	158	136	69·9	36·6	54·6	0·06	6
Total of 14 large Towns	6546587	35·5	4262	3244	2927 Week ending June 5.	87·5 Week ending June 5.	36·6	55·8	0·03	3
Vienna (City)	530000 (1863)	...	...	...	361	...	...	63·1	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·962 in. The barometrical reading decreased from 30·13 in. on Sunday, June 6, to 29·58 in. by the end of the week.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

June 19. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

21. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

22. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

ETHNOLOGICAL SOCIETY, 8 p.m. Dr. R. King, "On the Cranium and its Deformities in relation to Intellect and Beauty."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8½ p.m. "Cases of Aneurism," by Mr. Hilton, Mr. Birkett, and Dr. Hilton Fagge; and other Papers by Mr. Hutchinson, Mr. B. Carter, Dr. Dickinson, and Dr. John Harley.

23. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

WESTMINSTER HOSPITAL SCHOOL OF MEDICINE, 11 a.m. Mr. C. Carter Blake's Lectures on the Comparative Anatomy of Warm-blooded Vertebrata—Lecture III.: The Class Aves: *Aves Præcoces.*

24. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

25. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

BURGUNDY WINES. *What more valuable therapeutic agent than a pure Wine rich in Aromatic properties, but free from an excess of Alcohol and Sugar?* Such is PIOT FRÈRES' BEAUNE, 44s. per doz.

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CARLSBAD	FRIEDERICHSALL	POUGUES	SPA
CONDILLAC	HOMBOURG	PULLNA	VALS
CONTREXVILLE	KISSINGEN	ST. GALMIER	VICHY
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REPORT ON CLINICAL INSTRUCTION IN THE GERMAN UNIVERSITIES.

ADDRESSED TO THE MINISTER OF PUBLIC INSTRUCTION.

By Professor WURTZ,
Dean of the Faculty of Medicine of Paris.

(*Concluded from page 666.*)

III. *Special Clinics.*

In the lists given above mention is made of some of the special clinics instituted in the Universities of Berlin and Vienna. The progress of Medicine and Surgery has rendered this division of clinical teaching necessary; for, in fact, as is the case in physics and chemistry, it has become almost impossible for a single man to embrace and wield equally all the branches of the art of healing. There are parts of this vast domain which opportunity, his tastes, or special aptitude may lead him to cultivate in preference, and this he may do without running the danger of losing himself in such special study, if he has been sufficiently prepared by a sound Medical education. This can only be obtained by assiduous attendance on lectures on anatomy, physiology, pathology, and general clinics. Without it the Physician who gives himself up to a special branch of the art of healing loses the general view, and runs the risk of losing his way. The special instruction in question ought never to acquire in a Faculty the importance of the greater chairs. Its necessity has been long acknowledged in respect to the art of Obstetrics, the teaching of which is everywhere separated from Medicine and Surgery properly so called. Ophthalmological clinics are a more recent institution rendered necessary by the increasing extent and rapid progress of this part of Surgery not less than by the information it borrows from physics and physiology. All the German Universities are provided with these clinics. So, too, the clinics for mental diseases, the diseases of children, syphilitic and skin diseases have conquered their places in official teaching. On this point I must enter into some details.

In none of the Hospital services are the fatal effects of overcrowding manifested in a more cruel manner than in the lying-in wards, epidemics of puerperal fever becoming there developed and propagated with frightful intensity. To prevent this it is necessary to place but a small number of beds in the wards, to renew the air by active ventilation, and to cause the most scrupulous cleanliness to be everywhere observed. Such conditions are found united in a certain number of the obstetrical clinics established in the German Universities, sometimes in general Hospitals, and sometimes in buildings constructed expressly. At the Vienna General Hospital there are two obstetrical clinics, the one for the students under Professor Braun, and the other under Professor Spath for midwives, for the instruction of the latter is entrusted not only to the Faculty, as elsewhere, but to one of the ordinary professors invested with this special function. The wards have not been constructed with reference to the needs of an obstetrical clinic, and are scarcely distinguishable from the other wards of the Hospital. They are numerous and crowded. To give some idea of the importance of these clinics, it suffices to state the number of deliveries that take place annually. In 1867 it reached 9000. These are anything but favourable conditions, and yet the mortality last year was very slight, although on former occasions it is said to have risen to 25 per cent. This diminution has been thought to be attributable to the great cleanliness observed, and to the establishment of Bohm's system of ventilation, which has proved very efficacious, and has been adopted in other Hospitals. Bavaria possesses two obstetrical clinics that appear to me deserving of mention, that of Munich and that of Würzburg, both established in special buildings. The obstetrical clinic of Munich is placed in a broad street, not far from the General Hospital, and that of Würzburg in the middle of spacious gardens. Professor Scanzoni, the illustrious Würzburg accoucheur, may with just right claim the honour of having indicated the highly suitable dispositions which have been adopted in the construction of his clinics. I will here describe somewhat in detail the clinic at Munich, which is under the direction of Professor Hecker. In it are received three categories of lying-in women —those who, by paying dearly, are entitled to special attention and secresy, those who pay the ordinary charges, and those who are treated gratuitously. The establishment comprises wards for pregnant women and for those who have been delivered, a theatre, a collection of preparations employed for instruction, a cabinet in which women are examined, an apartment for one of the assistants, and a chapel. The wards into which the delivered women are admitted, do not contain more than six beds, of which two are usually empty. The building is, moreover, divided into three contiguous but completely distinct portions. The middle one is occupied by all that relates to instruction and administration, while the two lateral divisions are for the women under treatment. But one of these divisions is kept constantly empty, although quite prepared for the reception of patients when the other division has been for some time occupied. This alternate residence of the patients in these two lateral compartments allows of the completest cleansing of the one while the other is in use; the two divisions being, moreover, completely separated by the central portion. Nothing can give an idea of the cleanliness of these places, and of the precautions which are taken to prevent the transmission of the germs of disease. No student engaged in the practice of dissection is admitted to the examination of the patients, and all those who have occasion to make explorations in order to ascertain the condition of the organs or establish the diagnosis are obliged each time to wash their hands in a solution of permanganate of potash. Although some of these details do not bear directly upon instruction properly so called, yet I have deemed it right to admit them, as they are of great importance in relation to the good management of obstetrical clinics. I may add that to the latter are often conjoined special clinics for the diseases of women, which are generally confided to the Professor of Obstetrics.

Ophthalmology occupies an important rank at the present day in clinical instruction in Germany. The Faculty of Vienna was the first who confided this branch of instruction to a titular Professor. At the present time M. Arlt occupies the chair, but he is far from being the sole representative of his specialty. A Professor Extraordinary, M. v. Jäger, son of the celebrated oculist of that name, has charge of a large ophthalmological clinic, and instruction in this branch of science is further completed by another Professor Extraordinary, M. Stellwag v. Carion, who delivers courses of lectures on operations on the eye and on the ophthalmoscope. Moreover, a Privat-Docens, M. Manthner, gives practical instruction in determining the disturbances of the refraction and motility of the eye. So rich a programme as this dispenses with all commentary on the interest which is attached to this branch of instruction. The example set at Vienna has been followed at Berlin. We are all acquainted with the skill and just renown of M. von Gräfe, who has created a school in ophthalmology. For a long time attached to the Faculty as Professor Extraordinary, he has recently been promoted to the Ordinary Professorship, and his clinic is frequented by students from all parts of the world. I will only add that ophthalmology is also taught officially and successfully in all the other German Universities, referring by name especially to the Clinics for Diseases of the Eye at Heidelberg, Bonn, Königsberg, and Munich. From what I have stated the importance of these clinical courses on diseases of the eye is sufficiently shown, and we know the results that have flowed from them. Numerous and skilful disciples have spread from these schools into the principal towns of Europe and America; and I only mention the fact when I say that the public reposes a confidence in them which is merited whenever a solid Medical education is conjoined with skill and experience acquired in a special branch.

Under the same conditions one can speak only with approval of the institution of the clinics for mental diseases, diseases of children, syphilitic diseases, and diseases of the skin. For a long time past these diseases have been treated in special Hospitals, or, at all events, in distinct wards, and it was only natural that the simultaneous assemblage of a great number of individuals suffering from the same description of disease should be utilised for the purposes of instruction. These special clinics are frequently entrusted to Professors Extraordinary, and the "vocation" of these may depend upon circumstances, the needs of the moment, or the services they have rendered. A nomination, therefore, does not necessarily entail the permanent institution of a chair. Here is an example:—At Würzburg there happened to be an able Physician, M. von Tröltzch, who had acquired great skill and an extensive reputation for his treatment of diseases of the ear. He was nominated Professor Extraordinary of an Otiatric Clinic; but it is to be presumed that in this case the chair to which he has been appointed will disappear with him. More-

over, there is nothing uniform in the dispositions adopted in this respect in the various universities. Thus, to give another example, the clinic of mental diseases was confided at Berlin to a Professor in Ordinary, Dr. Griesinger (since dead), and is so disposed of at Würzburg, where Professor Rinecker directs both the Psychiatrical Clinic and that for Diseases of Children; but at Vienna the Psychiatrical Clinic is confided to the superintendent of the lunatic asylum, Dr. Kiedel, who is only a Privat-Docens.

In terminating this part of my subject, I may add that in the large Hospitals at Vienna and Prague facilities are given to the Clinical Professors for assembling in the same ward many individuals suffering from similar diseases. For example, there is a division for diseases of the chest. For the purposes of instruction this arrangement presents great advantages, enabling the Professor to initiate his pupils in the difficulties of the methods of exploration, the nice shades of diagnosis, and the individual peculiarities. It also furnishes various special Professors with the means of giving practical courses of lectures on auscultation and percussion.

IV. *Polyclinics.*

In the German university towns attendance at the patients' homes is so organised as to be beneficial to them as well as useful for the purposes of instruction. The object of the Polyclinic, or Town Clinic, is the introduction of advanced students or even young doctors into civil practice under the authority and direction of an eminent professor, at the same time providing the patients with skilful and devoted attendance. Two methods are employed, the patients being seen either at their own homes or themselves repairing to the consultation office, which is usually established in some special locality, and more rarely in a Hospital. The first is the *sedentary* clinic and the second the *ambulatory* clinic. In the former the patient having demanded Medical attendance, a young *praticirend* visits him at his house, examines and prescribes for him, and, in cases of great urgency, administers the first succour himself. But the Assistant-Physician has also visited the patient with him or by himself, and next morning the Director of the Polyclinic interrogates the student or young doctor, discussing, and if necessary rectifying, the diagnosis and treatment. In serious cases or where there is any doubt he visits the patient himself. The succeeding days the patient is attended by the *praticirend*, these visits regularly continued enabling him to follow the progress of the disease or the course of the convalescence. This is no longer a mere apprenticeship, but a commencement of practice under the most auspicious conditions both for the patient and his attendant.

The advanced students and young doctors also take an active part in the ambulatory clinic. Established in a locality especially chosen, it is provided with waiting-rooms, examination-rooms, and even a ward containing one or two beds, for any case that may occur which it is of importance to have closely watched. The Assistant-Physician first makes a preliminary examination of the patients, reserving for the purposes of instruction such cases as are of interest. The hour for the Polyclinic having arrived, each *praticirend* examines the patients assigned to him, makes his diagnosis, indicates the treatment, and writes the prescription—all being done under the eye of the master, and after a conversation (*colloquium*) whence the other *praticirenden* have not been excluded. Generally, permission is not granted to visit patients at their homes to any but students who have been first tried by practice at the *ambulatorium*. At all events this is the case at the Munich Polyclinic, which is under the direction of Professor Seitz. In Bavaria doctors who have obtained their diploma after four years' study are not admitted to the State examination until after another year passed in practical study. At Munich they generally attend the lectures and practice which are founded in the institution for the higher practical studies termed the *Reisingerianum* after its founder, Reisinger. Besides rooms for lectures and examinations, laboratories for chemistry, physics and the microscope, a library and reading-room supplied with all the Medical journals, this useful establishment contains a polyclinic and a pharmacy, where the *praticirenden*, under the superintendence of Professor Buchner or his assistant, dispense their own prescriptions. All the cases are recorded and the prescriptions are registered. Each year from seven to eight thousand patients obtain gratuitous advice in the various Polyclinics of the *Reisingerianum*.

Polyclinics are best suited for small towns, as in large centres of population places are at too great a distance to be easily reached, while a great crowd of patients would interfere with the efficiency of the ambulatory clinic. This would be highly inconvenient, for overcrowding necessarily leads to a rapid and sometimes superficial examination of the patients—a condition as prejudicial to them as it is unsuitable for the instruction of students. Still, it must be admitted that polyclinical teaching has furnished good results in some large towns. It brought Professor Romberg's name into prominence at Berlin, and, at the present time, Professor Martin's Obstetrical Polyclinic is as beneficial to the students as it is sought after by pregnant women, who are well aware that on the slightest sign of danger they will become the objects of the most skilful and devoted care.

Conclusions.

In terminating this long detail, I may make a general remark, which springs from the facts that I have observed. Pathological instruction in Germany assumes an essentially practical character, less pains being taken to describe morbid affections in theoretical lectures than to teach how they are to be recognised at the patient's bedside. There are no chairs of pathology, properly so called, in the German Faculties, with the exception of that of General Pathology. These chairs are everywhere confounded with the clinical chairs, the same Professor giving this double instruction. In some of the Faculties the theoretical course is entirely suppressed, and replaced by additional development of the clinical courses. Without seeking to approve of this latter arrangement, I yet note the existence of a circumstance that marks a sensible difference between our mode of instruction and that of the German Faculties. In these the Professors teach, and the students learn, pathology in the Hospital itself—the services of the Faculty being numerous enough to receive all the students, varied enough to allow of all pathological questions, including those regarded as special, becoming subjects of study, and sufficiently well paid to allow of the Professors pursuing their twofold mission of instructing the young and cultivating science. These three conditions are more or less defective in the clinics of the Paris Faculty. Let us examine into these various points, in order to ascertain what propositions may be made respecting them, bearing in mind any peculiarities of our position and the difficulties which would be met with in our application of measures deemed beneficial elsewhere.

[Professor Wurtz enters into some detail as to the shortcomings of clinical instruction at the Paris Faculty, and the measures most likely to remedy them, but we do not think it necessary to lay his observations on these points before our readers. We only give the concluding passage of his report.]

I will finish with a general observation. It has sometimes been attempted to oppose the interests of the patients to the exigencies of clinical instruction, but nothing can be less legitimate. The sufferings of the poor find in the clinical services both helping hands and feeling hearts. The inconvenience which may result for some patients from a minute and prolonged examination is largely compensated by the guarantee they have of attention all the more enlightened and devoted, as any negligence is subjected to immediate control, and any error to public detection. It is a fact that the clinical services are sought after by a great number of patients. And then, is it not a fact also that the instruction of the student is a social need, quite as imperious as tending the sick poor? It is a treasure which is amassed for future use, whence all those will freely draw upon who at a later period will be tried by the inevitable infirmities of human nature. This conviction that the asylums which are opened to those who suffer should have the double aim of solace and instruction, is as old as the establishment of Hospitals. Two centuries ago it inspired the benevolent bishop Julius Echter, when founding the Hospital at Würzburg, which still bears his name, he established by a formal clause a permanent institution of clinical services. The same idea is exhibited in front of the Academic Hospital at Greifswald, where the inscription may be read—"Ægrotis curandis, medicis instituendis."

Hypertrophy of one Side of the Body.—A. B., aged 4, is a strong and well-grown girl of her age. About ten days after birth the right half of her person was found to be larger than the other, and the disproportion has continued steadily to increase, this being especially evident when the opposite extremities are compared. One leg is about an inch longer than the other, causing a peculiar gait, and the foot requires a shoe at least one and a half or two sizes larger than the other, the two hands and arms showing a like disproportion. The difference is not so marked, but can be readily seen, in the head, eyes, nose, tongue, and all down the trunk.—*New York Journal*, May.

ORIGINAL COMMUNICATIONS.

A NOTE ON

PROFESSOR LIONEL S. BEALE'S DOCTRINES OF THE WILL IN RELATION TO BRAIN-FUNCTION.

By THOMAS LAYCOCK, M.D.

In common, doubtless, with many of your readers, I have read Professor L. S. Beale's lectures with much interest, and in particular that on "Mental Nervous Action" (of June 12), hoping to derive from his microscopic researches and mature conclusions some valuable information available to the elucidation and treatment of insanity. I find therein certain criticisms on the doctrine of reflex cerebral action (which to the lecturer is "very unsatisfactory," apparently because he does not understand it), and a statement of a doctrine which to him "appears to be most in accordance with facts of observation and experiment." By this he proposes to explain "how the germinal matter operates," and "how the mandates of the will originate, from what they emanate, and what is their nature."

The facts are as follows:—"Every one," the lecturer observes, "will admit that the nerve-tissue of the brain is the instrument through which thinking power works and the mind acts." He also thinks it "impossible for any one to deny that this instrument is formed by, or is the result of, changes taking place in the germinal matter." He more particularly localises the mechanism engaged in mental nervous actions (of which volitions are an important class) in the grey matter of the convolutions, and he affirms, as facts, "that nerve-cells consisting of germinal matter and formed material, and nerve-fibres composed of formed material only, are the active agents." Although many will probably question these statements as theories, I am ready to consider them as facts, that I may learn something of the relations of the brain to volition, and to the will and its "mandates."

The special characteristic of the insane mind is that the rational will is in abeyance from changes in its instrument, the brain. The law as well as common sense pronounces a man so deprived of rational will an irresponsible agent. I now turn to Professor Beale for information as to the means available for restoration of healthy will by curing the morbid state of the germinal matter, and I learn that it is the will of the man himself. "The degree of perfection which the organ of the mind and the tissues concerned in intellectual action has [*sic*] attained and will attain is determined in great measure by his own efforts, by his own will." In short, the will, as I understand Professor Beale, acts directly on the germinal matter, improves it, perfects it. In this respect, he holds, the brain differs from all other organs and tissues. It is dependent on the will, and, in accordance with this doctrine, the reader is asked, "Is it conceivable that under certain conditions the brain *must* think?" I reply, not only conceivable, but, under certain morbid conditions of the brain I have in view, its possessor must not only think in common with all men who have working brains, but must and will act in a particular mode, to his own great discomfort and the unhappiness of those about him.

I next seek for information as to the changes which take place in the cerebral germinal matter in health, that I may modify those which coincide with mental disorder and disease. We know little as to the direct action of alterative remedies like opium, alcohol, and arsenic on the cerebral germinal matter, and as to the direct results of imperfect supply of nutrient materials to the brain, whether from defect of the vascular system or of the blood itself. Being at least certain that oxygen and certain nutrient materials are needed for the healthy activity of this germinal matter, I turn to Professor Beale for information, and it seems to me that he virtually denies the fact, for he asks, "Is what I am now writing but the result of the distribution of a little extra proportion of certain nutrient constituents and oxygen to my nerve-cells, which thereby compels me to say all these things? Have I no choice? *Must* I say all this?" etc. Does Professor Beale mean to imply that he wrote all wholly without the aid of nutrient constituents and oxygen for his brain? or is it merely a question as to the relative amount required? In either case, the explanation (if it may be so termed) throws no light on the state of the will in insanity and other disorders from defective brain-nutrition, or helps to better treatment. Nor does it teach us how "the mandates" of the will originate, or what is their nature, as promised. It is quite certain that the will of any man may be abolished in a few minutes by any one of twenty different agents; according to Professor Beale's researches, these must act on the cerebral germinal matter.

I should not have ventured to call Professor Beale's attention to these practical points were it not that not only the successful treatment of insanity in all its forms, but also an improved mental hygiene, must rest upon an inductive mental science, which can only be solidly based on biology applied to cerebral physiology. The antiquated metaphysic which Professor Beale seems to have adopted has, and can have, no scientific relation to his germinal or any other matter—as, indeed, his arguments clearly show—nor is it compatible with modern scientific research at all. It is interesting to observe how corrupting this metaphysic is to the scientific mind: so soon as facts require to be accurately stated and terms used with a definite meaning, it raises clouds of vague arguments, in which facts have no place, terms no definite meaning, and discussion is confusion.

Edinburgh.

A CASE IN WHICH

THE CAVITY OF THE STOMACH WAS OCCUPIED BY AN ENORMOUS MASS OF HUMAN HAIR.

By JOHN RUSSELL, M.D., F.R.C.P.

I was requested to visit Mrs. ——, aged 31, with Mr. Prosser. I found that she was suffering from a very severe attack of hæmatemesis. Mr. Prosser directed my attention to a large tumour in the abdomen, which he believed to be occasioned by enlargement of the spleen, and I at once assented to his diagnosis. The tumour occupied the left side of the abdomen, extending into the pelvis; it presented a concavity on its inner edge, passed beneath the false ribs the entire splenic region being dull on percussion, and as I then believed, but I now am sure erroneously, moved with respiration. The only circumstance connected with the tumour which suggested a doubt of its splenic origin was its great length in proportion to its breadth. I could learn nothing more respecting the tumour than that it had been gradually increasing through the last seventeen years, having been first observed when the patient was 14. The patient's health had been good, and she had never suffered from indigestion. She miscarried on the day after my visit, and sank rapidly.

Mr. Prosser made a post-mortem examination, and was kind enough to bring me the specimen. The tumour was found to consist of a vast mass of human hair, accurately moulded to the shape of the stomach in which it lay; it had drawn down the stomach into a vertical position, so that the pylorus lay in the pelvis. The mass of hair was divided into two unequal portions, accurately fitting to one another, constituting a hard solid mass; it weighed 4 lbs. 7 oz., was 12 inches long, 5 inches wide, and nearly 4 inches in thickness. Dr. James Hinds, the Medical Tutor of Queen's College, has divided the mass, and finds it to be entirely composed of human hair, intermixed with broken-down particles of food. The divided surface gave an acid reaction with test-paper, and had the odour of gastric juice. Compared with the hair on the patient's head, the hairs constituting the tumour coincided exactly, both in colour and in general character. They were of all lengths, up to twenty inches; most of them of the greater length. I could not find a single root attached to a hair; all appeared to have been broken off. Some of the hairs which I examined under the microscope had a very rough outline, as though they were partially disintegrated; but the greater number preserved their natural appearance.

Mr. Prosser informs me that a single small ulcer existed in the greater curvature of the stomach; otherwise the stomach was healthy, excepting that the pyloric orifice was four times its normal diameter.

Although no doubt can exist as to the source whence the hair which constituted this remarkable mass was derived, no information could be gained either from the mother or the husband of the patient indicating that she was known to have swallowed her hair. The husband, however, volunteered the statement that she was in the habit, when excited in conversation, of pulling hair from the back of her head and twisting it round her finger; he had never any suspicion that she swallowed it. She was not at all hysterical.

As stated above, the tumour was first observed seventeen

years ago, when she was 14 years of age. I may also repeat the statement that the history of the patient did not present any evidence of difficulty in digesting food, in this particular coinciding with the account of other cases which demonstrate the extraordinary faculty enjoyed by the stomach of tolerating the presence of foreign bodies, especially when their magnitude underwent so very gradual an increase as must have been the case in the present instance.

Birmingham.

NORWEGIAN NOTES.

By JONATHAN HUTCHINSON, F.R.C.S.,

Surgeon to the London Hospital, to the Ophthalmic Hospital, and the Hospital for Skin Diseases.

Christiania, June 15.—Although the Christiania school has done good service in several other departments of Surgery, there is no doubt that the labours of Professor Boeck and his pupils, in reference to the natural history of syphilis and of certain skin diseases, are those to which it owes most repute. These were the two subjects which chiefly attracted my interest in my brief visit to-day to its Hospital. Dr. Boeck himself has recently retired from Hospital work, and, though still actively engaged in private practice, is, I believe, allowing himself a larger share of the rest he has so well earned than fell to his lot at earlier periods of his very active life. Dr. Bidenkap has succeeded him in the charge of the syphilitic and skin disease departments of the Royal Hospital, and the mantle could not have descended more fittingly. The ex-Professor and the present one are both of them firm believers in the double creed of the noxiousness of mercury and the virtues of syphilisation. The latter treatment is still constantly carried out in the Hospital.

My morning began by the inspection of some private patients who were kindly shown to me by Professsor Boeck at his own house.

The first of these was a young unmarried woman, who had contracted syphilis from a gentleman with whom she had lived. Her secondary symptoms were favourably vanishing under syphilisation, she appeared in good general health, and much pleased with her progress. The fronts of her thighs were covered with the large scabs of recent inoculations, but about these neither she nor her Surgeon appeared to care the least. Many of the earliest had healed, and those last made were producing only very small pustules—an indication of approaching insusceptibility. A fresh inoculation was made in my presence. Dr. Boeck told me that he did it regularly once in three days, obtaining the secretion in the first instance from a hard chancre, and subsequently from the inoculation pustules themselves.

The treatment is never commenced until secondary symptoms have shown themselves. In answer to my inquiry on this point, Dr. Boeck said, "I do not consider that it is even quite certain that secondary symptoms will follow an indurated chancre. I have known cases in which they did not." He especially mentioned one case in which a gentleman had a hard chancre and infected his wife. The latter suffered from the usual constitutional symptoms, but the former, although not treated, never had any whatever. I asked whether the patient's susceptibility to inoculation ever ceased before his constitutional symptoms had disappeared. "Yes, now and then; but you may leave off treatment, and they will go away after a while."

I was shown a young man, a jeweller, whose case was peculiar in that none of the inoculations had ever caused large pustules. Only small abortive ones had been produced. The treatment had, however, been continued, and now, after three months, the original disease was disappearing favourably.

The next patient was a middle-aged man, who had been cured under syphilisation a year ago, and who remained quite well. He now applied again for a recent gonorrhœa. The scars of his treatment were shown me. They were numerous and well marked, but perfectly sound.

Another man had been under inoculative treatment for three months for sores in the tongue, the sequences of a hard chancre contracted a year ago. The sores are now healed. His case is a complicated one, inasmuch as he has had syphilis several times before, and was once cured in England by mercury.

The last case was one in which Dr. Boeck took especial interest, from the fact that it seemed to show the superiority of syphilisation over expectancy. The patient, a ship captain, had consulted Dr. Boeck three months after syphilitic rupia had been fully developed, and whilst yet no treatment had been adopted. At first Dr. Boeck considered that the disease had got too long a start, and declined to use syphilisation; but at length, pressed by the patient, whose brother had been cured, he had consented, and with the result that now, after three months, the patient had all his sores well healed. This man spoke English well, and replied freely to all my questions. He appeared to be in good general health. His case must be contrasted with another of syphilitic rupia which I saw subsequently in Dr. Bidenkap's wards, and in which syphilisation had done no good.

The facts which, in spite of recent discussions, are still sufficient to claim the faith of Dr. Boeck and his *confrères* in this treatment, appear chiefly to be—

1. That repeated inoculations do undoubtedly result after three or four months (sometimes longer) in insusceptibility, thus seeming to prove the production of a change in the patient's state.

2. That coincidently with insusceptibility to inoculation there usually occurs the disappearance of constitutional symptoms.

3. The belief that relapses are less frequent after this plan than after the use of drugs.

I may just mention here that I was informed that not only at the General Hospital under Dr. Bidenkap, but at the Hospital for prostitutes (the Community Hospital), under the care of Dr. Gjor, syphilisation is still the one plan of treatment which obtains confidence.(a)

Professor Boeck's consultations being finished, I went at 10·30 to call on Dr. Bidenkap, who very kindly took me through his wards at the Rigs Hospital, and allowed me every opportunity for asking questions and examining the patients myself. The Rigs Hospital, or Royal Hospital, is the general infirmary for the city, but its first object is considered to be that of serving as an adjunct to University education. Cases are brought in and kept in purely for clinical purposes, and sometimes from great distances, whilst chronic cases which have ceased to be interesting are sent elsewhere. There is, however, no other Hospital for acute cases or for operative Surgery, so that almost all the really valuable material, whether from the city or district, finds its way here.

The Hospital building is old and ill-adapted, and before long will, it is hoped, be replaced by a new one. Dr. Boeck held the appointment of Surgeon to the Hospital, and, in connexion with it, he developed a special department for skin diseases and syphilis. It is to this special department only that Dr. Bidenkap has succeeded. I have not as yet visited the Surgical wards, but I hope to do so on my return here from Bergen homewards.

The following are some of the more interesting notes which I made in Dr. Bidenkap's wards:—

Leprosy never originates in this district. The two cases now in the Hospital were both of them, as is usual, brought from Bergen for the benefit of the students. Dr. Bidenkap has, however, known a case in which a Christiania man went to Bergen and stayed there a month, became the subject of leprosy, and died of it. He speaks of having known several somewhat similar facts, but this appeared to be the one which had made the most impression on his mind. It is a most curious and important fact.

Dr. Boeck does not believe that iodide of potassium does any real good in leprosy—on the contrary, he thinks it often does harm. In Paris last year I heard the iodide much praised. He does not believe that the taint of leprosy has anything whatever to do with the production of the more common skin diseases. It is, he says, a specific whole from beginning to end. The leprous patient himself enjoys good health until he begins to suffer from definite symptoms. He may have brothers and sisters who remain through life in perfect health, and, further, he may be himself the parent of healthy children. If he suffers at all, he will have leprosy, not psoriasis, or morphœa, or any other of the skin diseases which some have fancied to be in remote connexion with it. Common relapsing psoriasis is not more common in leprosy districts than elsewhere.

The cryptogamic diseases of the skin are very common here. Dr. Boeck believes that nearly all young adults have tinea versicolor, whilst favus and ringworm are frequent in children. In some out-of-the-way districts of Norway favus is more common than it is in Christiania. I may add that Professor Boeck confirmed this statement. It would appear that favus,

(a) In a recent discussion before the Medical Society of Christiania, Dr. Gjor, after a very candid statistical statement, avowed his preference for syphilisation over other modes, and stated that he had practised it ever since 1863 in all new cases of secondary syphilis.

which is so rare in London and so common in Paris, Berlin, and Vienna, is common also here. Another curious disease which is very rare on the Continent and fairly common in England, is also rare here. I allude to molluscum contagiosum seu sebaceum. Professor Boeck told me he did not think he had ever seen it, and Dr. Bidenkap spoke of only two or three cases.

Alopecia areata is not very common, and Dr. Bidenkap does not believe that it is cryptogamic. Respecting the vegetable-parasitic nature of the other diseases just mentioned (molluscum excepted), he, in common with the rest of Europe (Mr. Wilson excepted), entertains no kind of doubt. Ten grains of iodide of potassium four times a day is considered a large dose. The iodide is usually reserved for tertiary symptoms, and Dr. Bidenkap holds that it may do harm if given too early. Both Dr. Boeck and he agree in reprobating the use of mercury in all its forms and in all its stages. The expectant treatment is held to be better than the mercurial, and syphilisation better than expectancy. Sarsaparilla enjoys some repute, but is not used often. The local remedies employed are usually of the simplest kind. Water-dressing, or rather wet charpie allowed to dry on, for skin sores, and nitrate of silver for sores on mucous surfaces, no black wash or mercurial ointments.

Secondary Syphilis taking the Form of Rupia—Inoculation Unsuccessful—Treatment by Iodide of Potassium.

A woman named Oline O., aged 24, is now the subject of most severe syphilis in the form of rupial ulcers, many of which have spread widely. When admitted she was, as Dr. Bidenkap informed me, exceedingly ill. "It was a case of acute syphilis in which the disease had galloped on to its tertiary stage at once." Syphilitic inoculations were attempted, "but would not take," and iodide of potassium was given. Under the iodide the patient is now slowly improving. "If I had given mercury she would have died," remarked Dr. Bidenkap, and her appearance quite supported his suggestion.

Rupia—Syphilis from Contagion from a Tainted Infant—Improvement under Syphilisation.

A boy, aged 13, is the subject of syphilis, which is believed to have begun in a sore at the angle of his mouth contracted from a diseased infant. He still looks very ill, and has large scars and stains in many parts, but his chief sore, a serpiginous one in the left popliteal space, is certainly healing. Dr. Bidenkap told me that when admitted he was much more ill than at present, and that his rupial sores were then open. The only treatment which he has had is syphilisation, which is still being continued, and under which the sores are without doubt healing. He was admitted a month ago, and no local treatment has been employed.

(To be continued.)

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Medical Times and Gazette.

SATURDAY, JUNE 26, 1869.

THE ELECTION OF COUNCILLORS AT THE ROYAL COLLEGE OF SURGEONS.

Thursday next will decide. That is really all any one can say as to the chances of the six estimable gentlemen and distinguished Surgeons who are contending for the honour of sitting in the Council of the College of Surgeons. We believe that this election will be decided very much on personal grounds. The contest cannot bear largely a Medico-political aspect, as, in truth, we believe all the candidates would support well-considered measures of collegiate reform, and the chief difference among them is that certain have given distinct pledges as to particular measures, whilst others, and more particularly the retiring members, have been content to express themselves generally in favour of a liberal policy. It may be worth while, for the last time, to recapitulate what we conceive to be the especial claims of the candidates upon the electors, and we take their names in the order in which they stand in the College list.

First in order of seniority is Mr. Solly, of St. Thomas's, who has had a long service of usefulness as a teacher of Anatomy and Surgery, who has already filled the office of Councillor and Vice-President, and who, if again elected, will, in the natural course of things, succeed next year to the President's chair. 'Twere a pity that a hitherto successful career should miss its crowning honour!

Next stands Mr. John Adams, also a retiring Councillor, whose claims also rest on high merit as an anatomical teacher and Surgeon to the London Hospital. In the somewhat brisk electioneering which has been going on during the last few weeks, this gentleman has maintained a dignified inactivity which well befits a sense of duties well performed both in the Council-room and the examination theatre. We trust that Mr. Adams will not be a loser by his masterly inaction.

Next is Mr. Wilson, at least a tried candidate, if not a successful one. We would again emphatically assert our opinion that Mr. Wilson's course of Professional life has been such as should win him support from his brother electors. His first step in Professional life was a sound one. He is the author of one of the most popular books on anatomy that the Profession in this country has known. He has done much to raise dermatology from a department of practice to a department of science, and he has won a high degree of success by dint of perseverance and talent. In Mr. Wilson's person Surgery will not be isolated from Physiology and Medicine.

Mr. Gay scarcely requires from us any words of recommendation. The high position he obtained on the poll last year speaks the opinion which the Profession hold of him as a Surgeon of high and rare talent, and a most popular and kind-hearted man. Mr. Gay is one of those very few who, whilst discarding specialism of every kind, have succeeded in making a well-known name without the platform afforded by school or large Hospital. We think he is the very type of man who ought to have a seat in the Council of the College, and we heartily wish him success.

Mr. Henry Lee is Surgeon to St. George's Hospital, and was formerly Surgeon to the Hospital of King's College, where he was educated. So distinguished a career is itself a passport to the electors. But Mr. Lee has the special claim of being one of the most philosophic of modern syphilographers, and having done much good work in other branches of Medical literature. His experimental researches on the veins and on the effects of septic and other substances introduced into the circulation furnish part of the recognised basis of modern scientific pathology.

Lastly, Mr. Erichsen is Surgeon to University College Hospital, Professor of Surgery, and the author of one of our most valued text-books. Can any require higher recommendation? It has been whispered that the action of some of his friends in forwarding his claims may tell against him in the election. We think this should not be. Canvassing, as we know, has been the rule in this as in previous elections—abstaining from canvassing the exception. A popular election without canvassing is Utopian.

We have thus summed up the candidates, we hope, im-

partially. It is impossible that more than three of the six should win; and although we may have our personal predilections, we do not think that there is sufficient Professional and social difference amongst the gentlemen who are seeking this honour to justify us in endeavouring to bias the Fellows.

THE OBSTETRICAL SOCIETY.

The Obstetrical Society is not to be ranked with the Clinical or the Pathological, or any other society that cultivates some particular aspect of Medicine in general. Its aims are far deeper. It takes for granted that division of labour which exists in civilised life, according to which Medical practice is divided into Medicine, Surgery, and Obstetrics. If it be argued that Medicine is one indivisible whole, then, it would be answered, let it be treated as such; let Medicine and Surgery coalesce into one College, and Obstetrics will take care of itself. But if you are to have separate Colleges and examinations for two of the three great departments, the third must demand equal privileges. There are certain grand fundamental principles which must be appealed to by Practitioners in each of the three provinces of Medicine. But obstetricians make as much use of general physiology and pathology, and are as qualified to teach them, as Surgeons and Physicians are. Parturition and its accidents, the diseases of women, and the treatment of children in health and disease, offer quite as much scope for the science of biology as do the provinces of Physic and of Surgery. In practice in a civilised country, the quantity of work to be done in Obstetrics, and the necessity for having it well done, are quite as great as the quantity of work and the importance of it are in Medicine and Surgery. Hence Obstetric Medicine is legitimately entitled to a College, to examinations, and to a diploma of its own, quite as much as Medicine and Surgery are. The fact that the College of Surgeons holds an obstetric examination, and gives a diploma, is significant that a separate examination and diploma in that province are reasonable and expedient. But if so, why should they not be managed by an Obstetric College? Why should the treatment of women and children be a mere accidental appendage to the examinations of a College whose distinctive function is wounds and Surgical operations?

Looking at Obstetric Medicine in the light of a *quasi* independent province of the empirically divided kingdom of Medicine, we are prepared to understand and approve the reluctance of the Obstetrical Society to consent to an amalgamation in which their equal rank with Medicine and Surgery shall be ignored. The Obstetrical is a flourishing Society, though a very young one; it has money in hand, a good income, a library, and a home. It cannot be denied that it is for the public interest that its departments of practice should be better cultivated, and that the men who devote themselves to it should have every stimulant in the shape of Professional distinction. If no obstetrician can rule the Colleges of Surgeons and Physicians, the presidency of the Obstetric Society ought to remain as an object of ambition, and we cannot think it good public policy that it should merge in the mere headship of a subordinate department of another society. As one of the speakers truly said, during sixty-four years one distinguished obstetrician alone had been President of the Royal Medical and Chirurgical Society. We believe that the fusion of the societies is a good thing in itself; but it will be purchased too dearly if it cause the sacrifice of that energy and independence which have distinguished the Obstetrical Society, and promised to rescue the study of the diseases of half the population from present neglect and indifference.

Why, let us ask, should a student be obliged to hear one course of Surgery twice over during two winters, and half a course of midwifery lectures during the three months of summer?

MILL ON THE SUBJECTION OF WOMEN.(a)

Mr. Mill has compressed into a small book of 188 pages his reasons for believing that the existing social relations between the sexes are based on an entirely wrong principle. It is difficult to give his argument more concisely than he has done, for his book is little more than an abstract, and any further analysis must detract from its completeness. A slight sketch, however, of his mode of treatment may be attempted.

The book has four chapters. The first treats of preliminary objections, the second of woman's present condition, the third of her abilities as we find them, the fourth of the benefits to be gained by her liberation.

The subjection of woman, though universal, he says is not based on experience, for the contrary has never been tried; nor on nature, for woman has always been so artificially educated that it is impossible to know what her real nature and character are. It is based on the law of might alone. The vitality of an institution based on such a law is explained by the fact that the stronger half of mankind is interested in keeping it up. Women do not ask for complete liberty as a body, because no injured class ever does at first, but many individuals amongst women are asking for the franchise and protection. Besides, the selfish policy of man has been to educate them to subjection. The history of the abolition of similar institutions, such as slavery, absolute monarchy, and the like, teaches us that this last relic of savage life must soon disappear.

In Chapter II. we find the legal position of a wife. All her property is her husband's. He may proceed to the very extreme of brutality and insult, while she believes that every obligation of religion, society, and her own interest is upon her to submit. Her person is no more her own than her property. "Above all," says Mr. Mill, "a female slave has (in Christian countries) an admitted right, and is considered under a moral obligation to refuse to her master the last familiarity. Not so the wife. However brutal a tyrant she may unfortunately be chained to—though she may know that he hates her, though it may be his daily pleasure to torture her, and though she may feel it impossible not to loathe him—he can claim from her and enforce the lowest degradation of a human being, that of being made the instrument of an animal function contrary to her inclinations." In proportion as men are unfit for power, it demoralises them, yet though few men are fit for power, all can obtain it by marriage. The actual average position of a wife may not be so bad as this, but laws must be made for the bad, not the good,(b) and we must not judge of an institution by its best instances only, to test its working. For this state of things a claim to separation by the wife is the only cure. The present relations are not necessary for the well-conducting of a household, since in no other voluntary partnership is such power found necessary; in most families already the principle of equality is acted upon, and the morality of Christianity being based on justice between equals, there is no hope for true freedom in any country so long as the family remains a school of despotism.

In Chapter III., after a protest that we can at present know nothing of woman's real nature, history is appealed to to show that a greater proportion of women rulers have become eminent than of men. If, then, they are competent to rule, why are they not to do things of less importance? In literature women have excelled. If they lack originality it is because the age for real originality has passed. In music women are only amateurs. Excellence in painting can only be obtained by a first-class mind highly cultivated. How is it possible for

(a) The Subjection of Women. By John Stuart Mill. London: Longmans, Green, Reader, and Dyer. 1869. Pp. 188.

(b) Lord Stowell, as great a man as Mr. Mill, said on the contrary, "Courts of justice do not pretend to find cures for all the miseries of human life. . . . They cannot make men virtuous, and as the happiness of the world depends upon its virtue, there may be much unhappiness in it which human laws cannot undertake to remove."

women to become famous, when they have always been taught to shun fame? All admit that women excel in quickness of apprehension, the faculty of intuition, and the practical turn of their minds, while their chief deficiency is in power of abstraction and speculation. When this has been remedied by education, we may expect woman's mind to become equal, if not superior, to man's.

In Chapter IV. the author asks—What good may we expect from these changes? First, socially, married women at least will be benefited by them, and the family will become a school of justice, not of despotism. The amount of intellect at the service of mankind will be nearly doubled by educating woman properly; her influence, already large, will no longer be misapplied through ignorance and prejudice. An educated woman will not be a drag on her husband's aspirations. A greater similarity of education between the sexes will lessen their points of difference; no union can be happy where there is much diversity of taste and opinions, and still less where there is marked superiority and inferiority of intellect. Secondly, individually, half the human race will be ennobled by the acquisition of liberty. The mind that is denied liberty grasps at power; hence woman's love of display and all the evils that flow from it. Enlarging the sphere of women's action will increase the worthy outlets of their active faculties, and enable them to enjoy life as rational beings should.

At least, then, on his own showing, Mr. Mill must admit that primæval man was superior to the woman of his age in strength before any artificial education had obscured her real nature. We do not pretend to believe in any inherent "delicacy" in woman, yet her very voice and stature and the long occasional seclusion from active life entailed by the duties of maternity, show that she is the weaker of the two. The possession of superior strength confers both duties and privileges on the man, while the opposite weakness brings disabilities and a claim on the generosity of the strong. That women have established such a claim is not be denied—they are not liable to serve in the militia, nor the *posse comitatûs*, nor on juries. Mr. Mill will probably say that such privileges are dearly bought at the price of liberty; but it must not be forgotten that if women claim to be equal with men in one thing they must consent to be so in all.

Three measures are discussed as essential for the relief of women's wrongs—facility of separation, better education, and opening up of fresh spheres of work.

As regards a claim to separation we think it has yet to be shown that the evils attendant on dissoluble marriages are less than those that now exist. Certainly Christianity and the Church (which, *pace* Mr. Mill, are not at variance) contemplate marriage as indissoluble. Society has also concurred, not from the selfish interest of men, for we fancy there is many a man who would willingly be cut off from a shrew, but from sad experience that the principle "that a man shall cleave unto his wife" is necessary to its own existence. In both Greece and Rome men could repudiate their wives: both were rotted to destruction by unchastity. It has yet to be shown that women may do the same with impunity from a like result. Nay, as the right of separation must be mutually equal, women, being the weaker, will be sure to get the worst of it.

On the questions of a better education and the enlargement of woman's sphere of action, we can go a great way with Mr. Mill.

If women have a better education and a knowledge of some lucrative art, they will be less likely than at present to marry a man they do not care for, "merely for a home," as the saying is. When they do marry they will be better helpmates, better able to govern their household and train their children. As for fresh spheres of work, it will be time enough to seek them when the existing ones are exhausted; but we happen to know from experience that in employing women, in art, literature, and in business, including teaching, the difficulty is not to find the work, but to find women with education and habits fit to do it. Women, if better educated, would do women's work better; and if parents cannot give their daughters independent fortunes at least they should strain every nerve to educate them well. That girls should engage in pursuits which rob them of their delicacy, such as dissecting the human body and intruding into Medical schools amongst young men, is to be deprecated for woman's own sake.

THE GENERAL MEDICAL COUNCIL.

Great events succeed each other rapidly in these times. The debate in the Lords on the Irish Church Bill will doubtless be eclipsed, and its remembrance effaced, by the brilliant discussions and weighty deliberations which are to be inaugurated in Pall-mall East on Thursday next. True it is that the business which the Medical Parliament has to transact does not appear to ordinary apprehensions enormous. It may be all arranged under three or four principal heads, which we shall presently recount; and people who are looking merely on the surface of things are predicting a short session. Such superficial reasoners, however, fail to take into consideration all the elements of the case. They do not give due weight to the forces, repellent and attractive, which influence the national and individual elements of which the Council is composed—which render them so unwilling to separate and so unable to agree.

There are four principal matters which will occupy the present session. First, there is the great subject of education, upon which a Committee, at first under the presidency of Mr. Syme, has been engaged since the last session. Mr. Syme's illness having unhappily deprived the Committee of his valuable aid and direction, Dr. Parkes has, we believe, supplied his place. We need scarcely observe that no worthier or better qualified substitute could have been found. We hear that a large amount of valuable information from various sources has been obtained by the labours of this Committee, and we are glad to know that the papers on Medical education in Germany and Italy, and the recent report by Professor Wurtz on clinical teaching in the German Universities, which have appeared in our columns, have not been without their use in their investigations. The report of this Committee and the discussion which is likely to rise out of it will, we presume, be the great feature of the present session. The amendment of the Medical Act will no doubt be talked about, but the talk will certainly end in itself. It is in the highest degree improbable that any united action for the alteration of any special clause in the original Act—even that relating to penalties for the wrongful assumption of Medical titles—will be obtained; and there is not the slightest chance of Government introducing a large measure in the present session of Parliament. The Medical Profession have certainly something to learn from the Pharmaceutical Society. Another subject which is likely to come up, or rather to be again forced upon the Council, is that of the direct representation of the Medical Profession. Of course the Council have already declared their mind upon it, and they will probably consider that they best consult their own dignity by resting on their former decision. The question really lies in a nutshell. Direct representation means the return of the same or of different men to the Council, for, we suppose, no one in his sober senses would wish to see the Council more numerous. If the same men be returned, why need we alter the mode of returning them? If other men are to occupy their places, will they be men better qualified to deliberate on Medical matters and to represent the Profession than the present? We trow not.

Another subject which will be brought before the Council is State Medicine, of which Dr. Rumsey and Dr. Acland are the special apostles. If the discussion of this subject lead to the introduction of a system of instruction in preventive Medicine

as a part of a general Medical education, it will have the double good effect of benefiting the public, and, in time, of thinning the ranks of the Profession.

It would be presumptuous to prophesy further on what are to be the proceedings of the session. We can only hope that the grand palaver of the three tribes will be dignified, to the purpose, and sensibly brief, and especially that no chief will insist on dancing his particular war-dance more than once.

THE WEEK.

TOPICS OF THE DAY.

The debate on the second reading of the Irish Poor-law Medical Officers' Superannuation Bill, which we publish in our Parliamentary Intelligence, is an important one to the Medical Profession. When a number of the House of Commons in Sir J. Gray's position, than whom no man has had a better opportunity of forming an opinion from the facts, tells the Council of the nation that there is a radical defect in the education of Medical men, and in the tests by which they prove their ability to practise their profession, and that, in fact, a large proportion of Medical men are not qualified to practise it with advantage to the public, these allegations must either be refuted, or immediate reform must be instituted, or the Profession will proportionately sink in public estimation. Can the College of Surgeons, for instance, afford to have the charge of inadequate examination laid at its doors much longer? How long can the College suppose that disendowment and disestablishment will be postponed? We know the difficulties in the way of giving clinical examinations, and in the adoption of other measures of necessary reform. But will not their delay leave our examining bodies in greater difficulties? We commend these questions to the consideration of the members of the Medical Council and to the candidates for seats in the Council of the College of Surgeons.

Dr. Owen Rees will deliver the Harveian Oration in the theatre of the Royal College of Physicians this afternoon (Saturday, June 26) at 4 o'clock. The oration will be in "the tongue understanded of his hearers."

The brilliant assembly that met in the theatre of the Royal Institution, Albemarle-street, on Monday, to do honour to the memory of Faraday was worthy of the fame of one of the greatest philosophers England has produced. The presence of M. Dumas, who himself has achieved a fame only second to that of Faraday, and who in eloquent language enlarged upon the estimation in which the name of Faraday is held in France by all ranks of educated society from the Emperor downwards, and enumerated and enlarged with appreciative eloquence and a philosophic power on the discoveries which Faraday has made, gave a special interest to the proceedings. The testimonial to Faraday is, it is stated, to take the form of a statue to be erected in St. Paul's Cathedral, a fit home for the memorial of so great a Christian philosopher.

We are informed that the appointment to the Chair of Physiology in King's College will be made on July 9. We are also informed that Dr. Child, of Oxford, and Dr. Burney Yeo, of King's College, whose names have been mentioned in connexion with the chair, are not candidates.

We notice that an important discussion on a paper by Dr. Mapother, on the system of purchasing appointments in the Dublin Hospitals, is going on in the Statistical Society of Dublin. The discussion is adjourned until Tuesday next. We shall therefore defer any further notice of the subject until it is concluded.

Dr. Oldham has resigned the chair of Obstetric Medicine and the appointment of Obstetric Physician in Guy's Hospital. He will be succeeded by Dr. Braxton Hicks, and probably the post of Assistant Obstetric Physician will be filled by Dr. J. Phillips.

MEDAL TO DR. WALTER DICKSON.

The Sanitary Congress assembled at Havre in connexion with the great Maritime International Exhibition of last year have distributed the following rewards to British contributors to Naval Medicine and Hygiene, viz.:—A silver medal to Dr. Walter Dickson, R.N., for his paper in reply to the questions submitted by the Congress, and his numerous publications on the health of seamen; a silver medal to Dr. Mitchell, London, for a memoir on Condy's fluid; and a bronze medal to Mr. H. Leach, for his report on the health of the mercantile marine. The other fourteen medals (including a gold one to the *Archives de Médecine Navale*) were awarded to French writers.

VOLUNTEER MEDICAL OFFICERS.

We understand that the appointment of Volunteer Medical Officer at Wimbledon has been offered to Dr. John Murray, Assistant-Surgeon London Scottish Volunteers, and that Dr. Murray has written to refuse the appointment unless he is allowed entire charge of the Volunteer Hospital and the Volunteers who may place themselves under his care. Although there has been abundant time to reply to this proposal, no answer has as yet been received. The Council of the National Rifle Association, no doubt, intend again to refuse to the Volunteer Surgeons the bare justice which they are entitled to, and to place them, as heretofore, in every way in a subordinate position to their brethren in the Army. We are sure that the position Dr. Murray has taken up will be supported by Volunteer Surgeons throughout the country.

NAVAL MEDICAL CHANGES.

The first changes consequent on the report of the Committee of Civil Practitioners who have been examining our naval Hospitals seem to be injurious to several Medical officers who are condemned to suffer by removal from their offices. As those officers who received their appointments as rewards of good services, under a system then in force, are to be placed on half-pay, they must suffer much pecuniary loss, in some instances of £300 a year. We trust that some immediate redress will be provided, that at their ages they may not be left to the indefinite chances of future full-pay employment. It is strange that the first act of retrenchment in Medical institutions should fall on the Medical men, while, as yet, nothing has been heard of the reduction of the expensive staff of executive officers whose presence in Hospitals has been reported unnecessary.

THE COLLISION AT ALDERSHOT.

The unfortunate collision between two squadrons of light and heavy cavalry during a recent field-day at Aldershot has resulted in the death of one man, who had sustained fracture of the skull and ribs. The injuries of the other men were of much less serious nature, and the patients, we believe, are proceeding favourably.

HEALTH OF HONG-KONG.

The tenth annual report by Dr. J. Murray, M.D., Colonial Surgeon at Hong-kong, dated February 26, 1869, gives a very satisfactory account of the sanitary condition of the colony. Ever since 1863 a steadily diminished rate of mortality among European and American residents has been recorded, a reduction having occurred from 6·32 to 1·99 per cent. It is difficult to determine whether this amendment is attributable to improved sanitary measures, which have been progressively enforced, or to an undulatory change of climate itself, which reduced the average temperature of the past year below that within the recollection of the earliest sojourner in the colony. The arrival of the American steamer *Warrior* from the Mauritius with fever on board gave rise to considerable uneasiness, and quarantine was at first rigidly

enforced; but subsequent observation of the nature of the cases treated in the Government Civil Hospital proved the type of fever to be remittent or intermittent, with great enlargement of spleen, in most cases, and that it was not a contagious disease. In consequence of the alarm, however, the colony obtained the benefit of the appointment of a paid and therefore responsible Health Officer of the Port and Inspector of Emigrants. The health of the troops, saving at Hong-kong, has also undergone improvement, the sickness having decreased by one-third and the mortality by one-half, as compared with the preceding year. The return of contagious diseases among the police is not so satisfactory as in 1857, there having been a considerable increase of cases, limited entirely, however, to the European portion of the force.

A LESSON FROM ROME.

Whilst we are vainly striving after a national registry of sickness, based on the returns of the Medical officers of the Poor-law and of the various charitable institutions, we find that the thing is at any rate attempted in the Eternal City. We have before us the "Monthly Statistics of the Roman Hospitals," to which are appended the tables of births, deaths, and marriages, published by authority.(a) We learn that the population of Rome is 217,378, of whom 4602 are Jews, 488 heterodox, 10,738 soldiers, and 367 prisoners. Amongst these, in the month of January, 1869, were 543 births, 167 marriages, and 650 deaths. Out of the 650 deaths 130 took place in Hospitals; 374 were men, 276 women. The mean temperature of January 6·05 Centigrade. Out of the deaths, in order of frequency, phthisis caused 65, pneumonia 46, *verminous maladies* (*entozoa*) 32! sanguineous apoplexy 25, diarrhœa 24, infantile convulsions 24, pleurisy 22, old age 20, gangrene 18, enteritis 18, pulmonary catarrh 17, typhoid fever 17. Taking the deaths as to their causes and ages, we find that 84 persons died of fevers, zymotic, typhoid, and malarial, of whom 25 were under 7 years of age. From diseases of the organs of respiration 196, including 65 from phthisis. Of the total deaths 161 were under 7 years of age. Now for the statistics of sickness, so far as indicated by the Hospital returns. The month of January, 1869, began with a Hospital population of 2002; during the month 2122 fresh patients entered, 1777 went out, 225 died, leaving a balance of 2121 in-patients in the last day of the month. When we come to details, we sadly miss the tabular nosological form which alone can give precision, and which would be very little more troublesome than the loose statements presented. That which is clear is the enormous proportion of fevers of a kind little known amongst ourselves—the intermittents, remittents (simple and pernicious), the algide and soporose, and the paludal cachexiæ. In the Surgical Hospitals pyæmia and purulent infection are not unknown, but for want of tabular statements the proportions cannot be stated.

FROM ABROAD.—PRIZES AND PRIZE SUBJECTS OF THE ACADÉMIE DES SCIENCES.

At the recent anniversary meeting of the Paris Académie des Sciences the names of the new prizeholders were announced. 1. The Statistical Prize was adjudged to Dr. Berigny for the excellence of his meteorological observations made at Versailles during the period 1847-67. 2. Experimental Physiology: a prize of 1500 fr. to M. Gerbe for his discovery proving that Purkinje's vesicle is, in the ovum of species having a cicatricule, really the centre of the formation of this cicatricule—that is, of the germ. M. Gonjon received an "encouragement" of 500 fr. for having demonstrated that the bony medulla can be grafted and reproduce bone. 3. The Prize in Medicine and Surgery of 2500 fr. was adjudged to M. Villemin for his "conclusive researches on the inoculability of tuberculosis." The author had announced the results he had arrived at to the Academy last year, but the committee to which his paper had been referred was desirous that new experiments should be made in order that the reality of the conclusions might be incontestably established. The results of the new experiments have been verified by MM. Andral, Bouillaud, Cloquet, Longet, Nélaton, and Laugier. "Inoculable from man to animals," it is stated in concluding the report, "it would doubtless be so from man to man. It remains for the future to determine under what special conditions cohabitation may render the disease transmissible." "Honourable mentions" were also accorded to M. Feltz for his "quite new and very remarkable" researches entitled "A Clinical and Experimental Investigation of Capillary Embolism;" to Dr. Austin Flint for his "original experiments having a great interest for physiology and pathology," "Experimental Researches on a New Function of the Liver;" and to M. Raciborski for his "excellent Treatise on Menstruation." The Academy accords to MM. Collin and Grehant 1000 fr. to aid them in continuing their experiments, the former on trichinæ and trichinosis, and the latter on respiration. M. Labordette has also obtained 500 fr. in order to continue his observations on the employment of the laryngeal speculum in the treatment of asphyxia from submersion. 4. The Bréant Prize is the annual torment of the Academy, having been instituted for rewarding the discoverer of a cure for cholera, and, in his absence, the interest of the 100,000 fr. being given to the person who has done most in advancing the cure of this or other epidemic disease. During the fifteen years that so tempting a sum has been held out, the number of candidates has been legion, and this year it amounts to thirty, none of whose works are deemed worthy of the 100,000 fr. or its interest of 5000 fr. Still a near enough approach has been made for this latter to enable the Academy to divide it between three competitors, giving M. Lorain 2500 fr., M. Brébant 1500 fr., and M. Nicaise 1000 fr., for their respective essays on cholera. 5. The Jecker Prize has been decreed to M. Favre for his researches on "Heat disengaged during Chemical Combinations," a sum of 2000 fr. being awarded to M. Gautier for his "Researches on Hydrocyanic Acid and the Nitrils." The Barbier Prize is divided between Dr. Fraser, "who forwarded the results of a thorough investigation of the botanical characters, physiological action, and therapeutical employment of the *Physostigma venenosum*, which furnishes the Calabar bean. Its remarkable action on the pupil was already known, and the author has now examined the influence of the alcoholic extracts of the envelopes of the seed, and has deduced from them important therapeutical facts;" and M. Rambuteau, for his experiments with regard to the physiological action of some of the metallic compounds — the fluorites, iodides, bromides, etc. The Godard Prize was adjudged to Professor Ercolani, of Bologna, for his interesting researches on the utricular glands of the uterus, an honourable mention being awarded to M. Dieu for his observations on the semen of aged persons.

Among the prize subjects announced having a bearing on Medicine are—1. The Prize in Medicine and Surgery of 5000 francs—subject, Application of Electricity to Therapeutics. 2. Bordin Prize of 3000 francs—subject for 1869, A Monograph on an Invertebrate Animal; for 1870, the Comparative Anatomy of the Annelids; for 1871, "Exhibit the differences and resemblances which exist among the organic productions of every species of the eastern parts of the continents of Africa, South America, and Australia, and the causes to which the differences may be assigned." 3. The Serres Prize of 7500 francs—subject, General Embryology, applied as far as possible to Physiology and Pathology. 4. The Monthyon Prize in Experimental Physiology, for the printed or manuscript work which has most contributed to the progress of this. 5. The Monthyon Prize in Medicine and Surgery for works or well-

(a) Rassegna Mensile Statistica degli Ospedali della Città di Roma, pubblicata per ordine di S.E. Riverendissima Monsignore Achille Maria Ricci. Anno ii., Gennaio, 1869. Roma. (Subscription, foreign post free 14 lire per an. G. Aureli, Piazza degli Orfanelli, No. 104.)

defined discoveries regarded as of most utility to the Art of Healing. 6. Monthyon Prize in Unhealthy Occupations, for a means of rendering an art or occupation less insalubrious. 7. Grand Prizes in the Physical Sciences—subjects, the Genetic Phenomena in Parthenogenesic Animals, and Investigation of the Fecundation of Fungi (*Champignons*).

PARLIAMENTARY.—POOR-LAW REFORM—MEDICAL OFFICERS' SUPERANNUATION (IRELAND) BILL.

On Tuesday, June 22, in the House of Lords, Lord Townshend moved for an address praying for a Royal Commission on the operation and administration of the Poor-law, which he considered at present extremely faulty.

Lord Granville refused the assent of the Government, on the ground that the inquiry of recent Parliamentary Committees had exhausted the facts, and Lord Townshend withdrew his motion.

In the House of Commons there was a discussion on pauperism and local taxation. Mr. Rathbone proposed that the present system of poor relief should be supplemented by grants from national sources, conditional, like the education grants, on efficiency. The motion was subsequently withdrawn.

On Wednesday Dr. Brady moved the second reading of the Medical Officers' Superannuation (Ireland) Bill, and dwelt on the efficiency of the Poor-law Medical Relief staff in Ireland, and contending that this efficiency could not be maintained unless a system of retiring pensions were established. Under the Medical Charities Act of 1851 Ireland was parcelled out into 716 Dispensary districts, containing 1038 Dispensaries. To those districts, the area of which was on the average from 40 to 60 square miles, 785 Medical men were appointed. Those gentlemen were obliged to devote their whole time to the work, and were prohibited from undertaking any other public office. It was also necessary that they should possess three qualifications, whereas two only were required for Poor-law Medical officers in England. Their duties were of the most arduous nature, and they were exposed to great risk of contagion in visiting the sick poor. The hon. gentleman then proceeded to show that since the passing of the Medical Charities' Act the number of deaths from fever, small-pox, and other diseases, had greatly decreased in Ireland—a result which, he maintained, was to be attributed to the ability and self-sacrificing devotion to the duties of their profession by which the Medical officers in that country were distinguished. Yet, for rendering services so important, he found that 1867 Medical men, to whose case he was inviting attention, received on an average not more than £90 per annum, or 1s. 8d. for each case which they attended in the rural districts, and 4d. for each case attended in the towns throughout the year. But, taking each case as requiring on the average four visits, the remuneration would be only 5d. in the rural districts and 1d. in the towns for each visit. Now that, he maintained, was a miserable rate of pay for men who performed duties so onerous and laborious, and he proposed that the Poor-law guardians should be empowered to tax the ratepayers with the view of providing for them a superannuation allowance. It was urged in opposition to such a proposal that the rates were already too high, but if a worse system of Medical supervision were established in Ireland, what, he should like to know, would be its effect? No better means, he maintained, for reducing the rates could be adopted than the prevention of disease, for it had been stated in evidence before a committee of that House that 72 per cent. of all the pauperism which prevailed was the result of illness. The hon. member, having disclaimed any wish to prosecute his Bill merely in the interests of the Profession to which he belonged, concluded by moving the second reading.

Mr. Peel-Dawson seconded the motion, stating that the proposal of the hon. gentleman appeared to him to be entitled to support on the double ground of generosity and justice. He trusted, he added, that the Government would be guided in the course which they took in reference to the Bill by the expression of feeling in its regard on the part of the Irish members.

Mr. W. H. Gregory also supported the Bill, not so much on the ground of justice as on that of expediency. He thought it was most desirable in the interest of the poor themselves that the Medical officers in Ireland should receive a superannuation allowance, because the services of a good class of men would thereby be likely to be secured. He hoped, however, that the Bill would not be converted into a precedent for quartering every Medical man, no matter what the nature of his practice might be, hereafter on the rates.

Mr. Synan spoke in favour of the Bill, observing that his hon. friend the member for Leitrim was, he believed, willing to make ten years' service a necessary condition precedent to enable any Medical man to obtain a superannuation allowance under its provisions.

Sir J. Gray maintained that the Bill was entitled to support in the interest of the public, to whom it would be a great advantage to secure the services of as highly qualified a class of Medical men as possible. There were cases in which Medical officers of unions, having to visit the hotbeds of disease, carried typhus home and were themselves carried off, with a portion of their families. It was most important that Medical men of skill should be appointed in the unions, and every care should be taken by the Government to improve their condition. The favour shown to lawyers in the matter of superannuation allowances contrasted remarkably with the status of Medical men in this respect. It was unjust to the latter, who belonged to one of the learned professions, and who were at least as useful as any other of the professions, that this distinction should be maintained. In his opinion, the Government had been grossly negligent in its duty in failing to exclude incompetent men from the Medical Profession. He said it advisedly that, notwithstanding the Bill of 1858, under the present system men utterly incompetent could get into the Profession. The system was the same as when it was denounced by Sir B. Brodie and others. The highest authorities had declared that no man ought to be permitted to practise until he had been brought by the examiners to the bedside of a patient in a Hospital and was able to explain the symptoms and the treatment which ought to be adopted. He (Sir J. Gray) did not desire to detract from the Profession, but he did desire to convince the Government of the necessity of providing an efficient Medical examination, and of thus protecting the public. He had asked one of the most eminent Medical men in Ireland whether a man could not get a Medical licence who had never put his hand upon a human pulse, who had never opened an abscess, never percussed a chest, handled a broken limb, or opened a vein, and the answer was that he could. At present students were brought before the examiners and asked questions which they were taught to answer like parrots. The "grinders" made large incomes by teaching the students to answer these questions, and charged according to the difficulty of passing a student through each college—twenty guineas for Dublin, fifteen for London, and ten for Scotland. He had recently accompanied Sir W. Jenner through the Hospital in which he practised, and afterwards asked Sir William to explain the small degree of attention which the students paid to his able and careful explanations. The reply was, "A man does not want Hospital practice in order to pass," and at a meeting of the Medical Teachers' Association, held in Dublin, presided over by Sir William Jenner, the inefficiency of the present examination was prominently dwelt upon, and the fact noted that the only test consisted of mere certificates of Hospital attendance, and mere answers from memory to certain questions, without any practical bedside examination. He himself knew of cases in which a man had been complimented by the examiners for his answers in auscultation, and yet had never handled the stethoscope or put his ear to a diseased chest; and in another case a Physician, entitled to put ten letters after his name, being asked what he should prescribe in certain obstetric cases where bleeding was not practicable, answered—first, two drachms and then one drachm (or sixty grains) of tartar emetic, the proper dose being the eighth of a grain. (Laughter.) If a lawyer made a mistake in the advice he gave you, there was a court of appeal in which you could be set right; but here an ignorant Practitioner might send a patient out of the world, and nothing could be done. At present the College of Surgeons gave two degrees, each of which conferred the right to practise. One, the Fellow's degree, cost most and was worth most, for no Fellow was admitted who did not go to the bedside of a patient and submit to examination. The other degree was twenty guineas cheaper, and in order to obtain it it was only necessary to study for four years, and there was no practical examination at all. At Dublin an attempt had been made to carry out a practical examination, but as there were twenty-two other places where degrees might be obtained, the students simply laughed at the examiners in Dublin, and went elsewhere, so it became necessary to discontinue the system. A heavy responsibility rested on the Government in this respect, and he hoped that they would not neglect it. (Hear, hear.)

Mr. C. Fortescue said the hon. member had made a statement of a very formidable character, containing facts which

were enough to make us all tremble when we called in a member of the Medical Profession, but statements also which would one day demand the attention of Parliament. With regard to the Bill, his only objection related to the manner in which it was drawn. In his opinion it should be a simple extension to the Medical officers of unions of the Irish Poor-law Superannuation Act of 1865, and it was upon that understanding only that he should support the Bill. He agreed with hon. members in thinking that the well-being of the poor required some such measure as this, or otherwise there would be a natural tendency on the part of the guardians of unions to retain the services of old and disabled Practitioners who were not able to give to the poor the requisite attention. He was willing to consent to some power being given to Boards of Guardians to grant superannuations under strict regulations, and on the conditions of the Act of 1865, according to which no officer was entitled to such allowances, on the ground of retirement, who was under 60 years of age, and who had not served as a union officer for 20 years. With these observations he assented to the second reading of the Bill.

Mr. Downing said he was glad the Government had yielded to what appeared to be the unanimous wish of the Irish members.

Lord Claud Hamilton also expressed gratification at the general tone of the observations of the right hon. gentleman the Secretary for Ireland.

Mr. Ayrton, on the part of the Treasury, said it would be necessary to confine the Bill exclusively to the action of the local authorities on local rates, which were the funds at their disposal.

The Bill was read a second time.

REVIEWS.

On Varicose Disease of the Lower Extremities and its Allied Disorders, Skin Discoloration, Induration, and Ulcer. By John Gay, F.R.C.S., Surgeon to the Great Northern Hospital, Consulting Surgeon to the Earlswood Idiot Asylum, etc., etc. London: John Churchill and Sons. 1868. Pp. 171.

A Manual of the Pathology and Treatment of Ulcers and Cutaneous Diseases of the Lower Limbs. By John Kent Spender, M.B. London, Surgeon to the Mineral Water Hospital and to the Eastern Dispensary, Bath. London: John Churchill and Sons. 1868. Pp. 89.

The first volume in our list presents in a published form the Lettsomian lectures delivered before the Medical Society of London in 1867. These form an important and valuable addition to a series of discourses, many of which, by reason of their practical subjects, their intrinsic excellence, and the wide reputation of the lecturers, now occupy a prominent place in modern Surgical literature. Mr. Gay's lectures teem with instructive and deeply interesting facts which add materially to our knowledge of venous pathology, and are calculated also to lead to still further research. All the acquirements of a philosophic Surgeon have been brought to bear upon the elucidation of the subject of varicose disease, and the results of long and patient investigations into its morbid anatomy are treated calmly and without predilection. The inferences and suggestions based upon the lecturer's researches indicate many fallacies in the generally accepted teaching of preceding authorities.

Mr. Gay, in retaining the term "varicose disease," proposes to use it generically, and to include under this heading varix, or partial and limited dilatation of a vein, and varicosity, or its general dilatation, with those other morbid changes to which the well known varicose vein is prone. "This distinction," the lecturer states, "is necessary, not only because the two forms of disease differ materially, but also because, without it, the allusions to the veins that are met with in some of the older and abler writers on this subject cannot be clearly comprehended."

In the first lecture a short summary of the principal theories concerning the nature of varicose disease according to various recent authorities, is followed by a full description of the anatomy of the venous system of the lower limbs. Here Mr. Gay is at issue with anatomists as to the course and arrangement of the external or lesser saphenous vein, which is asserted by him to penetrate the fascial aponeurosis covering the gastrocnemius opposite the junction of this muscle with its tendon, and not, as has been universally taught, in the popliteal space. According to Mr. Gay's investigations, the course of the vein along the upper two-thirds of the back of the leg is unquestionably sub-aponeurotic, and occasionally even intra-muscular. The internal saphena, according to Mr. Gay, has generally seven valves, the external saphena an indefinite number. The branches of the saphena, with the exception of certain large branches which appear functionally to appertain to the trunk vein, are destitute of valves. The branches of the muscular veins, on the other hand, are abundantly supplied with valves, which are so arranged as to insure for the currents a centripetal course. The physiology of the saphenous system is next considered, and illustrated by the results of numerous experiments upon the corpse and upon living dogs, and by a series of observations on the legs of prisoners working at the treadmill. From these it follows that the resistance of the healthy vein walls cannot be overcome by either systolic, arterial, capillary action or columnar pressure, but that congestion of the saphenous system is closely associated with muscular activity. In concluding the first lecture, Mr. Gay states the following:—

"The relation of the saphenous to the muscular system indicates the source of a force as well as the means of intensifying it, so far in excess of that which the vein walls can oppose to it as satisfactorily to account for its production.

"That this result is obtained in part—

"(*a*) Through a contingent disadvantage arising from the fact that the capacity of the saphenous trunks is greatly less than that of the sum of their branches; and for the rest, as I shall hope to make more clear hereafter—

"(*b*) Through the agency of certain foramina, of which *some—e.g.*, the saphenous, the femoral ring, and the triceps opening—regulate the size of the stream at the points where they preside over it, and, in case of overflow, intercept the surplus quantity of blood, whilst others—as the fascial and intra-muscular—act as valves or barriers, and oppose its reflux.

"Blood so intercepted finds its way to and accumulates in the saphenous system, where its tension expends itself with varying results. The valved and powerful trunks are able to resist an amount that would dilate their unvalved and feeble branches."

In the second lecture, on the morbid anatomy of varicose disease, are given details of twenty-four dissections made evidently with great care, and recorded clearly and fully. The following inferences require notice, and will, we doubt not, be much criticised and tested by further experience before the views thus enunciated are generally accepted by the Profession:—"I infer, therefore, that pathologically the doctrine of the 'varicose ulcer' does not appear to 'hold water;' that, to reiterate my conclusions, ulceration, when it exists with varicosity, but without other complication, is a coincidence, and not a consequence, of the vein disease; that, when associated with induration and bronzing of the skin, it is the direct result of serious obstruction of the venous trunks, and of this alone, whether associated with varicosity or not. The converse cannot, however, be alleged—viz., that serious embarrassment to the circulation through the trunk veins is invariably followed by these affections of the skin."

Again, in Lecture III.:—"There are no substantial grounds for accrediting ulcers on legs with varicose veins to the diseased veins in the relation of effect; that, in fact, the varicose ulcer, in the sense in which it is usually understood, is a fiction."

Mr. Gay, in ordinary cases, advocates rest, bandaging, an elevated position of the foot, the administration of tonics, etc., with the aim of relieving the general circulation, supporting the deteriorated walls of the vessels, and giving strength to the affected tissues. Obliteration of the vein by means of the needle and ligature is practised whenever any portion becomes so impaired in structure that it can no longer assist in furthering the circulation, or when a distended part seems liable to burst without forewarning. The remainder of this lecture is devoted to the consideration of induration and skin discoloration, and to an excellent *résumé* of Mr. Gay's views on the pathology and treatment of ulcers. In describing the treatment of venous and indolent ulcers, the author, supported by the results of his own practice and the success of the increasing number of Surgeons who are converts to his plan, advocates most zealously the making of curved incisions, free and deep, on either side of the ulcer margins.

(*To be continued.*)

A Large Child and a Small Mother.—Mrs. Sibley, of Detroit, was delivered by means of the forceps of a well-formed male infant, twenty-four inches and a half long, and weighing sixteen pounds. The mother's weight after parturition was only ninety-two pounds.—*Boston Journal*, April 22.

FOREIGN CORRESPONDENCE.

FRANCE.

(*From our Surgical Correspondent.*)

Animal Vaccination—Syphilitic Infection in Ordinary Vaccination —Warm Debate at the Société Impériale de Chirurgie.

Paris, June 15.

The announcement was made at the last session of the members of the Académie de Médecine, that the discussion on animal vaccination should commence this day; but from the unexpected absence of M. Guérin, who represents the feeble opposition, it has been postponed until this day week.

The subject of animal vaccination finds no longer the adversaries which existed when Dr. Lannoix first returned from Naples in 1864 with virus from the cow. I may say the *élite* of French Physicians and Surgeons, with M. Depaul in the lead, are decidedly in favour of this mode of vaccination. The only voice so far inscribed against it for the ensuing discussion is M. Guérin. I regret that the debate did not come off, or at least begin, though I doubt much if the late researches of M. Depaul can give better proof of the superiority of the animal virus over the whole procedure than the last two or three years have already furnished us.

The two special objections which M. Guérin has heretofore urged are: firstly, the vaccination from the heifer is less sure; secondly, the virus does not keep. If we turn to the first of these objections, we find ourselves in possession of sufficient material to contradict the assertion. M. Danet, who was charged by the Minister of the Interior in 1867 to determine the comparative value of the two kinds of vaccinations, revaccinated 4592 persons with the virus from the heifer. The subjects revaccinated were persons of both sexes, and of all ages and conditions, such as are found in our penitentiaries, asylums, etc. Of this number he obtained good results 1838 times, equal to 40 per 100; whereas out of 3803 revaccinations practised with the human virus, M. Danet only obtained good results 982 times—26 per 100, leaving 14 per 100 in favour of revaccination from the heifer. The successful vaccinations of children from the heifer, practised at the vaccine station of the Academy of Medicine during 1867, amounted to 88·63 per 100, while the same inoculations from arm to arm only furnished 60·76 per 100, leaving again a considerable percentage in favour of animal virus. I could thus give the statistics of M. Husson, and others equally favourable to the cause of progress. But these figures prove sufficiently that the virus from the heifer is at least equal to that taken from the child. And how could it be otherwise? The spontaneous cow-pox inoculated to the heifer loses none of its original qualities, whereas every one must admit the degenerating tendency of the human virus. How better can we cultivate or replenish its force than by going back to the original source of the virus? Certainly, the poison is more active in its natural state than after having undergone transplantation upon strange soil and from system to system.

Once established that the vaccination from the heifer is as sure as any other, why then does M. Guérin object to it? He says the matter cannot be preserved. This latter I believe to be true. I had occasion last year to forward some vaccine matter to America, and for that purpose went to Dr. Lannoix, who allowed me to fill the tubes (24 in number) myself with the virus from the heifer. I did not advise, as I should have done, for the matter first to be inoculated on the heifer, and thence to the patients, and, as it turned out, every one of the tubes proved unsuccessful. But perhaps the virus can be preserved if kept on points and enveloped by gold-beater's skin, as is recommended by Mr. Hinds, of Birmingham.(a)

This last objection falls to the ground as far as large cities are concerned, for nothing so easy as to always keep on hand one or more heifers to visit the Hospitals regularly, as we have them here. For out-door patients depôts can be established—like the one at the Medical Academy, whence city and country Practitioners can obtain the virus. The expense is not great; it can certainly not be brought in question when compared with the many evils it avoids, the transplanting of infectious diseases, and especially that of syphilis, of which there can be no more doubt to-day—immaterial whether this is caused by the blood, as is the theory of the school of Lyons (MM. Viennois, Rollet, and Diday), or by the virus itself, as we are taught here. The fact of syphilitic inoculations is certain, and though M. Briquet tried to deny the fact in the children of Auray, he cannot, nor can M. Guérin, deny the cases which happened here in Paris, under our own eyes, in 1865, when four out of nine children thus inoculated died from the effects of syphilis. All such terrible accidents are avoided by animal vaccination, for every one knows that syphilis cannot be given to the bovine race; and if it is true, as M. Danet advances, that the vaccine virus, in passing through the organism of an individual, becomes impregnated with the constitutional principles of that organism—besides the already known facts of syphilis—it is certainly often dangerous to vaccinate from arm to arm, and the only means of shielding against those dangers is the use of the virus from the cow.

(a) *Medical Times and Gazette*, June 12, 1869.

June 16.

Harsh words are never pleasant, especially if they occur in a learned body like our Société Impériale de Chirurgie, but such was the winding-up of this evening's session.

I gave it to you as my opinion in my last week's communication that M. Liégeois' hypodermic injections of corrosive sublimate as a treatment for syphilis would doubtless call forth arguments from M. Després, and so it was. This gentleman mounted the tribune, and stated his views upon the tonic treatment in this affection and the non-necessity of other, and above all the mercurial, treatment. He, in fact, produced his statistics of 296 patients thus treated by him at the Lourcine Hospital, and of whom only 27 failed to be cured—say 9 per 100. These are about the same results as those which he communicated to the Society in 1867, whence arose the unkind feeling now existing between himself and M. Depaul. The latter is a believer in the mercurial treatment for syphilis, and he thus treats the pregnant women attacked with syphilis who enter his wards at the Hôpital des Cliniques. M. Depaul is, moreover, of the opinion that the mercurial treatment is the only one which can be of benefit in preventing miscarriage in these cases.

M. Després, who has had eleven of such patients under treatment during the last year, treated five of them exclusively with tonics, and of these three children were born living, one dead, and only one of the women miscarried. Of the remaining six who were put upon the mercurial treatment four miscarried, one child was still-born, and only one lived. (I may add that the patients were syphilitic at the commencement of pregnancy.) The argument from hereon became more than lively, and M. Després somewhat personal. The President in vain called the gentlemen to order, and so the meeting broke up in a very hasty manner, much to my regret and to that of everybody present.

GENERAL CORRESPONDENCE.

DEARTH OF BODIES FOR DISSECTION.

[To the Editor of the Medical Times and Gazette.]

Sir,—You have always shown yourself so ready to ventilate in your columns the acknowledged grievances of the Profession, that I now take the liberty of requesting an opportunity of directing attention to the deficient supply of subjects for the dissecting-room, and the difficulty of obtaining them in sufficient quantity.

Why is it that the general cry from the dissecting-rooms is—"Such a dearth of bodies"? Is not anatomy the very backbone of our Profession? How, then, can we, as Medical students, expect to get on in practice, or, as some would say, pass our examinations, without a thorough groundwork of practical anatomy, a knowledge of which can alone be obtained by careful and laborious dissection?

St. Thomas's, which I suppose fairly represents the condition of all the London Hospital schools, has been supplied this session with ten bodies for sixty-four students of anatomy. The most diligent dissector considered himself lucky if he obtained two parts during the whole of the past winter session. Surely, with all the increasing distress, of which we have heard so much during the winter, the supply of bodies ought to have been rather increased than decreased. Either the student must be prepared to pay more for his parts, or else the inspector of anatomy and his subordinates must take the matter in hand and hunt up the bodies more diligently than heretofore. A large number of pauper and unclaimed bodies must frequently be buried from the workhouses and elsewhere, in contravention of the Anatomy Act of 1835, which ought to be reclaimed for the instruction of students and the advancement of science.

Do give us the aid of your powerful support in our endeavours to obtain redress for the next winter session; otherwise I very much fear that some of us, when presenting ourselves for examination at the close of the session, will be "plucked" in consequence of the "dearth of bodies."

I am, &c. A St. Thomas's Student.

*** We shall make further inquiries on the important subject our correspondent has brought forward.—Ed.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

SPECIAL GENERAL MEETING,

Monday, June 21, 1869.

Dr. Graily Hewitt, President, in the Chair.

The President said this special meeting was called to consider the letter of the Secretary of the Royal Medical and Chirurgical Society, along with the resolutions adopted by that body as the basis of the scheme for amalgamating the various existing Medical Societies. When this letter was received a Council was called and the matter fully considered. The Council had come to certain conclusions, to be considered this evening. These were:—1st. They consider that it is desirable to effect an amalgamation, if a suitable plan can be adopted. 2nd. That this can only be done if Obstetrics rank on equal terms with Medicine and Surgery. 3rd. That, to carry out this idea of equality, there should be three great sections, and that the others should be on a different footing. 4. That the President be chosen annually, in rotation, from the heads of these three sections. 5. That the annual subscription be not greater than the present sum of one guinea. Having now existed ten years, and having succeeded beyond expectation, and having done so much for furthering their branch of the Profession, they were now called upon to join with other departments of the Profession. They had to consider whether this union would do good or harm to the Society. They must be jealous of the position they had attained; whilst, on the other hand, they should be unwilling to stand in the way of a union. Their autonomy should be retained, and the interests of their branch of the Profession should be advanced. What was good for them was good for the Profession at large. They should be exceedingly careful not to suggest that the Royal Medical and Chirurgical Society was desirous of interfering with their rights and privileges. It was the earnest desire of this Society to enter into the discussion in the fairest possible way, and they simply desired to maintain their own position in reference to other societies, and in reference to the Profession at large.

Dr. Tyler Smith proposed the first resolution:—"That, in the opinion of this meeting, it is desirable to effect an amalgamation of the various Medical societies in London if a suitable plan can be adopted." In December, 1858, it fell to him to move the resolution which founded the Obstetrical Society, and now it had fallen upon him to propose a resolution which might terminate its existence. If they looked to their meetings, their *Transactions*, their Fellows, one could scarcely help regretting their dissolution. There was a feeling that amalgamation should be effected, for there was no concrete body now representing the whole of Medicine, and it would be for its advantage to have one great society. He would have preferred the title "Academy" to that of "Society," especially with regard to foreigners. Still, before they could dream of forming any society, they must lay down that obstetrics was in no way inferior to Medicine or Surgery. They should enter into the negotiation with a determination to maintain their rights. Then they would not be destroying the Obstetrical Society, but developing it. If they failed in effecting a union on an equitable basis, they could but go on as now.

Dr. Holman, of Reigate, regretted that no more influential Fellow had been found to second this important motion. They should just now confine themselves to the abstract proposition that they were willing to unite with the other societies on equitable terms. He trusted that this proposed union would benefit Medicine at large. Many things might be entrusted to the delegates to be sent to discuss the scheme. The animus of the Society was certainly not obstructive, and they had done as much as any body for the advance of Medicine, and they were therefore entitled to just consideration. Let the delegates go with full instructions, and if there was anything they could not effect let them return to the Society, which by its instructions would relieve them of their difficulties.

The President here read certain letters received from Fellows unable to attend: Dr. Fox (of Scarborough), Mr. J. J. Mason (Stratford-on-Avon), Dr. Paterson (Partick, near Glasgow), Dr. Radford (of Manchester); each communicated his opinion.

Mr. Squire was strongly in favour of the scheme. There were only eight or nine life members in their Society, and their position could easily be secured. He thought the title of the section should be that of "Obstetric Medicine and Surgery," and that the diseases of children should be included in the title.

The resolution was then put by the President, and carried unanimously, and with applause.

Dr. Barnes, in moving the second resolution—"That, in the opinion of this meeting, such amalgamation can only be effected by the recognition of the principle that obstetrics rank on terms of equality with Medicine and Surgery"—said that after Dr. Tyler Smith's observations he was spared the necessity of entering into many details. The enormous advances made by Obstetrics were no doubt partly the result of their organisation, and it was a question whether that would be improved or diminished by the new scheme. He thought this would mostly depend on the terms of amalgamation. They might gain strength, but if subjected to other bodies they would suffer. They must insist on a perfect equality with Medicine and Surgery, which would involve the formation of three great and coequal bodies. The Obstetrical Society had been able to influence certain of the colleges and examining boards; the power of separate action should, therefore, be still retained. They might not perhaps be so free in this new body, and they certainly would not, unless they went in on certain defined conditions. The matter of entrance fee should also be considered; to the absence of any such they owed their great number of members.

Dr. Tilt said that after what had fallen from Dr. Barnes he needed to say little. They wished for union, but only on terms of perfect equality. He seconded the resolution, which was carried unanimously.

Dr. Meadows moved the next resolution—viz., "That, in order to carry out the foregoing resolutions, it would, in the opinion of this meeting, be desirable to form three sections only in the Royal Society of Medicine, representing the three great departments of Medical practice—viz., one each for Medicine, Surgery, and Obstetrics; and that the other proposed sections, relating, as they do, to subjects which are common to each of these, should be placed on a different footing"—with a great deal of hesitation, as it came home closely to the interests of other societies. It had been urged that they were going beyond bounds in doing anything more than accepting or rejecting the propositions of the Royal Medical and Chirurgical Society. It was better, however, that they should show their cards. They really proposed to form a new society, not patch up old ones. It was only common sense that, in such a society, the three great departments of Medical practice should be equally represented. They had found great difficulty in framing this resolution, which was only explanatory of Dr. Barnes's motion. As Obstetricians, they did not claim to be coequal with Medicine and Surgery combined, but with either of them individually, and claimed to be something more than State Medicine.

Dr. Brunton seconded. They were forming a new society, and Medicine, Surgery, and Obstetrics ought to be coequal. Seven sections were proposed; but the majority of these might be included in Medicine, Surgery, and obstetrics. He therefore urged that the Obstetrical Society should stand out for their position. If it was necessary to go to the Pathological Society to show a specimen relating to obstetrics, it might be both troublesome and inconvenient, and so with regard to others.

Dr. Meadows said, in explanation, that it was far from the intention of the Council to abolish the other sections, only to elevate obstetrics to an equal rank with Medicine and Surgery, and to show that the others were of less importance than these.

The President pointed out that in this resolution the word "desirable" was used rather than "essential." It was only to indicate the wish of the Society, but not to hamper the negotiations. It really should be discussed at a subsequent period.

Dr. Squarey thought that other societies, as the Pathological and Clinical, might demur to this proposition. He should like to know if the Society was prepared to stand out for this subordination of the other sections.

The President said that the word "desirable" indicated the intention of the resolution.

Dr. Squarey thought that the confirmed intentions of the Society should be known.

Dr. Barnes also thought that if this was put down as essential it might bring the negotiations abruptly to an end. The second resolution was perhaps enough, except as an expression of opinion.

Dr. Woodman thought that the two grades of Associate and Fellow were objectionable, especially as they depended on a mere question of money.

The President here pointed out to Dr. Woodman that this subject was not now before the Society.

Mr. Squire thought this resolution stopped the way altogether, and it appeared to him for a variety of reasons that it should be dropped out. He accordingly proposed that it should be withdrawn.

Dr. Squarey seconded this.

On the representation of the President, this was taken as a simple negative.

Dr. Rogers thought that a negative would place the Society in a false position. An expression of opinion was desirable to strengthen the hands of their delegates. These should know the feeling of the Society, and on that account it should neither be withdrawn nor negatived.

Dr. Gervis strongly supported Dr. Meadows's resolution. He thought that if they entered the new Society they ought to enter aiming high, and endeavour not merely to maintain the present position of Obstetrics, but to advance it, and to obtain, if possible, the recognition of the equality of Obstetrics with Medicine and Surgery. He was therefore greatly in favour of this resolution.

Dr. Madge was glad to find that they were in favour of showing their cards. He confessed that the first and second resolutions were doubtful, but the third clearly showed a distinct antagonism to the scheme of union. It was just possible that if they did not unite with the others a rival Society might be formed.

Dr. Heywood Smith was certain that the Royal Medical and Chirurgical did not wish to take the upper hand. There was an opportunity of forming a new and great Society, and it should be taken advantage of. The delegates should also know the opinion of their Society on this point. As to actual sections, there was no reason why there should not be a separate section of Surgery. He thought there might be a section of clinical obstetrics. So also with regard to a pathological section.

Mr. Robinson did not think that a section of clinical obstetrics was necessary. Indeed, that was also the case with Medicine and Surgery.

Dr. Tyler Smith assured the meeting that the Council had no intention that the words should bear any other meaning than that which was apparent. He thought that obstetrics should enjoy a more prominent position than the other so-called subordinate sections. But, although, logically speaking, Dr. Meadows was quite right, yet they could not forget the great career of the Pathological Society. They could not go and ask that body to take a lower position than it now enjoyed. It was not proposed that the library should be made available to Associates.

Dr. Leonard Sedgwick thought the Society would fail in its duties if it did not uphold the position of those who practised obstetrics. The instructions to the delegates ought to be that it was desirable to have three sections.

Dr. Playfair would call attention to one portion of the scheme. It would be observed that the general management was proposed to be centred in a council containing only three Obstetric Practitioners to nineteen others, so that they would be in an infinitesimal minority. Their object therefore in this resolution was to devise some plan which would prevent their being so entirely swamped. He strongly supported the resolution.

Dr. Wynn Williams said that it had been proposed in the Royal Medical and Chirurgical that there should be three sections. That was immediately negatived. It was well to know what should be done were their propositions rejected. It might be well to have a single section of Medicine, Surgery, and Obstetrics, the others to be subsections.

Dr. Meadows said that in proposing this resolution he had experienced considerable difficultics, and these had been now enhanced by the behaviour of certain members of Council who now opposed the scheme of the Council. He used the word "desirable" simply to indicate the Council's opinion as to the best mode of insuring the perfect equality which had been declared essential. The word "subsection" had been carefully struck out, lest it should wound the feelings of anybody. Dr. Playfair's remarks only illustrated the difficulties of the situation. He was merely the mouthpiece of the Council, and could not withdraw the motion; the Fellows had only to vote against it if they did not approve of it.

Mr. Squire still thought that this prescribed too closely the method of overcoming the difficulty of securing equality.

The President thought that as what took place in the Council had been referred to, it should be fully explained that the resolution was only passed by a majority; they were not unanimous.

The motion being put, there voted—for the motion, 25; against it, 10.

Dr. Playfair moved the fourth resolution—"That, in the opinion of this meeting, it is essential that the President of the Royal Society of Medicine be chosen annually in rotation from the past and present presidents of the sections of Medicine, Surgery, and Obstetrics." This had been considered *essential* by the Council. He wished to point out that thereby no injury would be inflicted on the other sections, as the prominent Fellows would also be Fellows of the Medical or Surgical sections. It had been suggested that this should be left to the sense of justice of the new Society; but the only precedent was in the Royal Medical and Chirurgical Society, where, during sixty-four years, only one obstetrician, Sir Charles Locock, had occupied the chair. If they were willing to give perfect equality to obstetrics, they could not object to this.

Dr. Sedgwick seconded.

Carried *nem. con.*

Dr. B. Hicks proposed the last resolution—"That, in the opinion of this meeting, it is essential that the annual subscription of Fellows of the obstetric section shall not exceed their present annual subscription of one guinea, and that there be no entrance fee." He thought it was entirely from the wisdom and foresight of their founders that such success had been attained. Their great achievements had been all effected on a single guinea fee. If an entrance fee of one guinea were exacted, many would be prevented from joining. The term "Associate" proposed would also be objectionable to many. The use of such a Society as this was not to read papers only, but also to extend the interest in their subjects. He would recommend the new body to follow their example in the matter of fees.

Mr. Dunn seconded.

Dr. Wynn Williams asked if it was to be made essential that they be called Fellows.

Dr. Gervis said that the word "Fellow" was inserted in the resolution with this view.

Dr. G. Murray asked if it would not be enough if they were placed on an equality with the sections of Medicine and Surgery.

Dr. Tilt thought the resolution should be put exactly as sent from the Council.

The original motion was then put and carried *nem. con.*

Dr. Rogers thought that the term "Fellow" should be retained.

Dr. Wynn Williams thought that they should be Members or Fellows, and moved accordingly.

Dr. Hicks thought the term "Associate" was very objectionable.

Dr. Barnes also held that it would be so, as the Associates of the Linnean Society, *e.g.*, were an inferior body.

Dr. Tyler Smith explained that persons paying one guinea were Associates of the Royal Society of Medicine, members of their sections.

Dr. Gervis said it appeared to him that the word "member" was used generically in the printed scheme which had been circulated.

Dr. Brunton thought that the monetary value of the Fellowship was objectionable.

Dr. Heywood Smith thought that they were thus throwing obstacles in the way of amalgamation, virtually negativing the first resolution. This should be left to delegates.

Dr. Williams's motion was then withdrawn.

Mr. Mitchell proposed as delegates the President, Dr. Tyler Smith, and Dr. Barnes.

Dr. Day-Goss seconded.

These gentlemen were accordingly elected.

Railway Accidents in the State of New York.—From the report of the State Engineer for the year ending September, 1868, we learn that on the steam railroads of this State during the year 302 persons were killed, and 358 injured. On the horse-railroads 13 were killed, and 90 injured. The number of persons carried on the steam-roads was 18,434,300, and on the horse railroads 146,326,486.—*New York Journal*, May. [Railway travelling is evidently rather ticklish work in the United States; for if this is the statistical result for New York State alone, the sum total must be terrific.]

NEW INVENTIONS.

SODA-WATER.

Now that the hot weather has set in, it will perhaps not be considered out of place to call attention to the state of the soda-water and aerated water of various kinds which are now so largely consumed. Examinations of different kinds of artificial water, conducted by the aid of the now well-known "ammonia method" of water analysis, have brought to light the fact that very dirty water is often drunk in the form of soda-water. The presence of the carbonic acid masks the quality of the water employed to make soda-water or aerated water, and that will be drunk as soda-water which would not be tolerated as the water-supply to any town. Every one knows how very nasty a glass of soda-water which has stood a short time often becomes. This nastiness ought not to occur, and indicates simply the quality of the water which is employed to make the soda-water. The investigation of artificial waters to which we have alluded has shown, moreover, that the process of aerating water tends to increase the organic nitrogenous matter in it, so that in order to make good soda-water it is necessary to take water of a very high degree of purity. To meet the requirements of the case, we understand that some makers have adopted the Clark process of purification, and with excellent results. From a circular which has reached us, we find likewise that there has been a company started for the supply of pure distilled water, which is subsequently aerated, and sometimes also charged with appropriate mineral salts. Whilst wishing the company every success, we desire to point out that one, at any rate, of the country soda-waters which are to be met in London is of a very high degree of organic purity. The water of Messrs. Ellis, of Ruthin, in North Wales, has proved, on examination by the ammonia process of Wanklyn, Chapman, and Smith, to be of extraordinary purity. One million parts of this water contain 0·014 parts of free ammonia and 0·054 parts of "albuminoid ammonia." For soda-water these numbers are most remarkable. It is only too common to find treble this quantity of albuminoid ammonia in commercial soda-water. At the recent meeting of the Officers of Health to hear Dr. Letheby's paper on the Registrar-General's water-report, a remark fell from one of the speakers to the effect that he would never drink Thames water if he could get soda-water from Wales. This preference is, as we see, fully borne out by the results of delicate chemical analysis.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, June 17, 1869:—

Collet, Augustus Henry, Worthing.
Grant, Frederick, Kibworth, Leicestershire.
Orme, Campbell, Avenue-road, N.W.

As Assistants in compounding and dispensing medicines:—

Howlett, Henry John, Southsea.
Jeckell, Edward, Ipswich.
Ritson, John, Sunderland.

The following gentlemen also, on the same day, passed their First Examination:—

Leadman, Alexander D. H., Leeds School of Medicine.
Lee, Edward Samuel, St. George's Hospital.
Slater, John Samuel, St. Thomas's Hospital.

APPOINTMENT.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

FOX, CHARLES JAMES, M.R.C.S., L.D.S., has been appointed Dental Surgeon to the Dental Hospital of London, Soho-square, *vice* G. A. Ibbetson, F.R.C.S., L.D.S., resigned.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—The following appointment has been made:—James D. Smith, Assistant-Surgeon, to the *Fox*.

WAR OFFICE.—The following appointments have been made:—Royal Regiment of Artillery: Staff Surgeon Herbert Chalmers Miles to be Surgeon, *vice* William Alexander White, M.D., appointed to the Staff. 16th Foot: Surgeon Alexander Reid, from the 89th Foot, to be Surgeon, *vice* John Sparrow, who exchanges. 89th Foot: Surgeon John Sparrow, from the 16th Foot, to be Surgeon, *vice* Alexander Reid, who exchanges.

MEDICAL DEPARTMENT.—Surgeon William Alexander White, M.D., from the Royal Artillery, to be Staff Surgeon, *vice* Herbert Chalmers Miles, appointed to the Royal Artillery.

The surname of the Assistant-Surgeon transferred from the 109th Foot to the Staff in the *Gazette* of December 1, 1868, is Grose, and not Grosses, as therein stated.

BIRTHS.

CRANE.—On June 14, at Hallaton, Leicestershire, the wife of Charles A. Crane, M.D., of a daughter.

HOUGHTON.—On June 18, at 6, Mount-street, Grosvenor-square, the wife of Henry George Houghton, M.D., of a son.

MCCLEMENT.—On June 11, at 8, Alexander-terrace, Bray, Ireland, the wife of Richard Carr McClement, Surgeon, R.N., of a son.

MERCER.—On June 12, at Karlshof, near Darmstadt, Grand Duchy of Hesse, the wife of Dr. Mercer, of a daughter.

NASH.—On June 18, at Royston Lodge, Ladbroke-grove, Kensington-park, W., the wife of Edmund Nash, M.D., of a daughter.

ORD.—On June 16, at 57, Wood-street, Woolwich, the wife of Knox Ord, M.D. Edin., F.L.S., Staff Surgeon H.M.S. *Fisgard*, of a son.

PLAYNE.—On June 18, at Maidenhead, the wife of Alfred Playne, M.B., of a daughter.

ROBERTS.—On June 10, at 365, Oxford-road, Manchester, the wife of John Roberts, M.D., of a daughter.

YELD.—On June 23, at Sunderland, the wife of Henry J. Yeld, M.D., of a daughter.

MARRIAGES.

DICKSON—KIRKPATRICK.—On June 15, at St. Paul's, Edinburgh, Lindsay F. Dickson, M.D., her Majesty's Bengal Army, son of Dr. Dickson, of Bolton-street, to Charlotte, youngest daughter of John Kirkpatrick, Esq., Moray-place, Edinburgh. No cards.

DODDS—ARTHUR.—On June 18, at Bathgate, by the Rev. Alex. Shennan, A.M., Thomas Dodds, solicitor, Bathgate, to Jane Aitken, fourth daughter of the late John Arthur, Conservator, Anatomical Museum, Edinburgh.

FRANCIS—SYMES.—On June 17, at the parish church, Bridport, the Rev. Herbert O. Francis, M.A., Emm. Coll., Camb., son of C. Larkin Francis, Esq., of St. George's-road, S.W., to Mary Broadley, youngest daughter of George Symes, M.D., of Bridport.

GARLIKE—FARLOW.—On June 17, at St. Stephen's Church, Avenue-road, Edward W. B. Garlike, Surgeon, Cheshunt, Herts, eldest son of Thos. W. Garlike, Surgeon, of Tulse-hill, Surrey, to Annie Osborn, eldest daughter of Charles Farlow, Esq., of 5, St. Edmund's-terrace, Regent's-park. No cards.

GREEY—VON LINTZGY.—On May 8, at St. John's Church, Calcutta, William Woolston Greey, to Frances Elizabeth, third daughter of C. F. Von Lintzgy, M.D.

NETZLER—GRAHAM.—On June 17, at St. Barnabas, Kensington, Oskar Frederick William, eldest son of J. F. Netzler, M.D., K.N.S., of Helsingborg, Sweden, to Sarah Simpson, youngest daughter of the late Joseph Graham, Esq., of Trinidad, West Indies. No cards.

THURSTON—RULE.—On June 16, at St. Mark's, Tollington-park, Edward Whitfield Thurston, L.R.C.P. Lond., of Ashford, Kent, to Mary Anne, eldest daughter of Charles Henry Rule, Esq., of Tollington-park, Hornsey.

TURNER—CLEMENT.—On June 9, at St. James's, Piccadilly, Theophilus Verney Turner, late of Newbury, Berks, to Henrietta, widow of the late Lewis Clement, M.R.C.S.

DEATHS.

BARTLEY, CHARLOTTE ELIZA MAWBY, elder surviving daughter of the late Alfred Collett Bartley, M.D., at Mitcham-green, Surrey, on June 20, aged 33.

CULHANE, FRANCES, the beloved wife of Dr. Culhane, and eldest daughter of the late Admiral James Pigott, of Beddington Lodge, Surrey, at 23 Victoria-road, Kensington, on June 17, in her 69th year.

DAY, EMMA, the beloved wife of Surgeon Francis Day, Principal Medical Storekeeper Madras Army, at Akyab, on May 4, of cholera.

ELLIOT, WILLIAM, M.D., late of Stratford-green, at Gatton-point, Redhill, on June 23, aged 72.

GREGORY, ISABELLA SOPHIA, widow of the late Richard Gregory, M.D., at Bellevue, Finglass, Dublin, suddenly, on June 15.

HENDERSON, ANDREW THOMAS, the only son of Andrew Henderson, Esq., M.R.C.S., at Great Malvern, on June 16, deeply regretted by all who knew him, in his 28th year.

WILKS, MRS., the wife of Samuel Wilks, M.D., at 77, Grosvenor-street, Grosvenor-square, on June 16.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon; must be a Member of one of the Colleges of Surgeons of England or Ireland. Applications and testimonials to the Chairman of the Medical Committee on or before July 3. Election on July 13.

BROADMOOR CRIMINAL LUNATIC ASYLUM, WOKINGHAM, BERKS.—Assistant Medical Officer; must be a single man, and be legally qualified. Applications and testimonials to the Superintendent on or before July 10.

CRANBROOK UNION.—Medical Officer for the Parish of Frittenden, Kent. Candidates must possess the qualifications required by the Poor-law Board. Applications and testimonials to H. J. Farrar, Esq., Clerk to the Guardians, Cranbrook, on or before the 30th inst.

DOVER HOSPITAL AND DISPENSARY.—Resident Medical Officer; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to the Secretary, 27, Castle-street, Dover, on or before June 30.

KINGTON UNION.—Medical Officer for the New Radnor District; candidates must be duly qualified. Applications and testimonials to A. Temple, Clerk to the Guardians, on or before July 2. Election on the 3rd.

Lincoln County Hospital.—Physician; must be F. or M.R.C.P. Lond. or Edin., or be F.K.Q.C.P., not practising pharmacy. Applications and testimonials to the Secretary on or before July 5. Election on July 8.

London Fever Hospital.—Assistant-Physician; must be F. or M.R.C.P.L. Applications and testimonials to the Secretary, at the institution, on or before July 2. Election on the 9th.

Northampton General Infirmary.—House-Surgeon's Assistant. Applications and testimonials to the Secretary, on or before the 28th inst.

Royal South London Ophthalmic Hospital, St. George's-circus, S.E.—Honorary Surgeon; must be F.R.C.S. Applications and testimonials to the Secretary, on or before July 5.

St. Mary's Hospital and Dispensary for Women and Children, Manchester.—Honorary Physician; must be a graduate of one of the universities of Great Britain or Ireland, and a Fellow or Member of one of the Royal Colleges of Great Britain. Applications and testimonials to the Board of Management, at the Hospital, Quay-street, Manchester, on or before July 9.

Sunderland Infirmary.—House-Surgeon; must be legally qualified. Applications to the House-Surgeon, C. D. Hildbury, Esq., M.B.

University College Hospital.—Resident Medical Officer. Applications and testimonials to John Robson, Esq., Secretary to the Council of University College, on or before July 17.

University College.—The Professorship of Medical Jurisprudence will be vacant at the end of the present session. Further information may be obtained of the Secretary.

York Dispensary.—Resident Medical Officer; must possess both Medical and Surgical qualifications. Applications and testimonials to the Secretary, Dispensary, York.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Kington Union.—Mr. Brown has resigned the New Radnor District; area 25,868; population 3084; salary £80 per annum.

Romford Union.—Mr. F. M. Davidson has resigned the Third District; salary £40 per annum.

APPOINTMENTS.

Bakewell Union.—Matthew H. F. Cautrell, M.R.C.S.E., to the Winster District.

Chailey Union.—Mark A. Robinson, M.R.C.S.E., L.S.A., to the Fourth District and the Ditchling Workhouse.

Cleobury Mortimer Union.—Joseph J. Godfrey, M.R.C.S.E., L.S.A., to the Workhouse.

Lancaster Union.—John Johnstone, M.D. Edin., L.R.C.S. Edin., to the Southern District.

Sedbergh Union.—Robert Inman, M.D. Edin., to the Dent District.

University Intelligence.—Cambridge, June 19.—At a congregation this day the following degrees were conferred:—M.D.: Arthur Ransome, Caius; Philip John Hensley, Christ's. M.B.: B. Amingson, Caius. The following regulations with respect to the qualification for the M.D. degree will come into operation in Easter term of next year:—Previously to the Thesis being read, four topics, relating severally to physiology, pathology, practice of Medicine, and State Medicine, will be submitted to the candidate, on one of which, selected by himself, he will be required to write a short extempore essay. The *viva voce* discussion and examination in the Act will be somewhat extended in length, but restricted to the subjects of pathology, practice of Medicine and State Medicine, and the subject of the Thesis and Essay.

Balliol College, Oxford.—Three scholarships, of £70 a year each, for three years, having been founded in Balliol College by Miss Hannah Brakenbury "for the encouragement of the study of law and history, and of the study of natural science, or one of the aforesaid studies, in order to qualify students for the professions of law and Medicine respectively," there will be an examination for one scholarship, in the subject of natural science, in November next; the precise time and further particulars to be announced hereafter. Candidates must not have exceeded eight terms from their matriculation. Papers will be set in the following subjects:—1. Mechanical philosophy and physics; 2. Chemistry; 3. Physiology; but candidates will not be expected to offer themselves for examination in more than two of them. There will also be a practical examination in one or more of the above subjects if the examiners consider it expedient.

University of Durham.—Easter Term, 1869.—The following gentlemen have passed the undermentioned examinations:—Final for M.D. Degree: Frederick William Newcombe. Second for Licence in Medicine and Degree of Master in Surgery: Frederick J. Higgs, James D. Murray.

Non-Collegiate Students at Cambridge.—The following information relating to non-collegiate students in the University of Cambridge, has been issued by a board appointed to admit and superintend them:—Students may be admitted members of the University without being members of any college or hostel. Such students will keep terms by residing in Cambridge with their parents or in lodgings duly licensed, and will be entitled to be matriculated, examined, and admitted to degrees in the same manner and with the same status and privileges as students who are members of colleges. They will be under the jurisdiction of the Vice-Chancellor and proctors, and will be required to pay due obedience to all academical regulations. They will be under the supervision of the censor, to whom they may apply for advice and direction, and by whom their daily residence in the University will be registered. They are to report themselves to him on their arrival in Cambridge, and at the end of each term's residence to obtain leave from him to go down. During residence they are to call on him, and write their names in a book to be kept for the purpose, at times to be indicated by him. Each is to make a written report, when required by the censor, for the information of the board, as to the place of religious worship he attends, and as to the studies he is pursuing and the lectures he is attending or the instruction he is receiving. The fees payable will be the following:—To the board, per annum, £5 5s.; capitation tax, per annum, 17s.; matriculation fee, 15s.; previous examination fee, £2 10s.; for B.A. degree, £7; for M.B. degree, £8. Non-collegiate students will be admitted to the University library and museums and to the professors' lectures under the same regulations as the other students, and it is already known that several college lectures will be open to them. Further information on this subject will be issued as soon as possible after the commencement of the Michaelmas term. They will be able to compete for University scholarships in the same manner as other students. All applications for admission and other communications are to be addressed to the Censor, the Rev. R. B. Somerset, Trumpington-road, Cambridge.

Royal College of Surgeons of England.—Notices have been sent to all the Fellows of the College resident in London and the provinces that the following are the names of the eligible Fellows who are candidates for seats in the Council of this College at the ensuing election on Thursday, July 1 next, at 2 o'clock p.m.:—1. Samuel Solly, Savile-row. 2. John Adams, Finsbury-circus. (Retiring from the Council in rotation.) 3. William James Erasmus Wilson, Henrietta-street. Nominated by John Wiblin, Southampton; H. Haynes Walton, Brook-street; George Critchett, Harley-street; Henry Smith, Wimpole-street; Edward Newton, Upper Wimpole-street; Thomas Carr Jackson, Weymouth-street. 4. John Gay, Finsbury-place South. Nominated by Barnard W. Holt, Savile-row; H. Haynes Walton, Brook-street; George Lawson, Harley-street; William Adams, Henrietta-street; Henry Smith, Wimpole-street; William S. Savory, Brook-street. 5. Henry Lee, Savile-row. Nominated by William Bowman, Clifford-street; George D. Pollock, Grosvenor-street; Timothy Holmes, Clarges-street; John Wood, Montague-street; Richard Partridge, New-street, Spring-gardens; James Rouse, Wilton-street, S.W. 6. John Eric Erichsen, Cavendish-place. Nominated by John Marshall, Savile-row; Henry Thompson, Wimpole-street; John Wiblin, Southampton; William Cadge, Norwich; Henry Smith, Wimpole-street; William S. Savory, Brook-street.

The Levée.—At the Levée held on Saturday at St. James's Palace by the Prince of Wales on behalf of her Majesty, the following presentations were made to His Royal Highness:—Inspector-General Charles A. Anderson, M.D., R.N., on promotion, by the Director-General of the Medical Department of the Navy. Inspector-General George Burn, M.D., C.B., on appointment as a C.B., by the Director-General of the Medical Department of the Navy. Assistant-Surgeon F. G. Byrne, R.A., on appointment, by Colonel W. A. Middleton, C.B. Mr. Edward B. Broster, R.N., on promotion, by the Director-General of the Medical Department of the Navy. Mr. W. H. Colvill, Surgeon, Bombay Army, by the Secretary of State. Assistant-Surgeon J. Davidge, R.A., on appointment, by Colonel W. A. Middleton, C.B. Surgeon-Major James Daubeny (Bombay retired), by the Secretary of State. Staff-Surgeon James N. Dick, R.N., on promotion, by the Director-General of the Medical Department of the Navy. Mr. M. C. Furnell, Surgeon in the Madras Army, by the Secretary of State. Mr. Richard S. P. Griffiths, R.N., by the Director-General of the Medical Department of the Navy. Mr. Henry Hadlow, R.N., by the Director-General of the Medical Department of the Navy. Dr. Hector Helsham, 19th Surrey Volunteers, by Lieutenant-Colonel Labrow. Surgeon Cameron M'Dowall, Bombay Army, by the Secretary of State. Assistant-Surgeon T. M. O'Brien, by Colonel W. A. Middleton, C.B. Staff Surgeon-Major George Saunders, on nomination to Companionship of the Bath, by the Adjutant-General. Staff Assistant-Surgeon James Watson, by the Adjutant-General.

Surgeon Richard Wolseley, 5th Foot, by the Adjutant-General. Surgeon Edwin Wilson, on promotion and on appointment to 4th Dragoon Guards, by the Adjutant-General. The following gentlemen attended the Levée :—Sir William Fergusson, Drs. Fraser, Walter D. Jones, E. Louis McSheehy, Minter, Phillips, Messrs. Gilborne, Mitchell Henry.

THE chair of Medical Jurisprudence at University College is vacant through the retirement of Dr. George Harley.

MACCLESFIELD INFIRMARY.—It is proposed to adapt a portion of the south-west wing of the Infirmary as wards for the reception of children (15 boys and 12 girls) over 2 and under 11 years of age.

DR. A. C. CHALMERS, on leaving Thornhill for Sheffield, has been presented by his friends and patients with a valuable gold watch and chain and a purse containing one hundred and fifty guineas.

THE annual dinner in aid of the funds of University College Hospital was held on Wednesday evening at Willis's Rooms. His Highness Prince Christian presided. He was supported by his Royal Highness Prince Arthur. Upwards of 100 guests sat down to an excellent dinner, which apparently had the good effect of opening the purse-strings of the guests, as a large sum of money was collected during the evening. The speeches of Sir William Jenner and Mr. Marshall were admirable.

AN infirmary for sick emigrants is about to be established at Liverpool. The annual expense is estimated at £300, and the current expense for food at 1s. 6d. per day for each inmate. Upon this basis four firms have agreed to contribute £60 each during the first year, and 1s. 6d. per day for each patient sent by them. The management of the infirmary is to be confided to the select vestry of the town.

DR. STEVENSON, Medical Officer of Health for St. Pancras, says, in his Annual Report for 1868 :—"Of typhus, enteric (typhoid) fevers, scarlatina, and small-pox alone, 371 persons died in St. Pancras in 1866. I have no hesitation in saying that the mortality from these diseases might have been very largely diminished had there been proper provision, such as the vestry is empowered to provide by the Sanitary Act, 1866, for the disinfection of clothing, etc. The cost of such an establishment as one of those erected in Liverpool would, I doubt not, be soon saved to the parish by the saving of life that would be effected."

THE *Worcester* training ship is now permanently moored off the pier at Southend. The boys express themselves as delighted to get away from Erith, where they were debarred from bathing and fishing, owing to the filthy state of the water, caused by the Metropolitan sewer's outfall. They are now able to obtain more amusement and exercise, as well as fresh air, and their general health is consequently very much improved. The effluvium arising from the river at Erith is described as extremely offensive, causing great nausea and general deterioration of health and bodily vigour. The committee have acted wisely in removing their young charges from such a fertile source of disease before the hot summer weather sets in.

DEATH FROM CHLOROFORM.—An inquest on the body of Mr. John Edward Perris was held yesterday at Ross. The deceased had for years been in the habit of inhaling chloroform for the purpose of lulling the pain attendant upon a disease of the spine, from which he had long suffered. Owing to the presence of scarlatina amongst his children, he had been sleeping at the Swan Hotel during the previous week. The evidence of the boots at the hotel, who was the first to discover that Mr. Perris was dead, showed that the deceased must have saturated his handkerchief with chloroform, and the sudden stupefaction which followed rendered him incapable of removing it from his mouth, for his hands were found with the handkerchief between them, resting upon the pillow close to his face. The other evidence taken showed that, although the deceased had long been habituated to the use of chloroform, he had never taken it for any other purpose than that of assuaging pain. The jury found that the deceased died from the effects of chloroform taken to alleviate pain.

A FRENCH DOCTOR AND HIS FEES.—The suit between Dr. Déclat, Medical adviser of the late Duke of Grammont-Caderousse, and the family of the deceased has just come before the Imperial Court on an appeal from a judgment of the Civil Tribunal of the Seine. The duke, who died in 1865, disinherited his collateral relations, and constituted by will Dr. Déclat his universal legatee after the payment of a sum of 60,000f. to be applied to a purpose which remained a secret with the Doctor. The succession of the duke was valued, after the payment of all charges, at between 700,000f. and 800,000f. The relatives of the deceased obtained the annulment of the legacy to the Doctor, who then put forward a claim for 200,000f. as his fees during the six years of his attendance on the duke. The family resisted this demand, and the Civil Court being appealed to fixed the remuneration to Dr. Déclat at 20,600f. That sum the heirs offered to pay, but the Doctor considered it insufficient, and appealed, as above stated, to the Imperial Court, which has now confirmed the former decision.

CAUGHT AT LAST.—On Monday, at the sessions of the Central Criminal Court, Edwin Taplin, 42, described as a Medical assistant, and well educated, pleaded "guilty" to stealing a set of Surgical instruments, value £4, the property of Mr. Roberts, and to stealing a barometer, value £4, the property of Mr. Phillips. There were two other indictments for similar offences against the prisoner. In all four cases the prosecutors were Medical men, and the thefts were effected in a similar way. The prisoner called at the house, and if the prosecutor happened to be at home asked to see him, and made some plausible excuse for calling; if the prosecutor happened not to be in, the prisoner asked to be allowed to write a note for him. In either case, having once gained admission, the prisoner took the opportunity to carry off some small article of value. The prisoner stated that it was under circumstances of great distress he committed these offences. The Court, in passing sentence, said they had some hesitation in not passing a sentence of penal servitude, and sentenced him to two years' imprisonment with hard labour.

MEDICAL BENEVOLENT FUND.—The Committee met on the 8th inst. to elect annuitants from those who had already been placed on the list of candidates; this list contained the names of twenty aged Practitioners, their widows, or orphans. Three others having died since the last election, are now past needing that small provision they were so eager to obtain but a few months since. After increasing the annuities of two aged widows from £10 to £20, the following six were elected :—1. The orphan (aged 63) of a M.R.C.S. and L.S.A., formerly in the navy, who afterwards practised in Ireland. No income, and has been in such ill-health for some years past as to be unable to earn a livelihood. Has been frequently assisted from the fund. Recommended by Miss Fincham, E. Pye Smith, and W. Holmes, Esqs., subscribers. Annuity (£10) No. 68. 2. The widow (aged 60) of a M.R.C.S. and L.S.A., who practised in Gloucestershire. Now occupying one of the houses at Chippenham presented to the Medical Benevolent Fund by Mr. Bailey. Recommended by Dr. Rumsey and C. Bailey, Esq., subscribers. Annuity (£10) No. 69. 3. M.R.C.S. and L.S.A. (aged 75), who practised in the Midland Counties for many years. Health completely broken down, and very deaf. Entirely dependent (with wife) on the contributions of friends. Strongly recommended by all the Medical men in the town where he now resides. Annuity (£20) No. 70. 4. M.D., M.R.C.S. (aged 85), practised in Oxfordshire. Disabled by old age, deafness, double hernia, and other ailments. Supported by two daughters, who have a limited school. Recommended by Dr. Acland, F.R.S., trustee, and J. T. Hester, Esq., hon. local secretary. Annuity (£20) No. 71. 5. The orphan (aged 79) of a Surgeon who practised (before 1815) in Shropshire. She is the oldest of four sisters living together, and who have but £6 per annum to depend upon. Has been assisted once (£10) from the fund in July, 1867. Recommended by J. Cordy Burrows, Esq., subscriber. Annuity (£20) No. 72. 6. The widow (aged 73) of a late annuitant in Cambridgeshire. No income. "Solely dependent on charitable relief." Recommended by W. Carr, M.D., subscriber. Annuity (£20) No. 73.

GERMAN PROFESSORS WANTED.—In an advertisement in the *Wien. Med. Woch.* it is stated that, for the newly created Medical Faculty in the University of Innspruck in the Tyrol, professors of physiology, pathological anatomy, ophthalmology, and Medical jurisprudence are wanted, and candidates are invited to send in their testimonials. The salaries offered, however, the *Wochenschrift* observes, are too insignificant to call forth applications from suitable men. They are to be only 1260 florins (about £125), which after ten years' service will have risen to 1470 florins. It asks how, for example, is a professor of physiology to keep a home over his head with such a stipend unless he is to live a life of semi-starvation or try to engage in practice to the neglect of the duties as a teacher and investigator involved in the German idea of the professorial office? This Medical Faculty will indeed be the lowest step of the German hierarchical ladder, whence its possessors will be always on the look-out for better posts.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

W. H., Cirencester.—We think that the matter had better be let quietly drop. It is clear that there was a misapprehension somewhere. There is no doubt you acted on what you supposed to be your rights, but as little that you were in the wrong. Whether other people were in the wrong in sanctioning or seeming to sanction the theory on which you acted, can now be of no practical consequence; neither can there be any slur on yourself, as you acted under misapprehension.

Dr. M. is thanked. Mr. Curtis, no doubt, belonged originally to the Society of Friends. There was something in his appearance and bearing that indicated his early connexion with the Quakers. He was cold and impassable, shrewd, and worldly wise; not "Ephraim smooth," but still "Elbow, the Quaker."

The Strychnia Case in South Wales.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your impression of the 19th inst. I saw a letter from Mrs. Hicks, of St. David's, in which she gives a full account of the solution of morphia dispensed by her. It was of the strength (gr. j. ad 3j.) the deceased had always been in the habit of taking, and also in accordance with the label of the Brighton chemist, then on the bottle. I cannot, therefore, see how any right-minded man can attach any blame to Mrs. Hicks. The question is, Who is to blame? We know Mr. Williams was poisoned, and we are yet in the dark as to who supplied the strychnia for morphia.

I am, &c. P. M. G. Williams, M.R.C.S. Eng.

Treyarched, Haverfordwest, June 22.

*** If we act on the learned coroner's advice, we shall remain in the dark, and had better make the best of a bad job. We cannot help thinking that a little more vigilance and energy on the part of the coroners would have led to a more satisfactory result, and have shown at whose door the blame lies. Can it be true that a respectable wholesale chemist sent out strychnia for morphia? Was no evidence attainable of the effects of the strychnia in the case in which it was said to have been dispensed? Do any shorthand writer's notes of the evidence at the inquest exist? The case is in this unsatisfactory state: a valuable life has been lost, and a public inquiry has resulted in nothing.

General Practice.—If a Surgeon in general practice sends a patient for advice to a specialist, that person has no right to retain the patient for a long time under treatment for dyspepsia, etc., saying the special disease is of no consequence, but he will treat the other symptoms.

M.R.C.S.—If a London Consulting Practitioner is staying at a watering-place, and is there called in consultation by another Practitioner, his fee, as a rule, should be the same as in town. But if he is not staying, and only on a Professional visit to another patient, then he is entitled to a larger fee. This must be regulated by the means of the patient, etc. If the consultation be held under the circumstances first mentioned, the London Practitioner should state beforehand that his fee was different from that which he accepted in town.

Quacks or not.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I should esteem it a very great favour if you would be so kind as to inform me in your next issue whether Dr. Ricord and Dr. Nelaton, whose medicines are advertised as a specific for nervous and general debility, are quacks or not; by doing so you will oblige Yours, &c.

Turnham-green, June 23. A Great Sufferer.

*** Our correspondent may be assured that Ricord and Nélaton are most eminent men, and not quacks, but that they certainly do not advertise their medicines, and that whoever does advertise medicine as theirs is a quack, and probably a very vile one. Our correspondent should consult the oldest and wisest Physician within reach, and not run the risk of buying a quack medicine, be it advertised by whom it may.

A. B.—MacNish, in his able work on "The Philosophy of Drunkenness," gives an account of the effects of different stimulants on the system. Dr. Paris, in his "Pharmacologia," relates some curious facts relating to stimulants. Hobbes drank cold water when he was desirous of making a great intellectual effort. Newton smoked. Bonaparte took snuff, Pope strong coffee, Byron gin and water. Wedderburne, the first Lord Ashburton, always placed a blister on his chest when he had to make a great speech. The celebrated nonconformist minister and scholar, the Rev. Wm. Bull, of Newport Pagnell, was an inveterate smoker. Cowper, the poet, was his most intimate friend. On one occasion Cowper said, "No man is perfect; Bull smokes." The great Lord Erskine took large doses of opium. On the trial of Queen Caroline, Erskine, anxious to make a great speech, took an overdose of his favourite drug. The effect was striking; he dropped into the arms of Lord Stanhope, who sat next him.

The Management of the British Baby.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I see from your report of the proceedings of the Obstetrical Society with reference to infant mortality that the practice of bandaging is mentioned as a frequent cause of convulsions, and Dr. Farr stated that the abdominal binder is used to a great extent on the Continent. Allow me to point out that the evil results of the binder or roller cannot be greater elsewhere than in this country, for in the hands of ignorant mothers and nurses English babies are dreadfully tortured by means of the roller, not only in the process of swathing, but in the injurious effects produced. Where the inconvenience and danger connected with this article of clothing have been pointed out, the roller has been omitted, and the infant is thus left without any support whatever. This plan has its disadvantages also. In order to obviate the difficulty and avoid both extremes, an "elastic belt" was contrived, which gives the necessary support to the fragile frame of the infant and yields sufficiently by expansion over the chest and abdomen to allow the lungs and organs of digestion free play. A model of the belt can be seen at the Brighton Sanitary Museum.

I think it may be useful to call the attention of your readers to this simple but important contrivance just at this time, when the evils of the old system of bandaging are receiving publicity through the report of the Infant Mortality Committee. I am, &c. M.

June 19.

P.S.—The "belt" is manufactured by Messrs. Thomas, 54, King's-road, Brighton. The price varies according to the material and ornamentation required. A single "belt" sent by post for 33 stamps.

Brighton.—Mr. Humphrey's statistics and remarks upon the health of Brighton in the first quarter of 1869 develope some facts which speak favourably for the town in a sanitary point of view. It must not be forgotten, however, that Brighton is, in many respects, an exceptional place in regard to its population. Statistics of death are not always to be fully relied on as evidence of the healthiness of a locality. There may be a good deal of sickness with a small amount of mortality, and a large mortality without a corresponding amount of sickness. Mr. Humphreys, however, shows that in the "borough" of Brighton 400 deaths occurred in the quarter, and says—"The 400 deaths returned in Brighton during last quarter were 18 below those in the first quarter of 1868, and showed a decrease of 128 and 146 respectively upon the same periods of 1867 and 1866. The annual rate of mortality per 1000 persons living was, as above shown, only 18·2, and was lower than in any other English town of the same size or larger during those three months. The death rate for the whole of England and Wales was 24·8, and among the eleven largest towns furnishing weekly returns the lowest death rate for the quarter was 20·7 in Birmingham. Before attempting to institute a comparison between the death rates prevailing in the different subdistricts of Brighton last quarter, it will be necessary to make a correction for the deaths in public institutions. Of the 400 deaths, 48, or 12 per cent., were recorded in these institutions; 33 occurred in the workhouse, and 15 in the Brighton Hospital, both situated in St. Peter's subdistrict. If we calculate the death rate for this subdistrict, exclusive of these 48 deaths, it will be 17·8 instead of 21·5 as given above, and the rates in the three subdistricts (exclusive of deaths in institutions), ranged in order from the lowest, were as follows:—The Palace, 9·9; St. Peter's, 17·8; and Kemp Town, 19·0. Each of these rates would be raised 12 per cent. if the deaths in institutions were rateably divided among the three subdistricts, but their value for comparison would scarcely be increased."

Campbell v. Corfield.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I must beg to be permitted to take up the cause of Prof. Corfield, without a retainer. Dr. Parkes, whom we may fairly consider the greatest existing authority in this matter, has defined hygiene to be "the art of preserving health—that is, of obtaining the most perfect action of body and mind during as long a period as is consistent with the laws of life; in other words, it aims at rendering growth more perfect, decay less rapid, life more vigorous, death more remote." This is a strictly logical definition, and therefore a perfect one as far as it goes; but it does not include all that is required in the teaching of hygiene, and therefore I maintain that when the Professor talks of investigating the causes of disease, and of pointing out the means of avoiding them, he acts with the wisdom of one who, despising vain subtleties, holds out the promise of a useful and highly instructive series of lectures. What is health but the absence of disease? The art of preserving health, then, is nothing more nor less than the art of averting disease—that is, hygiene and prophylaxis are one and the same thing differently viewed. Why, then, should the student be tormented with idle distinctions, and, what is worse, be robbed of the kernel of his lectures that his professor may have the vainglorious satisfaction of refining over the shell? Had Prof. Corfield been unfortunately afflicted with this super-veneration for terms, he would have done well to avoid the chair dedicated to hygiene, for, while feeling himself bound to exclude the consideration of disease, how could he, in such straitened circumstances, have framed a course of lectures which must necessarily consist of little else than his definitions served up in a variety of forms?

I am, &c. Athenodore de Negri.

192, Belsize-road, St. John's-wood, June 22.

The following might well be imitated in our own country:—A bill is before the Canadian Parliament respecting seduction. It provides that a seducer, under promise of marriage, of an unmarried female of previous chaste character, shall be punished by fine or imprisonment, or both, at the option of the court, but shall not be condemned on the sole evidence of the female.

Erratum.—P. 676, col. 2, paragraph "Corpuleney," *for* "parva" *read* "parvis."

Observations on Dr. Richardson's Lecture delivered at the Royal Polytechnic Institution.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The interesting experiments which have been recently performed by Dr. Richardson with the large induction coil of the Royal Polytechnic Institution suggest the importance of having the atmosphere of the room in which such experiments are performed analysed, with a view of determining whether nitric or nitrous acids are generated. If those acids could be detected, we might infer that they are also generated during a thunderstorm or lightning. There would be no difficulty in collecting the atmosphere of the room within a short distance of the electrical discharges, by pumping the atmosphere through distilled water containing an alkali. By evaporating the solution the acids might be detected, if they exist, with the ordinary tests. It may be said that acids possessing such irritating properties could not exist in the atmosphere without our know-

ledge, but the aqueous vapour and the ammonia, which must be continually carried into the atmosphere by hydrogen and sulphur, or by its natural volatile nature, would readily combine with the nitric acid, and the nitrous would have a greater affinity for organic matter. Moreover, we may infer that these acids, being in their nascent state, would possess more powerful oxidising properties, and the more readily purify the atmosphere to an extent far surpassing our understanding.

During the late epidemic of cholera, 1866, I heard no thunder and saw no lightning; but in order to know whether my observations were correct, I ascertained from the Ordnance Office of this town that I was not quite correct, but the following is the result of observations made at that office:—

June.—Heavy peals of thunder in the afternoon on the 27th. No lightning observed. Mean amount of ozone for the month, 5·9.

July.—Peals of thunder at 3.30 on the afternoon of the 6th. No lightning observed. Mean amount of ozone for the month, 6·0.

August.—No thunder or lightning recorded. Mean amount of ozone for the month, 6·8.

1867.—Mean amount of ozone for three summer months—June, 6·8; July, 7·2; August, 5·0. No cholera in the summer, 1867. The town healthy.

If the above observations are correct, it is remarkable that no lightning was observed during the prevalence of cholera.

It may not be out of place here to state that the late epidemic of cholera afforded me opportunities of knowing the value of nitrous gas as a destroyer of morbid matter, in this respect surpassing chlorine. After making visitations through a large cholera district, and being in constant attendance on cholera patients, I used nitrous fumes to a considerable extent in some of the bed-rooms of the patients. It was generated by adding nitric acid undiluted to pieces of copper, taking care not to add too much acid at a time, and also to avoid the accumulation of the blue nitrate of copper, which would dilute the fresh portions of the nitric, and prevent the evolution of the concentrated red fumes. On one occasion I passed the red fumes over the face of a child, when in profound collapse, by bringing the patient's head to the edge of the pillow, and passing the saucer beneath her face. No inconvenience was experienced by the suffocating nitrous gas, and the patient rallied shortly after, but recovered chiefly by the internal use of nitrous acid of the chemists. a) After visiting some of the worst cases I at first found my clothes very offensive, and felt, as it were, that I was "breathing contagion to the world." I then adopted the plan of exposing my clothes to the fumes of nitrous vapour, but I was astonished to find that, although the fumes are so suffocating, I could receive into my mouth and air-passages a much larger amount than under ordinary circumstances. I could only account for this tolerance by the presence of morbid matter with which the nitrous gas combined. I sometimes found, after inhaling the nitrous fumes, a griping sensation, which was removed immediately by taking a little soda in water. The remarkable tolerance of acids during epidemic cholera is generally acknowledged.

Southampton, June 23. I am, &c. HENRY OSBORN, M.R.C.P.L.

COMMUNICATIONS have been received from—

Dr. GRAY; Dr. D. J. BRAKENRIDGE; Dr. FAYRER; Dr. CLENDINNING; Dr. ALDRIDGE; Dr. REEVES; Dr. EDWIN LEE; Dr. PHILIPSON; MATER; Mr. J. HUTCHINSON; SECRETARY OF ARGENTINE RAILWAY COMPANY; Mr. JAMES FETTES: Mr. A. L. MACKAY; Dr. WALTER DICKSON; Mr. W. HODGES; Mr. P. M. WILLIAMS; Dr. H. OSBORN; Dr. FELCE; Dr. LISTER; Mr. C. J. FOX; Mr. G. STREET; Dr. KIRK; Mr. A. W. MOORE; A GREAT SUFFERER; Dr. DRYSDALE; Mr. T. BEVANT; Dr. LAYCOCK; Dr. JOHN RUSSELL (Birmingham; Mr. J. CHATTO; Dr. LIONEL S. BEALE; Dr. YELD; INQUIRER; Dr. GERVIS.

BOOKS RECEIVED—

Hogg on Cataract—Lescher's Elements of Pharmacy—Grimshaw on Pneumonia—Report on the Sanitary Condition of St. Pancras—New York Medical Journal, No. 51—Dr. Lee's Baths of Nassau—Sir Henry Thompson on Stricture of the Urethra—Braithwaite's Retrospect, vol. xlix.

NEWSPAPERS RECEIVED—

New York Medical Gazette—The Melbourne Leader—Gazette Hebdomadaire—Australian Medical Gazette—Gazette des Hôpitaux—Freeman's Journal.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 19, 1869.

BIRTHS.

Births of Boys, 949; Girls, 835; Total, 1784.
Average of 10 corresponding weeks, 1859-68, 1932·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	648	588	1236
Average of the ten years 1858-67	618·4	533·8	1156·2
Average corrected to increased population	...	...	1272
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West	463388	...	2	4	1	9	6	5	...
North	618210	1	4	12	...	25	11	2	...
Central	378058	...	4	8	1	10	3	.	...
East	571158	1	6	19	1	27	10	5	...
South	773175	1	12	17	3	22	8	5	...
Total	2804989	3	28	60	6	93	38	17	...

(a) I have treated nearly 100 cases of cholera successfully by nitrous acid (NO_5NO_4), including all stages of the disease, and I am of opinion that it possesses the property of decomposing the virus of cholera, though it does not arrest the serous discharges unless it is combined with laudanum, or the decoction of hæmatoxylon, or, still better, the liquor hæmatoxyli. I found, however, the physiological treatment absolutely necessary in many cases in order to promote reaction. I allude to the covering-up system, and keeping a fire in the room with the window closed, mustard to the feet to relieve head symptoms, etc.

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·720 in.
Mean temperature	51·3
Highest point of thermometer	73·0
Lowest point of thermometer	39·4
Mean dew-point temperature	45·3
General direction of wind	Variable.
Whole amount of rain in the week	0·84

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 19, 1869, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the year 1869.	Persons to an Acre. (1869.)	Births Registered during the week ending June 19.	Deaths. Corrected Average Weekly Number.	Deaths. Registered during the week ending June 19.	Temperature of Air (Fahr.). Highest during the Week.	Temperature of Air (Fahr.). Lowest during the Week.	Temperature of Air (Fahr.). Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tenths per Acre.
London (Metropolis)	3170754	40·7	1784	1462	1236	73·0	39·4	51·3	0·84	85
Bristol (City)	169423	36·1	99	76	*58	68·2	43·0	52·5	1·05	106
Birmingham (Boro')	360846	46·4	222	175	124	65·2	43·3	50·7	1·02	103
Liverpool (Boro')	509052	99·7	316	295	248	62·0	44·4	50·2	1·03	104
Manchester (City)	370382	82·7	247	210	*180	70·0	42·0	51·0	0·95	96
Salford (Borough)	119350	23·1	75	60	55	65·4	40·9	49·3	1·02	103
Sheffield (Borough)	239752	10·5	182	126	107	67·0	39·5	49·3	0·83	84
Bradford (Borough)	138522	21·0	66	71	63	66·8	41·9	50·7	0·57	58
Leeds (Borough)	253110	11·7	149	129	101	69·0	43·0	51·6	0·67	68
Hull (Borough)	126682	35·6	86	59	67	68·0	35·0	48·7	0·99	100
Newcastle-on-Tyne, &c.	130503	24·5	91	69	62	61·0	41·0	48·4	1·33	134
Edinburgh (City)	178002	49·2	135	86	136	64·7	40·0	50·1	1·30	131
Glasgow (City)	458967	90·6	361	268	299	64·3	39·6	50·4	1·13	114
Dublin (City and some suburbs)	320762	32·9	153	158	124	63·4	33·2	52·0	0·31	31
Total of 14 large Towns	6546587	35·5	3066	3244	2860	73·0	33·2	50·4	0·93	94
					Week ending June 12.	Week ending June 12.				
Vienna (City)	560000 (1863)	...	...	...	348	...	...	63·7	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·720 in. The barometrical reading increased from 29·24 in. on Monday, June 14, to 30·14 in. on Thursday, June 17.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1869 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous.

* The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

APPOINTMENTS FOR THE WEEK.

June 26. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 1½ p.m.

28. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 1½ p.m.; St. Peter's Hospital for Stone, 2½ p.m.

29. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

30. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic Hospital, Southwark, 2 p.m.; Samaritan Hospital, 2.30 p.m.

WESTMINSTER HOSPITAL SCHOOL OF MEDICINE, 11 a.m. Mr. C. Carter Blake's Lectures on the Comparative Anatomy of Warm-blooded Vertebrata—Lecture IV.: The Class Aves: *Aves Altrices.*

July 1. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.; University College Hospital, 2 p.m.

2. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic Hospital, 2 p.m.

INDEX.

A

Abdomen, wound of the, remarkable case of, 11
Aberdeen University, pass-list of, 452
Abortion, state of the ovum in early, 519
criminal, and insanity in America, 469
Abscess, lumbar, treated by carbolic acid, 223
Academician, reanimation of an, 469
Académie de Médecine, prize questions of the, 18
award of prizes by the, criticised, 158
Academy without academicians, 362
of Medicine for London, Dr. Bateman on the misnomer of a, 394
propositions for an, 474
vide Societies
Adams, Mr. William, on rheumatic affections of joints, 148, 255
on strumous affections of joints and partial anchylosis, 308
Mr. N. on the treatment of funis presentations, 344
Adulteration of food, debate on the, 282
Advertisement, a New York, 26
Mr. Grewcock's, 55
C. A. Hammond's, 264
Air, cold, inhalation of, Dr. Richardson on the, 69
Albumen, results of exposure of, to high temperature, Dr. Richardson on the, 29
Albuminoid, waxy, or lardaceous change, Dr. Legg on, 140
reply of Dr. Dickinson to, 180
Alcock, Assistant-Surgeon, on the influence of nerve-power on temperature, 206
on aphasia, 651
Aldis, Dr. report of, on St. George's, Hanover-square, 660
Alkaloids, sublimation of, Dr. Guy on the, 311
Allbutt, Dr. on dying declarations, 420
cases of diseases of the nervous system, 491
Allday, Mr. F. death of, 78
Alms-giving, indiscriminate, Dr. Guy on, 221, 316
Amputation, influence of age on the results of, Mr. Bryant on the, 32
by lightning, Dr. Sycyanko on a case of, 363
discretion in question of, 390
of the foot, case of Syme's, 408
Amyloid degeneration, Dr. Legg on, 140
Dr. Dickinson on, 180
fatal cases of, at St. George's, 331
Amyot, Mr. case of spina bifida with hydrocephalus, 330
Anæsthesia, Dr. G. Johnson on, 351
Anchylosis, partial, treatment of, Mr. Adams on the, 308
Andine Heights, Dr. Scrivener on the Sanitary Character of the, review, 47
Andrews (St.), University of, new graduates of, 590
Aneurism, theory and method of cure of, Mr. Maunder on the, 269
injection of ergot as a means of cure of, 443
new compressor in, Mr. Hills on a, 311
Mr. Tait on a, 349
tubular presse-artère in, Dr. W. Richardson on the, 435
cases of, by Staff Assistant-Surgeon Lamb, 451
of the aorta, prevalence of, among soldiers, 145, 182, 395
of the popliteal artery, Mr. Maunder on compression in, 380
of the pulmonary artery, case of, 66
subclavian, specimen of, 22
femoral, specimen of spontaneous, 206
Anger, M. *Nouveaux Éléments d'Anatomie Chirurgicale*, notice, 234
Anglada, Prof. *Études sur les Maladies Éteintes et Nouvelles*, notice, 261
Animal substances, exposure of, to high temperature, Dr. Richardson on the results of, 29, 53, 84
Anstie, Dr. on counter-irritation, 289
on a case of epilepsy, 641
"Apartments for ladies," 301
Aphasia, Dr. Carnley on a case of, 181
Dr. Bateman on, 486, 540
Assistant-Surgeon Alcock on, 651
Apomorphia, Dr. Gee on, 641
Apoplexy, temperature in, M. Charcot on the, 175
Apothecaries' Society, pass lists of the, 24, 53, 78, 103, 131, 156, 184, 210, 234, 261, 290, 317, 346, 372, 398, 424, 452, 477, 506, 534, 563, 590, 615, 644, 673, 693
Arding, Dr. on Liebig's extract of meat, 161
on confection of senna in hæmorrhage, 293
on sulphate of quinine in chorea, 349
on catheterism in fever with prostration, 375
Arminson, Dr. case of rupture of intestine from muscular exertion, 643
Armstrong, Mr. George Hillar, death of, 156
Army, sanitary state of, influence of on the public health, Dr. Gordon on the, 441
in India, early sanitation in the, *vide* Gordon
Army Medical Department, successful candidates for the, 211
letter of the Netley professors on the acquirements of the, 76
rumoured changes in the, 70
in relation to Dr. Sutherland, 120
in relation to military Hospitals, 495
Medical department of the, condition of the, 116
"A Special Correspondent" on the, 392
successful candidates in the, 236
another grievance in the, 553
Medico-Chirurgical Society, notices of meetings of the, 133, 206, 643
Army, the French, Medical statistics of the, for 1866, 121
Mr. O'Brien on syphilis in the, 152
Mr. Berkeley Hill on, 181, 238
Arnold, Mr. George Richard, death of, 210
Arsenic, cases of shingles supposed to be cured by, 407
Arteries, compression of, *vide* Aneurism
Arthur, Dr. on Hospital abuses at Brighton, 349
Ascarides, note on treatment of, 55
Assistants, Medical, "M.D." on, 161
"Not an Assistant" on, 187
"Inquisitor" on, 565
"Cantab" on, 593
Association, British Medical, petition of, on secondary education, 292
address of, on direct representation in the Medical Council, 467, 476
memorial of the, on State Medicine, 617
French Medical, annual meeting of the, 415
Medical Teachers', on Medical teaching, views of the, 94
address of Sir W. Jenner to the, 99
meetings of the, 146
Metropolitan, of Medical Officers of Health, notices of meetings of the, 50, 233, 316, 367, 450, 505, 530
Poor-law Medical Officers', meetings of the, 156, 480
correspondence of Messrs. Rogers and Quinan concerning the, 21
St. Andrews Medical Graduates, meeting of the, 417
vide Society
Astigmatism, detection of mixed, Mr. Couper on the, 114
Athletics and gymnastics, 171
Atrophy of the arm, case of, 164
progressive muscular, M. Jaccoud on, 178

B

Bacot, Surgeon-Major, the Bahamas, notice, 590
Baillie, Mr. on treatment of snake-bite, 238
Bakewell, Dr. on the mortality at Trinidad, 414
Baking-powder, the Horsford-Liebig, 563
Ball, Mr. John, Guide to the Eastern Alps, review, 342
Ballard, Dr. case of paralysis of the hypoglossal, followed by sloughing of the tongue, 236
on the distribution of small-pox according to age, 569
on animal vaccination, 611
Ballot, Dr. on impure water as a cause of cholera, 459
on the supply of water in Holland in relation to the cholera, 626
Baly medal, question of the award of the, 678
Bariff, Mr. Introduction to Chemistry, review, 393
Barham, Dr. T. L., death of, 318
Barnes, Dr. on the question of craniotomy and the Cæsarian section, 30
reply of Dr. Radford to, 61
lectures on obstetric operations, 60, 109, 241
observations on the, 274
criticism on the, by Dr. Murphy, 557
reply to, 569
on operations for inversion of the uterus, 561
on a new method of embryotomy, 670
Bartholomew's Hospital (St.), regulations at, as to prescribing of the House-Surgeons of, 573
report of, for 1868, 657
Barton, Dr. J. R., Pathology and Treatment of Syphilis, review, 48
Barwell, Mr. Causes and Treatment of Lateral Curvature of the Spine, review, 124
Bastian, Dr. C. views of, on the anatomical causes of delirium in fever, 40
Bate, Dr. Henry Francis, death of, 131
Bateman, Dr. on aphasia, 385, 540
on a Royal Academy of Medicine of London, 394
Bath, sanitary state of, 390
Bauer, Dr. Lectures on Orthopædic Surgery, notice, 234
Bayes, Dr. on the Engadine as a winter climate, 286
Baylis, Dr. Report on Sanitary Condition of Birkenhead, notice, 341
Beale, Dr. lectures on germinal or living matter, 2, 57, 111, 163, 215, 295, 353, 403, 539, 621
what is "protoplasm?" 296
resignation of his Professorship by, 392
Becker, Miss, on the study of science by women, 320
Beer, A Frenchman's views on, 240
Beer, Dr. Frederic, unjust prosecution of, 348
Beigel, Dr. on epilepsy, 52, 168
Belfast General Hospital, cases treated at the, 142
Bell, Mr. Joseph, Manual of Operations of Surgery, notice, 131
Bellamy, Mr. Handybook of Anatomical Plates, notice, 106
Benedict, Dr. *Elektrotherapie*, review, 256
Bengal, report of Sanitary Commissioner on, 283
Bennett, Dr. Coroner of Buxton, extraordinary charge against, 412
Berlin, mortality of, in 1867, 147
Bernard, Professor Claude, on experimental Medicine, 97
elevation of, to the Senate, 551, 583
on experimental Medicine, 97
Rapport sur les Progrès de la Physiologie en France, notice, 636
Beveridge, Dr. on the pathology of typhus, 435
Bird, Mr. new inhaling pipe of, 672
Birmingham, letters from, 125, 343, 472, 637
General Hospital, cases treated at the, 571
projected "Working Man's Hospital" at, 125, 134
homœopathy at, 226
prosecutions by the Registration Society of, 472
memorial to Poor-law Board from Practitioners of, 212
Mr. Goschen on the Poor-law guardians of, 307
Poor-law guardians of, and Mr. John Clay, 226
appointment of Medical officers by the, 361, 472
Bladder, absorption by the, question of, 291
injection in inflammation of the, 236
rupture of, Dr. Wathen's case of, 195
extroversion of the, and epispadias, Mr. Wood on, 286
an entire catheter lost in the, 260
irritable, lithotomy performed for, case of, 443
Blanc, Dr. on animal vaccination, 557, 585
establishment of, for heifer vaccination, 549, 647
Blandford, Dr. insanity without delusion, notice, 478
Blaxall, Surgeon, on the epidemic fever at the Mauritius, 307
Blind, education of the, Dr. Thompson on, 339
Blisters, prevention of pain from, M. Bricheteau on the, 116
Blood, formation of the fibrine of the, A. Schmidt's views on the, 46
Kühne on the chemistry of the, 47
plasma, mode of obtaining, 47
results of exposure of to high temperature, Dr. Richardson on the, 29
effects of lightning-stroke on the coagulation of the, 513
Mr. Cleveland on the, 676
cause and prevention of separation of fibrine of, in the body, 243, 325, 379
chemical constitution of the, Professor Ranke on the, 386
white cells of, behaviour of in inflammation, Professor Key on the, 542
Bloxam, Professor, Laboratory Teaching, notice, 505
Blythe, Dr. William F. death of, 156
Bocquillon, M. *Manuel d'Histoire Naturelle Médicale*, review, 149
Boeck, Prof. notes from the practice of, 682
Bone, composition and formation of, Dr. Beale on the, 57, 111
marrow of, as a blood-forming organ, 200
hypertrophy of, specimen of, 182
Books, reviews and notices of, 19, 23, 46, 53, 74, 78, 100, 106, 124, 131, 149, 155, 178, 204, 209, 230, 234, 256, 261, 285, 290, 309, 317, 340, 346, 364, 372, 393, 397, 417, 424, 445, 471, 476, 500, 505, 554, 583, 584, 590, 609, 610, 635, 666, 673
Borough, Mr. Edward, death of, 210
Botanic gardens in France and England, Professor Martins on the, 17
Boussingault, M. on the functions of leaves, 255

Boxall, Mr. William, death of, 318
Bradley, Mr. case of larval tapeworms in the brain, 87
Braidwood, Dr. Pyæmia, notice, 209
Brain, M. Broca's diagram of the convex surface of the, 488
as the organ of the mind, Dr. Beale on the, 622
Dr. Laycock on the, 681
larval tapeworms in the, Mr. Bradley's case of, 87
minute emboli in grey matter of the, specimen of, 101
injuries of the, Dr. Day on, 368
cases of, 246, 543, 654
concussion of the, the optic discs in, 492
Brakenridge, Dr. on the theory of diathesis, 652
Brayton, Dr. death of, 261
Brighton, Medical charities of, "A General Practitioner" on the, 264
Hospital abuses at, Dr. Arthur on the, 349
Eye Infirmary, abolition of recommendations at the, 523
sanitary state of, 696
Bristol General Infirmary, cases treated at the, 655
British Medical Association, *vide* Association
Broadbent, Dr. suggestions concerning herpes zoster, 33
on the treatment of anæmia and chlorosis by manganese and nickel, 474
Brodribb, Dr. William Perrin, obituary notice of, 77
Bronchocele, treatment of, Dr. Schinzinger on the, 124
Brown-Séquard, M. on induced epilepsy, 97, 337
experiments of, criticised, 336
Brown, Staff-Surgeon Allen, death of, 131
Dr. F. J. on the sinecure Governorship of Greenwich Hospital, 226, 252
case of bursting of a hydrocephalous head, 421
Dr. William Spence, death of, 347
Browne, Dr. James, Phrenology, review, 418
Bruce, Mr. Alexander, on a case of poisoning by coloured wool, 231
obituary notice of, 423
Bruhl, Professor, on a popular anatomical museum, 443
Brunton, Dr. on twin pregnancies, 315
on Digitalis, review, 471
Bryant, Mr. on the period for excision of the knee, 6, 31
on impacted fracture of neck of the thigh-bone, 405, 457
treatment of suppurating joints by free incisions, 514, 567
on the pathology of diseases of the joints, 622
Bubo ulcerating into the femoral artery, specimen of, 130
Buchanan, Dr. on the distribution of phthisis, 77
Buckle, Dr. on Hospital administration and statistics, 119, 204
Buller, Dr. Joseph, death of, 591
Burrough, Mr. R. F. death of, 103
Burton, Mr. report of practice at Walsall Cottage Hospital, 383
Busch, Prof. on curare in trismus and tetanus, 474
Butler, Dr. James, death of, 131
Byers, Dr. Robert, death of, 54

C

Cæsarian section, relation of, to craniotomy, Dr. Radford on the, 8, 61
Dr. Barnes on the, 30
clerical, in Belgium, 281
specimen of a uterus after, 588
Calculi, renal, nephrotomy in, Mr. T. Smith on, 469, 585
prostatic, remarkable, 123
Calloway, Mr. Thomas, death of, 591
Cambridge, rules for non-collegiate students at, 694
Camel, bad character of the, 417
Cameron, Dr. Lectures on Health, review, 424
Campbell, Assistant-Surgeon George M'Ivor, death of, 78
Mr. William, critique on Dr. Corfield's lecture on hygiene, 676
Cancer, recurrence of, discussion on the, 503
of dura mater and skull, specimen of, 314
of the peritoneum, case of, 436
of the spleen, specimen of primary, 130
Cannes, letters from, 342, 365, 393, 419, 501
Cape de Verd Islands, yellow fever at the, 119
Carbolic acid, Prof. Fayrer on the period of using, in wounds, 5
employment of, in wounds of joints, 142
cases treated with, 300
dangerous tampering with, by the public, 95
in lumbar abscess, 223
in compound fracture, 247, 655
caution respecting, 279
and Hospital mortality, "M.D." on, 312, 401
new double salts of, Dr. Sansom on, 313, 451
in skin diseases, Prof. Hebra's employment of, 445
Calvert's soaps impregnated with, 672
Carbuncle ending in embolism of the cerebral artery, Mr. Coombs on, 141
Carmley, Dr. case of loss of speech, 181
Carpenter, Dr. Human Physiology by Power, review, 666
Carson, Dr. History of the Medical Department of Pennsylvania University, notice, 372
Dr. James, Principles of Phrenology, review, 418
Carter, Mr. on a case of malignant growth of eyeball, 204
query addressed to, 232
on operations in malignant disease of the eye, 258
Cartilage, germinal matter of, Dr. Beale on the, 3
loose, in the knee-joint, Mr. Poland's case of extraction of, 34
Carus and Gerstaecker, Professors, *Handbuch der Zoologie*, review, 149
Case in Continental practice, "A Continental Practitioner" on a, 49
Catlin, Mr. "Shut your Mouth," notice, 660
Cattle plague, Benjamin Bell on stamping out, 357
Cauvet, Dr. Medical Natural History, review, 673
Cazeaux, M. Treatise on Midwifery, review, 209
Cell, the animal, Prof. Ranke on the, 386
Cells, ganglion, and nerve-cells, illustrations of, 304
Cephalotribes, Drs. Duncan and Hicks on, 233
Chadwick, Mr. on "practitioners of the curative art," 332
"Champaign, fabric of artificial," 606
Chancre, camphor as an application in, 471
Charcot, M. on temperature in apoplexy, 175
Chapman, Dr. on the pathology and treatment of neuralgia, 298, 327, 433
Charon, Dr. *La Ville de Doux-Repos*, notice, 290
Chemistry, physiological, review of new works on, 46
Chest, Hospital for Diseases of the, cases treated at the, 65
Children, arrest of development in, from procreation under alcohol, Dr. Downes on, 314
lithotomy and lithectasy in, cases of, 167, 628
the Evelina Hospital for, foundation of, 663
vide Infants
Chloride of ammonium and perchloride of mercury, "Experimentalist" on, 455
"J. B. S." on, 510
Chlorosis, manganese and nickel in, Dr. Broadbent on, 474
Chloroform, queries concerning, 107
vide Anæsthesia
Chocolate, medicated, 445
Chocolatine, Loewenthal and Co.'s, 590
Cholera, Dr. Ballot on impure water as a cause of, 459
and the water supply in Holland, Dr. Ballot on, 626
Mr. Moore on the mode of communicating, 463, 500
in the East, Dr. Macpherson on, notice, 577
and the Mecca pilgrims, 607
salt as a prophylactic in, 610
Cholmeley, Dr. case of hypertrophy of a limb, 421
Chorea, clinical history of, Dr. Russell's contribution to the, 64
relation of to rheumatism and heart disease, Dr. Ogle on the, 668
after articular rheumatism, Dr. Paulicky on, 87
rheumatic, cases of, 154
severe, cases of, 272
Dr. Wilks's lecture on, 125
Dr. Hughlings-Jackson on the pathology of, 245
muriate of lime in, 125
Calabar bean in, Dr. Harley's case of, 196
treated by sucus conii, 197
sulphate of quinine in, Dr. Arding on, 349
Churchill, Dr. F. Auscultation of the Heart, notice, 609
Civiale, M. *Collection des Calculs Urinaires*, notice, 234, 472
Civilisation, modern, savage thought in, Mr. Tylor on, 577
Clark, Dr. James, action of, for fees, 317, 321
Clavicle, fracture of, question as to apparatus in, 203
Clay, Mr. John, and the Birmingham Poor-law Guardians, 226, 232
Cleveland, Mr. on the blood after electrical discharge, 676
Clinical Society, notices of meetings of the, 52, 102, 154, 289, 344, 397, 474, 612, 640
instruction in Germany, Prof. Wurtz on, 578, 664, 679
Clowes, Mr. on sewage contamination of water, 528
Coal-miners' lungs, deposit in, discussion on the, 587
Cocoa, Van Houten's soluble, 615
Colborne, Dr. Charles Anthony, death of, 78
Colclough, Surgeon Anthony, death of, 158
Collins, Dr. Robert, of Dublin, biographical sketch of, 22
Collis, Dr. Maurice Henry, obituary notice of, 371, 400
Colostrum, nature and uses of, Dr. Thomas on the, 593
Colotomy, lumbar, Mr. Maunder on, 165
Coma, Dr. George Johnson on, 351
Consultations by letter, question of charging for, 161, 186
Consumption, Hospital for, Margaret-street, cases treated at the, 273
Contagious Diseases Prevention Act, extension of, Mr. O'Brien on the, 152
fanatical opposition to the, 409
Contractile tissues, Dr. Beale on, 163, 215, 295
Contracts, Medical, and fees, observations on, 302
Convalescent Hospital, the Atkinson-Morley, 498
Convulsions, uræmic, of pregnancy, Dr. Fairbank's case of, 542
Cooke, Mr. caution as to opium-smoking, 26
Coombs, Mr. on embolism of the cerebral artery after carbuncle, 141
Copaiba and turpentine capsules, 528
Coralline sock-poisoning, *vide* Sock
Corfield, Dr. lecture on hygiene, 635
critique on, by Mr. Campbell, 676
Dr. De Negri in defence of, 696
Coroner, Medical, extraordinary charge against a, 412
Coronership for Middlesex, litigation concerning the, 468
Corpse dust, the London, 520
Corrigan, Sir Dominic, inauguration of a statue of, 631
Cottage Hospital at Walsall, report on the, 383
Cotton, Dr. on the communicability of phthisis, 152
Cough, "the hungry," 56
Coulier, M. *Article Bière*, 249
Coulson, Mr. Walter, Stone in the Bladder, review, 204
Treatise on Syphilis, review, 610
Counter practice, manual for, 106
Counter-irritation, Dr. Anstie on, 289
County Boards Bill, "Medical Remembrancer" on the, 618
Couper, Mr. on the detection of mixed astigmatism, 114
Cowan, Dr. J. death of, 103
Cox, Mr. Nathaniel Myers, death of, 398
Crane, Dr. report on health of Leicester, notice, 443
Mr. Robert E. death of, 184
Crania, ancient British, Dr. Thurnam on, 72
Craniotomy in relation to the Cæsarian section, Dr. Radford on the, 8, 61
Dr. Barnes in reply, 30
a new method of, Dr. Barnes on, 670
Crowther, Mr. medal of the College of Surgeons conferred on, 211
Cullerier, M. Atlas of Venereal Diseases, by Bumstead, review, 610
Crompton, Mr. on the bulbous sound in stricture, 447
vide Teevan
Cupping (cross), practice of, in the army, 469
Curare in trismus and tetanus, Prof. Busch on, 474
Curtis, John Harrison, "J. F. C." on the career of, 580, 635, 647
Cyanide of potassium, accidental poisoning by, 633
Cysticercus cellulosus in the palm, 603

D

Dale, Dr. state of the Medical Profession, notice, 673
Daniell, Alfred Horatio, death of, 103
Darwinism, Dr. de Harlsen on an objection against, 447
Mr. Tait's note on, 482
Davidson, Surgeon James, death of, 158
Day, Dr. G. appeal of, to the benevolent for Dr. Levey, 258
Dr. Henry, on injuries of the brain, 368
Dr. W. H. hypertrophy of one extremity, 395, 397
Death, signs of, M. Carrière on the, 284
phenomena after, from increment of animal heat, Dr. Richardson on the, 485
from lightning-stroke, Dr. Richardson on, 512
"A Correspondent" on, 552
simulation of, from lightning, Dr. Richardson on the, 595
certificates of, Mr. Dyte on a form of, 509
Déclat, Dr. tremendous bill of, 695
Delirium in fever, embolism of the capillaries in, Dr. Bastian on, 40
Delivery, recent, instance of error of experts as to, 159
De Merie, Mr. how syphilis begins and ends, 205
Denman, Mr. James, Pure Wine, notice, 346
Desormeaux, M. on purulent ophthalmia of infants, 120
Diabetes treated with opium, Dr. Pavy on a case of, 52
Dr. Sanderson on a case of, 641
Diathesis, theory of, Dr. Brakenridge on the, 652
Dick, Mr. on loose cartilages in the knee-joint, 107
Dickinson, Dr. on amyloid degeneration, 180
Digitalis, Dr. Brunton on, review, 471
Diphtheria, unsuspected, fatal, from nerve-lesions, case of, 141
first notices of, in England, Dr. Richardson on the, 557

Disease, new infectious febrile, Dr. Hingston on a, 10
registration of, Dr. Milroy on, 311
Dr. Richardson on, 546
"Nomenclature" of, of College of Physicians criticised, 656
Dispensaries, sham, 161
Dislocation of the pelvis, case of partial, 116
Dissection, dearth of bodies for, 690
Dobell, Dr. circular of, 279
"Doctors' Bills," 67
French, 695
Donaldson *v.* Barker, 657
Drawbridge, Dr. George Henry, death of, 290
Dreadnought Hospital Ship, cases treated at the, 408
Dublin, Trinity College, typhus fever at, 360
Medical and Surgical travelling prizes at, 361
Duncan, Dr. M. Perimetritis and Parametritis, review, 340
on his cephalotribe, 293
Dunglison, Dr. Robley, obituary notice of, 452
Dyce, Mr. R. M. death of, 156
"Dying depositions," observations on the law on, 357, 387, 467
Dr. Allbutt on, 421
Dyspepsia, irritative, Dr. Garrett on, 24, 80
Dyte, Mr. on his form of certificate of death, 509

E

Ear, disease of the, followed by abscess of cerebellum, case of, 223
purulent catarrh of the, Dr. Schwartze on caustic treatment of, 519
disease of, in new-born infants, 607
Earle, Mr. James Neale, death of, 398
Edinburgh University, refusal of female Medical students at the, 441
Education, preliminary scientific, observations on, 143
secondary, petition of the British Medical Association on, 292
Mr. Froude's views on, 334
petition of the Senate of the University of London on, 348
Medical, views of the Medical Teachers' Association on, 94
Mr. Quain on, 189
Mr. Grove on, 574, 579
and Medical charges, a "Medical Practitioner" on, 212
in France, the *Gazette des Hôpitaux* on, 606
in Italy, 338
clinical, in Germany, Prof. Wurtz on the, 578, 664, 679
Edwards, Mr. F. on Ventilation and Extravagant Use of Fuel, review, 417
Alexander Mackenzie, obituary notice of, 477
a *souvenir* of, 675
Eggs as an article of diet, 547
Egypt, geology of, Prof. Owen on the, 575
Elastic tissue, germinal matter of, Dr. Beale on the, 2
Elbow, excision of, Prof. Fayrer's case of, 5
Electrical induction coil at the Polytechnic, Dr. Richardson's lectures on the, 511, 595
Dr. Osborn's observations on the, 696
Electricity, cases treated by, *vide* Epilepsy
death from, Dr. Richardson on, 511, 595
effects of the discharge of, on the blood, Mr. Cleveland on the, 676
animal, Prof. Ranke on, 387
Electro-therapeutics, reviews of new works on, 230, 256
Elliott, Mr. Increase of Material Prosperity, review, 364
Dr. William, testimonial to, 413
death of, 693
Else, Mr. John Ogle, death of, 318
Embolism of the cerebral artery after carbuncle, Mr. Coombs on, 141
of the pulmonary artery, specimen of, 130
Embryotomy, Dr. Barnes on a new method of, 670
vide Craniotomy
Engadine, the, as a winter climate, Dr. Bayes on, 286
Engelmann, Dr. Carl, death of, 24
Epilepsy, Dr. Beigel on, 52, 168
Dr. Wilks on, 58, 83
induced, M. Brown-Séquard on, 97, 337
castration in a case of, 347
galvanism in, 437, 490
strychnia in, Mr. Tyrrell on, 488
treatment by quinine, discussion on the, 642
and Paralysis, Hospital for, cases treated at the, 437, 490
Epispadias, Mr. Wood on operations for, 286
Epps, Dr. J. M. death of, 210
Epsom salts, disguising of, 183
Erichsen, Prof. Science and Art of Surgery, notice, 53
Erythema nodosum, Mr. Hutchinson on, 352
Erysipelas, traumatic, oil of turpentine in, 25
phlegmonous, in a pregnant woman, case of, 355
Ethics, Professional, a case in, 401
Everett, Mr. Benjamin George, death of, 318
Evershed, Mr. on the hypodermic injection of morphia, 463
Evidence, Medical, Dr. Rumsey's views of, 375
Examining art, specimens of the, 11, 38
Examinations at the London University, criticism on the, 384
how to get through in France, 603
Exanthems, abortive, Mr. Hutchinson on the doctrine of, 352
Excision of the elbow, Prof. Fayrer on a case of, 5
of the hip-joint, Dr. Good on the mortality after, 355
of the upper jaw, case of, 434
of the knee, Mr. Bryant on the period of its performance, 6, 31
influence of age on the results of, 32
Mr. Swain on, 100
Exostoses, multiple, case of, 205
Experimental Medicine, M. Claude Bernard on, 97
Experts, Medical, at fault, 159
Extra-uterine fœtation, Mr. Wright's case of, 34
pregnancy, Dr. Martyn on, 315
Eye, malignant disease of the, Mr. Carter on a case of non-recurrence of, 204
"A Surgeon" on the question of operating for, 232
Mr. Carter on, 258

F

Fairbank, Dr. case of uræmic convulsions in pregnancy, 542
Faraday medal of the Chemical Society, 645
Farr, Dr. on vaccination in relation to infant mortality, 630
Fasting girl in South Wales, "Inquirer" on an alleged, 320
proposed inquiry concerning the, 349
alleged assault on the, 508
Fauvel, M. *Le Choléra*, review, 472
on the improved sanitary conditions of the Mecca pilgrims, 607
Favrot, Dr. *Histoire des Inhumations*, review, 364
Fayrer, Prof. case of removal of a fibrous tumour, 4
on the radical cure of hernia, 244
cases of strangulated hernia observed in Bengal, 568, 649
Fees and Medical contracts, 302
Femur, impacted fractures of the neck of the, Mr. Bryant on, 405, 457
extra-capsular fracture of the, Dr. Ogston on, 516
Fermentation in the body and the sulphocarbolates, Dr. Sansom on, 451
Fever, catheterism in, Dr. Arding on, 375
delirium in, from embolism of the capillaries, Dr. Bastian on, 40
intermittent, without malaria, Gopaul Chunder Roy on, 619
at the Mauritius, *vide* Mauritius
low, in Spain, Mr. Gaskoin on, 625, 650
puerperal, *vide* Puerperal
typhus, *vide* Typhus
yellow, at the Cape de Verd Islands, 119
Fibrine, Dr. A. Schmidt's view on the formation of, 46
cause and prevention of separation of, in the body, Dr. Richardson on the, 241, 325, 379
Fibro-cartilage, germinal matter of, Dr. Beale on the, 4
Fibrous tumour, removal of, a, Dr. Fayrer's case of, 4
tumour of elbow, case of, 10
vide Uterus
Fidler, Dr. John Dixon, death of, 564
Fire service in France, 646
Flint implements, Mr. Whitley on the origin of, 70
Professor, Principles and Practice of Medicine, notice, 155
on pneumonic crepitant râles, 253
Flour, entire wheat, Chapman's, 615
Fluder, Mr. Charles John, death of, 591
Flux, Mr. The Law to Regulate Poisons, notice, 290
Fœtus, hydronephrosis of, impeding labour, Dr. Madge on, 314
in fœtu, example of, 374
large, Mr. Wright on a, 618
Foot, perforating ulcer of, Mr. Hancock on, 183
Foote, Mrs. Recollections of Central America, notice, 372
Forceps, illustrations of new, 672
Fort, M. le Dr. *Anatomie et Physiologie du Poumon*, notice, 590
Fracture of the clavicle, question as to apparatus for, 203
compound, of the leg, treated by carbolic acid, cases of, 247, 660
at its lower third, discussion on the treatment of, 551, 660
impacted, of the cervix of the femur, Mr. Bryant on, 405, 457
extra-capsular, of the femur, Dr. Ogston on, 516
of the olecranum, query concerning, 426
of the skull, cases of, 544
France, limitation of births in, 143
progress of population in, 149
letters from, *vide* Paris
South of, letters from, *vide* Cannes
France, statistics of lunatics in, 43, 362
Froude, Mr. views of, on education, 334
Funis, presentation of, Mr. Adams on the treatment of, 344

G

Gairdner, Prof. on the high rate of mortality at Glasgow, 524
Galezowski, stratomètre of, 404
Galvanism, cases treated by, *vide* Epilepsy
Ganglion cells, illustrations of the, 404
Gangrene of the leg, fatal case of, 642
Hospital, Dr. Joseph Jones on, 521
plaster of Paris in, 481
Gant, Mr. on collegiate representation in the Medical Council, 49
Garrett, Dr. Irritative Dyspepsia, review, 24
reply of, to the reviewer, 80
Gas, combustion of, in private houses, Dr. Odling on, 50
Gaskoin, Mr. on low fever in Spain, 625, 650
Gay, Mr. letter on his candidature at the College of Surgeons, 638
on Varicose Disease, review, 689
Gee, Dr. on apomorphia, 641
George's (St.) Hospital, cases treated at, 231
German Naturalists and Physicians, Congress of, account of the, 75, 124
Clinics, Prof. Wurtz on the, 578, 664
Germany, letters from, *vide* Austria
clinical instruction in, *vide* Wurtz
Germinal or living matter, Dr. Beale's lectures on, *vide* Beale
Ghecl, insane colony at, 426
Gilbert, William, the first electrician, 595
Gillan, Mr. George Jules, death of, 131
Gimson, Mr. William, death of, 591
Giraffe, ligamentum nuchæ of the, Dr. Beale on the, 3
Girard, M. *Kélotomie sans Réduction*, review, 560
Girdwood, Dr. Gilbert Finlay, death of, 535, 594
Glanders in man, case of, Mr. Poland on a, 297
Glands, cervical, specimen of tumour of the, 288
Glasco, Staff-Surgeon John, death of, 535
Glasgow (and Aberdeen) Medical graduates, interview of, with the Lord Advocate, 252
high rate of mortality at, 524
Royal Infirmary Report, notice, 342
Faculty of, question of double qualification by the, 118
University, Medical graduates of, 506
Godson, Mr. case of placenta prævia with prolapse of funis, 300
case of adherent placenta, with hypertrophy of neck of uterus, 381
on the use and abuse of Hodge's pessary, 427
Good, Dr. on the mortality after resection of the hip-joint, 355
Gopaul Chunder Roy, on intermittent fever without malaria, 619
Gordon, Deputy Inspector-General Dr. on early army sanitation in India, 7, 62, 138, 193, 270, 329
influence of the army on the public health, 441
Dr. Alexander, death of, 54
Gore, Dr. African "Lethargus," notice, 155
Gornal, Mr. on the Warrington Blue School, 349
Gorup-Besanez, Prof. *Lehrbuch der physiologischen Chemie*, review, 46
Graham, Prof. on hydrogenium, 225
Graphical method applied to biology, illustrations of the, 43
Gratuitous Medical advice and the out-patient department, 520
Greenhow, Dr. Chronic Bronchitis, notice, 23
on a case of tabes dorsalis, 474
Greenwich Hospital, sinecure governorship of the, Dr. Brown on, 226, 252
question of, 375, 498
Gresham Lectures, Dr. Thompson's, 176, 338
Greville, Mr. Richard, death of, 644
Grisolle, Prof. death of, 212
Grosser, Mr. Does Education lessen Crime? notice, 307
Grove, Mr. address at St. Mary's Hospital Medical School, 573, 579
Guardia, M. quarrel of, with the *Académie de Médecine*, 254
Gubler, Prof. *Commentaires Thérapeutiques*, notice, 556
Guérin, M. A. on the use of quinine in purulent infection, 578
Gull and Sutton, Drs. on natural history of rheumatic fever, 76, 127
Gunshot wound of the chest, fatal case of, 169
Gurdon, Mr. C. G. death of, 131
Guy's Hospital, report of cases treated at, 283, 436, 489
Dr. Steele's statistical report on, 413
Guy, Dr. on indiscriminate alms-giving, 224, 316
Sublimation of Alkaloids, notice, 309
on insanity and crime, and the plea of insanity, 448, 533
Gymnastics and athletics, 171
Ling's, Mr. Holm on, 293

H

Hæmoptysis, death from, observations on, 66

Hæmoptysis followed by inflammation, Dr. Bäumler on a case of, 289
Dr. Weber's cases of, 612
Hæmorrhage and gangrene from lesion of the restiform bodies, M. Brown-Séquard on, 336
confection of senna in, Dr. Arding on, 293
traumatic, forced flexion in, 141
dental, simple mode of arresting, 26
uterine, rapidly fatal case of, 529
peritoneal adhesions of the uterus as a cause of, Dr. Hewitt on, 588
Halford, Professor, experiments of, on snake-poisoning, 54, 123
Hall, Surgeon James, death of, 399
Marshall, proposed memorial scholarship of, 155, 176
Hamlyn, Surgeon James, death of, 318
Hammond, C. A. disgraceful advertisement of, 264, 293
Dr. on the therapeutics of wakefulness, 175
Hancock, Mr. on perforating ulcer of the foot, 183
Harden, Dr. G. F. death of, 157
Harding, Mr. Joseph James, death of, 507
Hargrave, Mr. on the examinations at the Dublin College of Surgeons, 100, 126
Harley, Dr. John, observations on his investigations on hemlock, 358
Hart, Mr. on the ophthalmoscope in cerebral disease, 205
Hartsen, Dr. de, on an objection against Darwinism, 447
Hartshorne, Mr. John, death of, 54
Dr. Henry, Essentials of Principles and Practice and Conspectus, notice, 477
Hartwig, Dr. Polar World, review, 393
Harveian Society, notices of meetings of the, 205
Haymes, Mr. Thomas, death of, 54
Headache, M. Martineau on, 333
sick, Dr. Wilks on, 1
Head, injuries of the, cases of, 246, 543
alteration in speech from, case of, 654
Health, public, influence of the army on the, Dr. Gordon on the, 441
Medical officers of, Dr. Stewart on collecting the reports of, 259
Association of, *vide* Association
Heart, nerves of the, Professor Ranke on the, 387
affections of the kidney from diseases of the, 75
case of irritative hypertrophy of the, Dr. Green on a, 53
Heat, animal, *vide* Temperature
Hemicrania, Dr. Wilks on, 1
Hemiplegia, syphilitic, Mr. Tait on, 219
Hemlock—is it a poison? 358
Hernia, inguinal, complicated with undescended testis, case of, 90
adaptation of trusses for, M. Huguier on the, 212
radical cure of, Professor Fayrer on the operation for the, 244
lumbar, discussion on, 305
strangulated, employment of coffee, Dr. Marchand on the, 18
pulverised ether in the reduction of, 572
mortality from, in London and Paris, 41
cases of, 99
cases of, observed in Bengal, Dr. Fayrer on, 568, 649
operation for, without reduction, M. Girard on the, 590
Herpes zoster, Dr. Broadbent's suggestions concerning, 33
apparently produced by arsenic, Mr. Hutchinson's cases of, 497
Hewitt, Dr. on peritoneal adhesions of the gravid uterus as a cause of hæmorrhage, 588
Hey, Mr. John, death of, 235
Hicks, Dr. Braxton, on cephalotribes, 233
Mrs. note on a case of poisoning by strychnia, 677
Hill, Mr. Berkeley, Syphilis and Local Contagious Disorders, review, 48
on syphilis in the French army, 181, 208
Mr. John D. on the effect of utero-gestation in constitutional syphilis, 217
Dr. Ninian, death of, 644
Hilles, Mr. on a new compressor in aneurism, 311
Hinds, Mr. on the preservation of vaccine lymph, 648
Hingston, Dr. on a new infectious febrile disease, 10
Hip-joint, excision of the, Dr. Good on the mortality from, 355
deformities of, treatment of, by traction, 75
Hirtz, Dr. *La Chaleur dans les Maladies*, review, 19
Hodge, Prof. Diseases peculiar to Women, review, 74
Hodgson, Mr. Joseph, obituary notice of, 206
Hogg, Mr. Jabez, on the parasitic theory of disease, 269
Holland, epidemics of cholera in, relation of, to impure water, Dr. Ballot on the, 459, 627
analysis of the drinking water in, 550
Holm, Mr. on Ling's gymnastics, 293
Holmes, Mr. Surgical Diseases of Children, notice, 317
Holthouse, Mr. on subglossitis, 474
Homœopathy in Birmingham, 227
attempt to establish, in Rochdale Infirmary, 238
the policy of, 388
Hoppe-Seyler, *Handbuch der physiologisch- und pathologisch-chemischen Analyse*, review, 46
Horner, Dr. Jonah, death of, 591
Horsford-Liebig baking powder, account of, 583
Hospital practice in Medicine and Surgery, reports of, 10, 65, 90, 115, 141, 167, 196, 222, 246, 272, 300, 331, 355, 383, 407, 436, 464, 489, 543, 571, 601, 628, 654
Birmingham General, cases treated at the, 571
projected working man's at, 125, 134
Bristol (General Infirmary), cases treated at the, 655
for Diseases of the Chest, Victoria-park, cases treated at the, 65
Children's, foundation of the Evelina, by Baron Rothschild, 663
for Consumption, Margaret-street, cases treated at the, 273
Convalescent (the Atkinson-Morley), 408
Cottage, at Walsall, report on the, 383
Dreadnought, cases treated on board the, 408
for Epilepsy and Paralysis, cases treated at the, 437, 490
Glasgow (Royal Infirmary), report of the, 342
Guy's, cases treated at, 383, 436, 489
Dr. Steele's statistical report on, 413
Leeds (General Infirmary), cases treated at the, 248, 491
Lincoln County, cases treated at the, 197
Liverpool Northern, account of the practice at the, 601
London, cases treated at the, 11, 167, 233, 272, 654
Lying-in, the British, disputes concerning the, 426
Metropolitan Free, cases treated at the, 168
Middlesex, cases treated at the, 543
report of the, 576
Newcastle Infirmary), disputes at the, 335
Northampton (General Infirmary), cases treated at the, 169
Oxford (Radcliffe Infirmary), cases treated at the, 141, 223
Royal Free, cases treated at the, 115
St. Bartholomew's, the prescribing of the House-Surgeons at, 573
report of, for 1868, 657
St. George's, cases treated at, 331
St. Mary's, Medical School, *vide* Mary's, St.
St. Thomas's, cases treated at, 464, 628
Samaritan, cases treated at the, 116
for Diseases of the Skin, cases treated at the, 467
Small-pox, report of the, 369
University College, cases treated at the, 300
Westminster, cases treated at the, 10, 90, 223, 355
Hospitals and Dispensaries, *The Times* on the abuses of, 141
"G. P." on the, 162
of London and the laryngoscope, "*Quod Scripsi Scripsi*" on the, 181
the mania for, observations on the, 493
better arrangement of the, Dr. Oppert on, 228
administration and statistics of, Dr. Buckle on, 119, 204
reform of, Mr. Hart on, 251
a colloquy on centralisation of, 264
the out-patient system of, and gratuitous advice, observations on, 520
Military, in relation to the Army Medical Service, 455
Naval, civilians in the commission concerning, 174, 201, 232, 282
Surgical, great mortality in, Sir J. Simpson on the, 72, 280, 633
Sir J. Simpson's views on, criticised, 98
the tent system in, observations on, 145
the Vienna, account of the, 527
Hôtel-Dieu, admissions to, in 1535, 400
Houghton, Mr. case of rapidly fatal uterine hæmorrhage, 529
Hudson, Dr. on returns of pauper lunatics, 126
Hughes, Mr. Manual of Therapeutics, notice, 290
Humpage, Mr. John, death of, 644
Hunter, William, anecdote of, 26
Hunterian oration by Mr. Quain, 189
Hutchinson, Mr. on erythema nodosum, 252
cases of shingles apparently produced by arsenic, 497
hints on the study of diseases of the skin, 570
Norwegian notes, 682
Huxley, Prof. on the physical basis of life, 248
Prof. Beale on the views of, 296
Introduction to the Classification of Animals, notice, 590
Hydatid cysts, spontaneous cure of, Dr. Kelly on the, 562
Hydrocephalus with spina bifida, Mr. Amyot's case of, 331
bursting of the head in, Dr. Brown's case of, 421
Hydrogenium, Mr. Graham on, 225
Hydrophobia, cases of, 498, 525
Mr. Moore on a successful case of, 593
Hygiene, Dr. Corfield's introductory lecture on, 634
critique on, by Mr. Campbell, 677
Dr. De Negri on, 696
Hypertrophy of one extremity, Mr. Maunder on, 327
Dr. Day on, 395, 397
Dr. Cholmeley on a case of, 421
of one side of the body, case of, 680
Hypodermic injection of morphia, Mr. Evershed on the, 463
Hypoglossal nerve, paralysis of the, Dr. Ballard on, 296
Hysteria, Dr. Wilks on, 267, 323

I

Illingworth, Mr. A. R., death of, 54
India, early sanitation of the army in, *vide* Gordon hill stations in, Deputy-Inspector-General Gordon on, 231
polluted water in, Mr. Moore on, 646
the army in, *vide* Army
Infants, mortality of, report of the Obstetrical Society on the, 671
in relation to vaccination, Dr. Farr on the, 630
stillborn, memorial on the registration of, 659
newborn, disease of the ear in, 607
purulent ophthalmia in, 129
tetanus in, Dr. Whitehead on a case of, 344
injurious binding of, 636
vide Children
Inflammation, treatment of, by inhalation of cold air, Dr. Richardson on the, 69
new mode of treatment of, Mr. Furneaux Jordan on a, 312
Inhalation pipe, Mr. Bird's, 672
Inhumations, History of, Dr. Favrot on the, review, 364
Injection, a dangerous use of the word, 385
Mr. Budd on the, 431
Insane, treatment of the, the *Times* on the, 225
question of restraint in the treatment of, Dr. Kellogg on the, 660, 668
Insanity among the aged, 373
and crime, Dr. Guy on, 448
plea of, Dr. Guy on, 533
vide Lunatics
Intermittent fever without malaria, Gopaul Chunder Roy on, 619
Intestinal canal, movements of the, Prof. Ranke on the, 386
obstruction of the, case of, 426
rupture of the, from muscular exertion, case of, 643
Italy, state of Medical education in, 338

J

Jaccoud, M. *Leçons de Clinique Médicale*, review, 178
Jackson, Dr. H. notes on the physiology and pathology of the nervous system, 245, 600
Jacob, Mr. John, death of, 210
James, Mr. John Haddy, of Exeter, biographical sketch of, 369
Japan, Medicine and Surgery in, Dr. Stone on, 451
Jaundice, Dr. Murchison on, 285
Jaw, upper, excision of, case of, 464
complete disarticulation of the, Mr. Salter's case of, 600
Jayaker, Dr. case of adherent placenta, 264
Jenner, Sir W. address of, to the Medical Teachers' Association, 99
Johnson, Mr. W. on pensions to Poor-law Medical officers, 259
Dr. George, on anæsthesia and coma, 351
Johnston, Mr. on the injection of morphia in sea-sickness, 381
Johnstone, Dr. James, tribute to the memory of, 608
Joints, wounds of the, treated by carbolic acid, 142
rheumatic affections of the, Mr. Adams on, 148, 255
strumous disease of, Mr. Adams on, 308
stiff, treatment of, Mr. Adams on, 308
suppurating, free incisions in, Mr. Bryant on, 514, 567
pathology of diseases of the, Mr. Bryant on the, 622
Jones, Dr. J. corrigendum in relation to Bell, 26
Dr. John Dalston, death of, 291
Mr. Wm. Thos. note on anti-vaccination, 428
Professor Joseph, on Hospital gangrene, 521
Jordan, Mr. Furneaux, on new Surgical remedies, 154
on treatment of severe wound of knee-joint, 312

K

Keates, Deputy Inspector Dr. William, death of, 564
Kellogg, Dr. on non-restraint in English lunatic asylums, 669
Kelly, Dr. on the spontaneous cure of hydatid cysts, 562
Kemplay, Mr. B. death of, 103
Kennedy, Dr. on the duration of acute rheumatism, 126
Dr. Ewory, on zymotic diseases and puerperal fever, 366

Kennedy, Dr. Evory, debate on the paper of, 582
Kent, Mr. Octavius Jackson, death of, 644
Key, Prof. on the behaviour of the white blood cells in inflammation, 542
Mr. David, death of, 644
Kidney, affections of the, from heart disease, 75
obstruction of the veins of the, by clot, specimen of, 396
lardaceous, specimen of, 396
inflammation of the, Prof. Key on the white blood cells in, 542
calculi of the, nephrotomy in, Mr. T. Smith on, 469, 585
King's College Medical School, distribution of prizes at, 617
Kingston, Jamaica, improved sanitary condition of, 120
Kinnear, Deputy Inspector-General, death of, 235
Knee-joint, excision of the, *vide* Excision
loose cartilage in the, Mr. Poland's case of extraction of, 34
Mr. Dick on, 107
severe wound of the, Mr. Furneaux Jordan's case of, 312
Knott, Dr. George Austice, death of, 561
Kühne, Prof. *Lehrbuch der physiologischen Chemie*, review, 46

L

Labour impeded by fœtal hydrocephosis, Dr. Madge on, 314
hypertrophy of the cervix uteri, with adherent placenta during, case of, 381
premature, Dr. Barnes on the induction of, 60, 109, 241
Lamb, Staff Assistant-Surgeon, cases of aneurism, 451
Lancereaux, M. Treatise on Syphilis, review, 317, 610
Lane, Mr. fatal case of gangrene of the leg, 642
Langley, Mr. Via Medica, review, 397
Larynx, paralysis of, cases of, Dr. Mackenzie on, 356
new forceps for polypus of the, 672
Laycock, Prof. on the doctrine of the will, 681
Lead-poisoning, cases of, 222
Leaves, functions of, M. Boussingault on the, 255
Lee, Mr. Henry, letter on his candidature at the Royal College of Surgeons, 638
Leeds General Infirmary, cases treated at the, 246, 491, 572
Leg, compound fracture of the, treated by carbolic acid, cases of, 247, 660
compound fracture of the lower third of the, discussion on the, 551, 660
Legg, Dr. on albuminoid, waxy, or lardaceous change, 140
reply of Dr. Dickinson to, 180
Leicester, sanitary state of, Dr. Crane's report on the, 443
Lescher, Mr. F. H. Examinations of the Pharmaceutical Society, notice, 261
Letheby, Dr. report on sanitary state of shipping, 106
Report on Health of the City of London, notice, 133
on the estimation of nitrogenous matter in potable waters, 429, 439, 450
vide Waters
and the water companies, 611
Leunis, Professor, *Synopsis der Naturgeschichte der Thierreiche*, review, 149
Ley, Mr. William, of Littlemore, obituary notice of, 345
Liebig's extract of meat, 92
compared with the Australian, 152
Dr. Arding on, 161
baking powder, account of, 563
Liégeois, M. on the semen in disease, 498
Life, science of, Professor Owen's conclusions concerning the, 12, 35
physical basis of, Professor Huxley on the, 248
assurance trial, 375
Lightning, amputation by, Dr. Syevanko on a case of, 363
death from, Dr. Richardson on, 512
a Correspondent on, 553
causing simulation of death, 596
Lincoln County Hospital, cases treated at, 197
Lister, Professor, on the Ligature of Arteries on the Antiseptic System, notice, 609
Lithotomy without a calculus, case of, 154
median, in a child, case of, 167
with hæmorrhage, case of, 247
for irritable bladder, case of, 446
and lithectasy in children, cases of, at St. Thomas's, 628
Little, Dr. James, note on naval Medical examinations, 473
Liver, Pacchionian glands of the, specimen of, 503
multiple vascular tumours of the, specimen of, 101
Liverpool, letter from, 258
Northern Medical Society, memorial on registration of births, 659
Northern Hospital, account of the practice at the, 601
Dr. Trench's report on, review, 341
Localisation of the faculty of speech, Dr. Bateman on the, 586
Dr. Jackson on the, 600
Assistant-Surgeon Alcock on the, 651
Logan, Dr. knighthood conferred on, 604
Lomi, Dr. Mark, death of, 372
London, vital statistics of, 27, 56, 81, 107, 134, 162, 187, 212, 239, 265, 294, 321, 350, 376, 402, 428, 455, 482, 510, 538, 566, 594, 619, 648, 677, 697
the weather of, in 1868, 170
Dr. Letheby's report on the City of, 133
registration returns of, compared with those of Paris, 494
prevalence of scarlatina in, in 1868, returns concerning the, 367
Dr. Milroy on the Medical topography and chronology of, 233, 311
deficiency of fresh vegetables in, 573
Hospital, cases treated at the, 11, 167, 238, 272, 654
Medical Society, notices of meetings of the, 52, 77, 183, 205, 229, 345, 368, 455, 642
University, criticisms on the examinations of the, 384
Longet, Prof. *Traité de Physiologie*, review, 74
Longmore, Prof. on the transport of the sick and wounded, 410
Louth, Lord, note on "Continental practice," 180
Low, Dr. William, death of, 54
Löwenthal's chocolatine, 590
Lunatics, returns of pauper, Dr. Hudson on, 126
alleged increase of, Dr. Robertson on the, 364
prosecution for receiving, 523
in France, provisions for, 43
statistics of, 362
criminal, hardship of the law relating to, 414
vide Insanity
Lungs, deposits in miners', discussion on the, 587
sloughing of the, case of, 489
Lye, Mr. Horatio, death of, 291
Lyel, Dr. B. B. death of, 372
Lying-in Hospital, the British, disputes concerning the management of the, 426

M

MacCormac, Dr. Henry, Synthesis in Education, notice, 290
Dr. William, Antiseptic Treatment of Wounds, notice, 477
M'Cormick, Dr. James Vandersleet, death of, 555
Macfarlane, Dr. Alexander Johnstone, death of, 240
Mackenna *v.* Parkes, 316
Mackenzie, Dr. on cases of laryngeal paralysis, 356
on syphilitic disease of the throat, 505
Mackesy, Dr. Thomas Lewis, obituary notice of, 423
Mackey, Dr. case of stricture of the œsophagus, 87
on sock-poisoning, 421
Mackie, Dr. James, death of, 671
Maclaren, Mr. System of Physical Education, notice, 24
MacLellan, Dr. William E. M., death of, 644
Macpherson, Dr. on Cholera in the East, notice, 577
Baths and Wells of Europe, review, 607
Madge, Dr. on hydrocephosis in the fœtus impeding labour, 315
Madras, report of the Sanitary Commission for, 553
Madrid, *maisons de secours* at, 391
Magnesia, Murray's fluid, 644
Malaria not always necessary for intermittent fever, 619
foul water as the cause of, 675
Malpraxis, unjust action against Dr. Thomson for, 335
unjust charge of, at Melbourne, 657
Man, prehistoric, new discoveries relating to, 675
Manning, Dr. Report on Lunatic Asylums, review, 500
Mansell, Surgeon William, death of, 424
Mant, Mr. Newton, death of, 235
Manyallah, composition of, 348
Marriages, circumstances influencing the fecundity of, Dr. Routh on the, 642
consanguineous, in France, 520
Marsden, Dr. New Mode of Treating Cancer, review, 584
Marsh, Mr. on strychnia as a substitute for quinine, 647
Martineau, M. on headaches, 333
Martyn, Dr. on extra-uterine pregnancy, 315
Mary's (St.), Hospital, distribution of prizes at, 579
Mr. Grove's address at, 574, 579
Mathews, Dr. William, death of, 347
Mattress, the Venetian spring, 23
elastic, Mr. Sagar on a new, 27
Maunder, Mr. on digital compression in popliteal aneurism, 380
on lumbar colotomy, 165
on the theory and method of the cure of aneurism, 469
on hypertrophy of one extremity, 327
Mauritius, malarial fever of the, Assistant-Surgeon Power on the, 206
Mauritius, protracted epidemic of fever at the, Surgeon Blaxall on the, 307
Assistant-Surgeon Power on the, 206, 349
Mayne, Mr. T. H. death of, 261
Maysmor, Dr. H. S. on Edwards, the ornithologist, 107
Dr. Humphrey Leverington, death of, 507
Meadows, Dr. case of amputation of the cervix in procidentia uteri, 588
Measles, great mortality from, at Leicester, 237
necrosis of bones of the face after, case of, 383
Meat, Liebig's extract of, *vide* Liebig
Mecca pilgrims, improved sanitary conditions of the, M. Fauvel on the, 607
Medical and Chirurgical Society (the Royal), notices of meetings of the, 76, 127, 286, 312, 422, 561, 585, 640
annual meeting of the, 250
projected union of other Medical Societies with, *vide* Societies and Obstetrical
Medical Council of Education, Mr. Gant on collegiate representation in the, 49
direct representation in the, petition to Parliament concerning, 236
memorial of the British Medical Association on, 467, 476
memorial of the Obstetrical Society on, 526, 548
Medical contracts and fees, observations on, 302
Teachers' Association, *vide* Associations
Medicine, international, 306
experimental, M. Claude Bernard on, 97
Medicines, ready prepared, question of the desirability of, 212
Medulla of bone as a blood-forming organ, 200
Meller, Dr. Charles James, death of, 616
Melbourne, unjust trial for malpraxis at, 657
Mental and emotional disturbance, Dr. Russell on, 64
and nervous action, nature of, Dr. Beale on the, 621
Merivale, Mr. on the physique of the rural population, 198
Mercurial puzzle, "Experimentalist" on a, 349, 376
Metropolitan Board of Works, report of the, 56
Free Hospital, cases treated at the, 168
Officers of Health, *vide* Association
Meyer, Dr. *Die Elektricität in ihrer Anwendung auf praktische Medicin*, review, 256
Midland Medical Society, meetings of the, 151, 205
Middlesex Hospital, cases treated at the, 543
reports of the, for 1868, notice, 576
Midwifery, defects in the teaching of, Dr. Murphy on, 50
Miles, Dr. Thomas, death of, 561
Milk and water, the Paris, 375
Mill, Mr. Subjection of Women, review, 683
Mills, Mr. Economy of Life, notice, 78
Milne, Dr. Manual of Materia Medica, notice, 372
Milne-Edwards, Prof. *Rapports sur les Progrès des Sciences Zoologiques*, review, 554, 635
Milroy, Dr. on the Medical topography and chronology of London, 233
on registration of disease, 311
Mind, training of the, Dr. E. S. Thompson on, 176
as a function of the brain, Dr. Beale on, 622
Miners' lungs, deposit in, discussion on the, 587
Mitchell, Dr. S. Weir, on the venom of serpents, 137
Mr. T. H. death of, 291
Moore, Dr. Edward, death of, 591
Mr. W. J. on a successful case of hydrophobia, 593
Mr. A. W. on his claim to priority in treating obesity, 676
Morgan, Dr. Electro-Physiology and Therapeutics, review, 230
Morphia, hypodermic injection of, Mr. Evershed on the, 463
Morrell, Mr. The High Death-rate, notice, 590
Morris, Mr. T. H. death of, 24
Dr. James, Irritability, review, 471
Mr. Edwin, correspondence of, with Mr. Solly, 639
Mortality of infants, report of the Obstetrical Society on the, 671
Munk, Prof. on renal affections from heart disease, 75
Munro, Mr. D. death of, 478
Murchison, Dr. Clinical Lectures on Diseases of the Liver, review, 285
Murphy, Dr. on education in midwifery, 50
criticism on Dr. Barnes's lectures, 557
reply of Dr. Barnes to, 560
Muscle, structure of, Dr. Beale on the, 163, 215, 295
fatty degeneration of, Dr. Beale on, 295
contraction of, during thawing, 388
Muscular action, laws of, illustrated by the myograph, 43
Muséum d'Histoire Naturelle, at Paris, a school of agriculture, 524
Musical pitch, lowering of the, 80
Myograph, description and illustrations of the, 43
Mythic age, Mr. Westrop on the, 593

N

Nails, disease of, query concerning, 321

Naval Hospital commission, observations on the civilian composition of, 174, 201, 252, 282
Medical officers, position of, in the United States, 348
Service, position of the, 391
changes in the, 412
and the Doctor's degree, note of Dr. Little on the, 473
Necrosis after measles, case of, 383
Negri, Dr. De, on hygiene, 696
Nephrotomy for renal calculi, Mr. T. Smith on, 469, 585
Nerve tissue, Dr. Beale on, 353, 403
action, Dr. Beale on, 539
Nervous action, nature of mental, Dr. Beale on the, 621
system, diseases of the, Dr. Wilks's lectures on, 1, 58, 83, 135, 267, 323
Dr. Wilks on the treatment of, 377
notes on the physiology and pathology of the, by Dr. Hughlings-Jackson, 245, 600
Netley professors, letter of the, on the acquirements of Medical officers, 76
Neuralgia, pathology and treatment of, Dr. Chapman on the, 288, 327, 433
of the internal saphenous nerve, cases of, 160
Newcastle Infirmary, disputes concerning the, 335
Newell, Mr. H. A. death of, 184
Nicholls, Mr. John George, death of, 564
Nicklès, Prof. death of, 447
Nisseron, Dr. *De l'Urine*, notice, 673
Nitrates, formation of, Dr. Webster's query on the, 538
Nitrous oxide as an anæsthetic, report of the Odontological Society on, 69
Noble, Dr. Thomas, death of, 235
Nomenclature of Disease of the College of Physicians, criticism on the, 656
Norris, Prof. on the aggregation of blood-corpuscles, 663
Northampton General Infirmary, cases treated at the, 163
Nourse, Mr. on propagation of fever and scarlatina by potable water, 628
Nutrition, Prof. Ranke on, 386

O

Obesity, case of, 454
O'Brien, Mr. on the Contagious Diseases Act, 152
reply of Mr. Hill to, 181
Obstetrical operations, Dr. Barnes's lectures on, *vide* Barnes
Society, report of, on infant mortality, 671
reports of meetings of the, 153, 233, 314, 529, 587, 670
memorial of the, on representation in the Medical Council, 526
discussion at the, on amalgamation, 684, 691
of Dublin, meetings of the, 366, 582
Odling, Dr. on the combustion of gas in private houses, 50
Six Lectures on Carbon, notice, 673
Œsophagus, traumatic stricture of the, Dr. Mackay on a case of, 87
forceps, illustration of a new, 672
Ogden, Dr. James, death of, 644
Ogle, Dr. William, on the cervical portion of the sympathetic nerve, 422
Dr. John, reprints of, review, 668
Ogston, Dr. on extra-capsular fracture of the femur, 516
Oldfield, Dr. note on a case of calculus, 293
Oldham, the proposed infirmary for, 42
Olecranon, fracture of, query on the, 426
Olliffe, Sir Joseph Francis, obituary notice of, 345, 369
O'Neill, Dr. death of, 235
Operations, mortality after, in Hospitals, Sir J. Simpson on the, 72, 280, 633
obstetrical, Dr. Barnes's lectures on, *vide* Barnes
Ophthalmia, purulent, in infants, M. Desormeaux on, 120
Ophthalmoscope in cerebral disease, Mr. Hart on the, 295
Opium, caution as to smoking, Dr. Cooke, 26
pipe for smoking, 320
insusceptibility of pigeons to, 388
Oppert, Dr. on better management of London Hospitals, 228
Orthopædic v. Orthopodic, 182
Orton, Mr. Thomas, obituary notice of, 155
Osborn, Dr. Henry, on Dr. Richardson's lecture, 696
Dr. Samuel, death of, 210
Otitis in new-born infants, M. Parrot on, 607
Otorrhœa, caustic treatment of, Prof. Schwartze on the, 519
Out-patient department and gratuitous advice, observations on the, 520
Ovariotomy, inventor of the clamp for, Mr. Wells on the, 280
Mr. Wells's third series of 100 cases of, 468, 586
Ovarian cyst, fatal rupture of, during digital examination, case of, 446
Owen, Professor, "conclusions" of, on the science of life, 12, 85
on the geology of Egypt, 575
Oxyuris vermicularis, Prof. Zenker on the, 75

P

Palate, artificial, Dr. Suersen on an, 75
Palsy, wasting, M. Jaccoud on, 178
Pancreas, the, the true "sweetbread," 181
Paracentesis thoracis in recent pleurisy, 391
Paralysis, facial, from apoplexy of the Fallopian canal, case of, 473
Duchenne's, Dr. Russell on two cases of, 571
wasting, M. Jaccoud on, 178
Parasitic origin of disease, Mr. Hogg on the, 269
Paris, letters from, 416, 557, 637, 690
prostitution in, M. Lefort on, 525
Public Assistance of, report on the, 42
Médical in 1869, 73
registration returns of, 494
anthropological statistics of, M. Lagneau on the, 121
parks and gardens of, Mr. Robinson on the, 573
Medical constitution of, in 1868, 202
effects of Baron Haussman's operations on, 280
Medical Faculty, criticism on the teaching at the, 470
disturbances at the, 551, 579
Parkes, Professor, Manual of Practical Hygiene, notice, 590
Parks and gardens, public, Mr. Robinson on, 573
Parliamentary intelligence, 18, 203, 228, 255, 281, 307, 337, 392, 416, 444, 470, 499, 525, 552, 608, 634, 688
Parville, Henri de, *Causeries Scientifiques*, notice, 397
Pathological Society, notices of meetings of the, 21, 101, 128, 182, 288, 314, 395, 473, 503, 586, 611
annual meeting of the, 39
Dr. Quain's address to the, 128
Pattison, John, M.D., criminal information against, 145
Pavy, Dr. Researches on Diabetes, notice, 24
case of diabetes treated by opium, 52
Pearce, Mr. John Wortham, death of, 399
Pelvis, partial luxation of the, case of, 116
Pennington, R. R. recollections of, by "J. F. C." 362
Pennsylvania Hospital Reports, notice, 346
Periodontitis, iodine and aconite in, 209
Peritoneum, cancer of, case of, 436
Peritonitis, traumatic, with remarkable symptoms, case of, 11
Perkins, Dr. John, death of, 507
Peskett, Dr. George, death of, 131, 158
Pessary, Hodge's, use and abuse of, Mr. Godson on the, 427
new intrauterine, Dr. Routh on a, 314
Petrie, Dr. George, Stokes' Life of, 275
Petroleum, poisoning with, case of, 45
Pettingal, Dr. F. R. James, death of, 157
Pharmacopœias, danger of changes in, "Caution" on the, 647
Pharmacy Act Amendment Bill, observations on the, 522
"A Barrister" on the, 565
"J. M. H." on the, 565
Phrenology, Drs. Browne and Carson on, review, 418
Phthisis, communicability of, Dr. Cotton on the, 152
Dr. Elliott on the, 311
distribution of, Dr. Buchanan on the, 77
in relation to soil, Dr. Crisp on, 130
occurrence of, pneumothorax in, Dr. Powell on the, 112, 166, 194
coal-miners', specimen of, 296
discussion on, 587
treatment of, by residence in elevated regions, Dr. Weber on the, 640
treated by rest and diet only, cases of, 65
Physicians, Royal College of, pass lists of the, 157, 210, 506
examination-papers of the, 132
"Nomenclature of Disease" of the, criticism on the, 656
and Surgeons, Faculty of, of Glasgow, question of double qualification by the, 118
Pipe for inhalation, Mr. Bird's, 672
Placenta, adhesion of, case of, 265
prævia, with prolapsus funis, Mr. Godson's case of, 300
adherent, with hypertrophy of cervix uteri, Dr. Godson's case of, 381
Pleurisy, acute, with sloughing of the lungs, 489
recent, paracentesis in, 391
Pneumonia, Dr. Davidson on the mortality from, 99, 111
crepitant râles in, Dr. Flint on, 253
white blood-cells in, Professor Key on the, 542
Pneumothorax in phthisis, Dr. Powell on, 112, 166, 194
Poisoning by coloured clothing, Mr. Bruce on a case of, 221
coralline sock, M. Tardieu on, 175, 202, 254
Dr. Mackey on, 421
snake, *vide* Snake
by strychnia, *vide* Strychnia
lead, cases of, 222
Poland, Mr. case of extraction of loose cartilage from the knee, 34
case of human glanders, 297
Pollock, Mr. on canvassing for seats in the Council of the College of Surgeons, 639
Polypus, uterine, with rupture of ovarian cyst, fatal case of, 446
of the larynx, new forceps for, 672
Pons Varolii, disease of the, Dr. Beveridge's case of, 518
Poor, metropolitan, Mr. Torrens on the new Bill for the, 15
statistics of the sick of the, 301
Mr. Goschen on the proposed Asylums and fever Hospitals for the, 470
Poor-law Medical Officers, of the English and Irish, 343
Mr. Johnson on pensions for the, 259
in Ireland, discussion on the superannuation of the, 688
Association of, *vide* Association
Population, rural, the *physique* of the, Mr. Merivale on the, 198
Porter, Surgeon, on compression in popliteal aneurism, 451
Mr. John Vining, death of, 318
Pouchet, M. dismissal of, from the Museum, 336
Powell, Dr. G. The Practice of Medical Electricity, notice, 78
Dr. William Henry, death of, 291
Dr. R. D., on the occurrence of pneumothorax in phthisis, 112, 166, 194
Power, Assistant-Surgeon, on malarial fever at the Mauritius, 206, 349
"Practitioner of the future," the, 94, 117
"Practitioners of the curative art," Mr. Chadwick's ideas on the, 333
unqualified, "M.D." on, 161
"Not an Assistant" on, 187
question of discretion of, 389
Pregnancy, effects of, on constitutional syphilis, Mr. John D. Hill on the, 217
pruritus of, tobacco in, 101
extra-uterine, Mr. Wright's case of, 34
Dr. Martyn on, 315
Preliminary scientific training, observations on, 143
vide Education
Prepuce, lipoma of the, case of, 480
Preston Medical Society, meeting of the, 643
Prince, Dr. David, Plastics, review, 100
Prize, the Riberi, the award of the, disputed, 73
for essays on vaccination, the Russian, 228
Prizes, distribution of, at University College, 508
at St Mary's Hospital School, 579
at King's College, 617
at the Académie des Sciences, 687
new travelling, of Trinity College, Dublin, 361
Prostate, calculi of, remarkable case of, 123
Prostitution in Paris, M. Lefort on, 525
Protoplasm, Dr. Beale on, 216, 296
Prof. Huxley on, 248
Pruritus, general, in pregnancy, tobacco in, 101
vulvæ, formula for, 65
Puerperal fever, Dr. Collins's views on, 23
Dr. Evory Kennedy on, 366
debate on the paper of, 582
convulsions, Dr. Fairbank on a case of, 542
Pullna water as a purgative, 346
Punctuality of Doctors, 25
Purdon, Dr. Neurotic Cutaneous Disease, notice, 590
Pursell, Dr. John, death of, 318
Purulent infection, *vide* Pyæmia
Putrefactive change, effects of lightning shock on, Dr. Richardson on the, 513
Pyæmia with pneumothorax, case of, 397
Dr. Steele on the prevention of, 413
quinine in, M. A. Guérin on, 578

Q

Quain, Mr. Hunterian oration, 189
Quinine, strychnia as a substitute for, Mr. Marsh on, 647

R

Rabies canina, the sort of dog most liable to, 501
Radcliffe Infirmary, Oxford, cases treated at the 141, 223
Radford, Dr. on the relative position of craniotomy and the Cæsarian section, 8, 61
reply of Dr. Barnes to, 50
Railway accidents in Prussia, 326
Dr. Samelson on, 618
in New York, 692
compensation for, observations on the law of, 465
Ranke, Prof. *Grundzüge der Physiologie*, review, 385
Ransford, Surgeon-Major John, death of, 220
Rattlesnake, *vide* Snake
Recruits, causes of rejection of, 199
Recueil de Rapports sur les Progrès, etc. en France, review, 554, 625
Registration returns of London and Paris compared, 494
of Rome, 687
of Scotland, 80, 426, 537, 674
of births, memorial on the unsatisfactory state of the, 659

Registration of disease, Dr. Milroy on, 311
Dr. Richardson on, 546
vide London
Reichenbach, Baron, death of, 364
"Remedy worse than the disease," 409
Restiform bodies, hæmorrhage and gangrene from lesions of the, 336
Rheumatism of the joints, Mr. Adams on, 148, 255
acute, Dr. Oppert on a case of, 273
treatment of, discussion on the, 71, 76, 127
natural history of, Drs. Gull and Sutton on the, 76, 127
Dr. Kennedy on the duration of, 126
connexion of, with syphilis, cases of, 289
Rhind, Dr. James, death of, 78
Richardson, Dr. B. W. lecture on exposure of animal substances to water gas at 340°, 29, 53, 84
on the cause and prevention of the separation of fibrine in the body, 243, 325, 379
on increment of animal heat, 483
on death by lightning, 511
on simulation of death from lightning, 596
on the national registration of disease, 546
Dr. Joseph, White Corpuscles of the Blood, notice, 590
Dr. Wills, on a tubular *presse-artère*, 435
Ringer, Dr. Handbook of Therapeutics, notice, 563
Robertson, Dr. C. L. on the alleged increase of lunacy, 364
Robinson, Mr. Parks, Promenades, and Gardens of Paris, notice, 573
Rogers, Dr. on English and Irish Poor-law officers, 343
Rome, registration returns of, 687
Roscoe, Prof. Lessons in Elementary Chemistry, notice, 505
Rosenstein, Prof. on the excretion of urea in typhus, 88, 220
Rothschild, Baron, foundation of the Evelina Children's Hospital by, 663
Routh, Dr. on circumstances influencing fruitfulness of marriages, 642
on a new vesico-vaginal speculum holder, 670
Rowdon, Mr. Henry Mortimer, obituary notice of, 131
Royal Free Hospital, cases treated at the, 115
Royal Society and the meteorological grant, 496
Russell, Dr. on the clinical history of chorea, 64
on two cases of Duchenne's paralysis, 571
on a mass of hair in the stomach, 681
Russian losses at Sebastopol, 256

S

Sacco, Luigi, proposed monument for, 509
Sadler, Dr. Report to the Barnsley Board of Health, notice, 341
Sagar, Mr. on a new elastic mattress, 27
Salivary fistula, Mr. Hill's cases of, 115
Salter, Mr. case of complete disarticulation of the superior maxillary bones, 600
Samaritan Hospital, cases treated at the, 116
Samelson, Dr. on railway accidents in Prussia and England, 618
Sanderson, Dr. on a case of diabetes treated with opium, 641
Sanger *versus* Sanger *ex parte* Clark, 317
Sanitary reports of Medical Officers of Health, Dr. Stewart on the collection of, 259
observations on the, 277
for Madras, 553
Sansom, Dr. on new double salts of carbolic acid, 313
on fermentation and the sulpho-carbolates, 451
Saphenous nerve, neuralgia of the, cases of, 169
Sarcoma, recurrent cystic, specimen of, 503
Scarlatina of London in 1868, returns concerning, 367
Scalp, steatomatous tumours of the, removal of, 552
Scheffler, Theory of Ocular Defects, notice, 209
Schmidt, Dr. A. views of, on the formation of fibrin, 46
Scirrhus, ossifying, specimen of, 396
Scotland, registration returns of, 80, 426, 537, 674
Scrivener, Dr. Sanitary Character of Andine Heights, review, 47
Schwartze, Prof. caustic treatment of purulent catarrh of the ear, 519
Sea-sickness, treatment of, M. Le Coniat on, 54
injection of morphia in, 381
Semen, condition of, in disease, M. Liégeois on, 498
Senna, confection of, value of, in hæmorrhagic diseases, 293
Sewage irrigation, dysentery from, 414
contamination of water by, *vide* Waters
Sewers to be ventilated, not trapped, 631
Sex, doubtful, curious case of, 646
Siamese twins, account of the, 171
Sibson, Dr. Medical Anatomy, review, 285
Sdurus glanis, account of the, 292
Simla, bad water supply of, 675
Simpson, Sir James, on the mortality in Surgical Hospitals, 72, 280, 633
views of, criticised, 98
Skin, diseases of the, Mr. Hutchinson's hints on the study of, 570
at Christiania, Mr. Hutchinson on, 682
Skin, diseases of the, derivations of the names of, Mr. Tuson on the, 618
Hospital for Diseases of the, cases treated at the, 407
Skull, passage of an iron shaft through the, 444
fracture of the, cases of, 544
vide Head
Skulls, ancient British, Dr. Thurnam on, 72
Small-pox Hospital, report of, for 1868, 389
and vaccination, prejudices concerning, in India, 481
distribution of epidemics of, according to age, Dr. Ballard on the, 598
vide Vaccination
Smith, Dr. Angus, Disinfectants and Disinfection, notice, 234
Dr. David, Pilgrimage to Juggernauth, notice, 590
Mr. Thomas, on nephrotomy for renal calculi, 469, 585
Snake-poisoning, Prof. Halford's experiments on, 54, 123
Dr. Weir Mitchell on, 137
experiments with, 203
Prof. Halford's treatment of, tried, 227
Mr. Baillie on treatment of, 238
rattle, bite of the, successfully treated, 25
Societies, French Scientific, annual meeting of the, 415
London Medical, scheme for an amalgamation of the, discussions on the, 497, 501, 559, 608
vide Association
Society, Clinical, notices of meetings of the, 52, 102, 154, 289, 344, 397, 474, 612, 640
Harveian, notice of meeting of the, 205
Liverpool Northern, memorial of, on registration of births, 659
London Medical, notices of meetings of the, 52, 77, 183, 205, 289, 345, 368, 455, 642
Medical and Chirurgical, *vide* Medical
Midland Medical, notices of meetings of the, 154, 205
Obstetrical Society of London, *vide* Obstetrical of Dublin, meetings of the, 366, 582
Pathological, *vide* Pathological
Preston Medical, meeting of the, 643
Statistical, notices of meetings of the, 448, 533
Western Medical and Surgical, meeting of the, 642
for the Relief of Widows and Orphans, report of the, 152
for the Sick and Wounded in War, 303, 603
Sock-poisoning, M. Tardieu on, 175, 202, 254
Dr. Mackey on, 421
Soda-water, improved, 693
Soden as a health resort, 501
Soldiers, married, note on, 26
liability of, to aneurism of the aorta, 145, 182, 395
health of, as compared with civilians, Dr. Gordon on the, 442
Solly, Mr. letter of, on his candidature, 639
Spain, low fever in, Mr. Gaskoin on, 625, 650
Specialist, "J. F. C." on the career of a, 580, 635
Speculum-holder, Dr. Routh on a new vesico-vaginal, 670
Speech, localisation of the faculty of, Dr. Bateman on the, 586
Dr. Jackson on the, 600
Assistant-Surgeon Alcock on the, 641
loss of, Dr. Carnley on a case of, 181
from injury of the head, case of, 655
Speechlessness, remarkable case of, 491
Spina bifida with hydrocephalus, Mr. Amyot's case of, 331
Spencer, Dr. John, death of, 535
Spleen, primary cancer of the, specimen of, 130
fibroma of the, specimen of, 503
Squire, Mr. Companion to the British Pharmacopœia, review, 584
Dr. Manual of Diseases of the Skin, notice, 234, 293
State Medicine, memorial concerning, 617
Statistical Society, meetings of the, 448, 533
Stewart, Dr. A. P. on sanitary reports for the library of the Medico-Chirurgical Society, 259
Steel, Mr. J. S. death of, 261
Steele, Dr. statistical report on Guy's Hospital, 413
Still-born children, registration of, memorial on the, 659
Stokes, Dr. Life of Dr. Petrie, 275
Stomach, chronic ulcer of, leading to cancer, 496
simple ulcer of the, specimen of, 611
mass of hair in the, Dr. Russell's case of, 681
Stone, Dr. R. N. on Medicine and Surgery in Japan, 451
Storrow, Mr. John, death of, 54
Stovell, Inspector-General Dr. Matthew, obituary notice of, 643
Strabomètre, Dr. Galezowski's, 401
Stricture, bulbous steel-sound in, Mr. Crompton on the, 447
Mr. Teevan on the, 593
Strychnia, poisoning by, Dr. Wormley on, 309
from misadventure, case of, 605, 613, 696
note of Mrs. Hicks on, 676
Strychnia as a substitute for quinine, Mr. Marsh on, 647
Suicides at St. Petersburg, 142
Supra-renal capsule, amyloid degeneration of the, specimen of, 182
Addison's disease of the, specimens of, 288
Surgeons, Royal College of, of England, pass lists of the, 78, 103, 131, 398, 421, 452, 477, 506, 535, 563, 591
Licentiates of Midwifery of the, 210
admission of Fellows by the, 290
new Fellows of the, by examination, 644
examination papers of the, 132, 592, 616
medal of the, conferred on Mr. Crowther, 211
Messrs. Lee and Gay's letters as candidates for the Council, 638
Mr. Morris's correspondence with the candidates for the Council, 639
Mr. Pollock on canvassing for seats in the Council of the, 639
Royal College of, Ireland, Mr. Hargrave on the examinations at the, 100, 126
Sutton, Mr. Frederick John, death of, 210
Swain, Mr. on excision of the knee-joint, 100
"Sweetbreads," Mr. Wilson on, 161
Syevanko, Dr. on a case of amputation by lightning, 363
Syme, Mr. candidature of, as president of the Medical Council, 99
Sympathetic nerve, physiology and pathology of the, Dr. William Ogle on the, 422
Syphilis, review of new works on, 48
in the French army, Messrs. O'Brien and Hill on, 152, 181, 238
how it begins and ends, Mr. De Meric on, 205
effect of utero-gestation on the treatment and progress of constitutional, Mr. John D. Hill on the, 217
treatment of, by hypodermic injection in Paris, 637
treatment of, without mercury, M. Desprès on the, 690
hemiplegia from, Mr. Tait on, 219
of the brain, specimen of, 288
connexion of, with acute rheumatism, cases of, 289
of the throat, Dr. Mackenzie on, 505
Syphilisation in Norway, Mr. Hutchinson on, 682

T

Tabes dorsalis, Dr. Greenhow on a case of, 474
Tait, Mr. on syphilitic hemiplegia, 219
on a new aneurism compressor, 349
note on the theory of development, 482
Tapeworms, larval, in the brain, Mr. Bradley's case of, 87
Tar, concentrated liquor of, Guyot's, 23
Tardieu, Dr. on coralline sock-poisoning, 175, 202, 254
Teachers' (Medical) Association, *vide* Association
Teeth, hæmorrhage after extraction of, mode of arresting, 26
disease of the, disturbances of vision from, M. Delestre on the, 228
Teevan, Mr. on the bulbous sound in stricture, 593
Temperature, high, experiments on the effects of, on animal substances, Dr. Richardson's, 29, 53, 84
animal, in disease, Professors Wünderlich and Hirtz on the, 19
influence of nervous power on, Mr. Alcock on the, 206
increment of, Dr. Richardson on the, 483
Tendo Achillis, suture of the, case of, 169
of the long extensor of the thumb, suture of the, 646
Tent system of the German Hospitals, observations on the, 145
Tents, Hospital, Stackmann's, 207
Testis, undescended, complicating inguinal hernia, case of, 90
recurrent cancer of the, specimen of, 503
Tetanus, traumatic, treatment of, by curare, Prof. Busch on the, 474
Calabar bean given in, Mr. Holthouse's cases of, 344
Professor Fayrer's case of, 5
chloroform in, discussion on the employment of, 416
infantile, Dr. Whitehead on a case of, 344
Thermometer, clinical use of, *vide* Temperature, animal
Thomas, Dr. on the nature and uses of colostrum, 593
Thomas's (St.) Hospital, report of cases treated at, 461, 628
Thompson, Dr. E. S. Gresham Lectures of, 176, 338
Sir Henry, Clinical Lectures on Diseases of the Urinary Organs, review, 445
Thomson, Dr. unjust action for malpraxis brought against, 335
Thurnam, Dr. on ancient British skulls and barrows, 72
Throat, Hospital for Diseases of the, cases treated at the, 356
Tidy, Dr. on water analysis, 584

Tiley, Mr. note on a purloiner, 565
Tissues, Dr. Beale's Lectures on the, *vide* Beale
Tobacco, use and abuse of, "Chir." on the, 647
Tongue, congenital tumour of the, specimen of, 288
sloughing of the, following paralysis of the hypoglossal nerve, Dr. Ballard's case of, 297
subacute inflammation of the, Mr. Holthouse on, 474
Torrens, Mr. on the new Metropolitan Poor Bill, 15
Tracheotomy, ulceration after, specimen of, 182
new forceps for extracting membranes after, 673
Training, excessive, observations on, 253
the mind, Dr. E. S. Thompson on the, 176
Transfusion, Prof. Landois on the results of, 227
Transport of sick and wounded, Prof. Longmore on the, 410
Trials Medical Donaldson *v.* Barker, 375, 657
Mackenna *v.* Parkes, 316
Sanger *v.* Sanger, *ex parte* Clark, 317
Bird *v.* The British Equitable, 375
Trinidad, Dr. Bakewell on the mortality at, 414
Trousseau, Prof. M. Pidoux on, 374
Tuberele, *vide* Phthisis
in fowls, specimen of, 130
Tuberculosis, acute miliary, depression of temperature in case of, 572
Tuffnell, Surgeon-Major, and the Dublin Military Prison, 202
Tumour, fibrous, removal of a, from the thigh, Prof. Fayrer's case of, 4
fibro-plastic, at the elbow-joint, case of, 10
myeloid of the jaw, excision for, case of, 434
Tuson, Mr. on the derivations of the names of skin diseases, 618
Tweed, Mr. John James, death of, 264
Twin pregnancies, Dr. Brunton on, 515
Twins, conjoined, specimens of, 587, 670
Tylor, Mr. on savage thought in modern civilisation, 577
Typhus, pathology of, Dr. Beveridge on the, 435
excretion of urea in, Prof. Rosenstein on the, 88, 220
creosote in, M. Pécholier on, 362
Tyrrell, Mr. strychnia in epilepsy, 588

U

Ulcer, perforating, of the foot, Mr. Hancock on the, 183
University College Hospital, cases treated at the, 300
Medical School, distribution of prizes at the, 508
Urea, excretion of, in exanthematous typhus, Prof. Rosenstein on the, 88, 220
Ureter, fatal obstruction of the, case of, 315
Urethra, forceps for extracting foreign bodies from the, 672
Uterine hæmorrhage, *vide* Hæmorrhage
Uterus, procidentia of the, amputation of the cervix in, Dr. Meadows's case of, 588
polypus of the, with rupture of ovarian cysts, 446
after Cæsarian section, specimen of, 588
peritoneal adhesions of the, as a cause of post-partum hæmorrhage, Dr. Hewitt on, 588
inversion of the, Dr. Barnes on operations for, 561
ulceration of the cervix of the, discussion on applications for the, 529
fibro-cystic tumour of the, M. Kœberlé on the removal of a, 225
fibroid tumours of the, specimens of, 232
fibroid outgrowth from the fundus of the, specimens of, 529, 587

V

Vaccination in relation to infant mortality, Dr. Farr on, 630
Russian prize question on, 223
Act, shortcomings of the, 428
prosecutions under the, 54, 150, 173, 593
Vaccination Act, Mr. Jones on refusal to comply with the, 428
from the heifer, Dr. Blanc's establishment for, 549, 557, 585, 647
Dr. Ballard on, 621
for transatlantic voyages, 646
at Milan, 281
M. Guérin's objections to, 690
Vaccine lymph, preservation of, Mr. Hinds on, 648
Vacher, M. on the Medical constitution of Europe, 147
on the mortality of Paris, 281
Velpeau, punctuality of, 25
Venn, Mr. Henry, death of, 103
Ventilation, Mr. Edwards on, review, 417
a test of good, 639
Vesico-vaginal speculum-holder, Dr. Routh on a new, 670
Vienna, Letters from, 419, 526
Hospitals, account of the, 527
Vincent, Dr. Cruthers, death of, 24
Vines, Mr. Frederic Castell, death of, 131
Viper, experiments with venom of the, 203
vide Snake
Vision, influence of disease of the teeth on the, M. Delestre on the, 228
Voice, falsetto notes of the, Dr. Marcet on the, 537

W

Wakefulness, therapeutics of, Dr. Hammond on the, 175
Walsh, Mr. James, death of, 103
Walsall Cottage Hospital, cases treated at the, 383
War, international aid to sick and wounded in, congress on, 303, 603
Wardrop, Dr. James, memoir of, 207, 229
Warren, Mrs. A House and its Furnishing, notice, 565
Warrington Blue School, Mr. Gornall on the, 349
Waters, potable, Dr. Letheby on the nitrogenous matter in, 429, 439, 451
discussion on, 493, 504, 530
Mr. Clowes and Dr. Tidy on, 528, 584
Mr. Nourse on the propagation of fever and scarlatina by, 628
of Holland, analysis of the, 550
in relation to the cholera, M. Ballot on, 459, 626
impure, induction of fever in India by, 629
pollution of the, in India, 646
the metropolitan, composition and quality of the, 25, 133, 237, 263, 400, 543, 617
Wathen, Mr. case of rupture of the bladder, 195
Watson, Sir Thomas, address of, to the Clinical Society, 103
Mr. J. P., death of, 372
Watters, Mr. Thomas, death of, 370
Weather of London in 1868, 170
Weaver, Mr. John Davies, death of, 591
Weber, Dr. on hæmoptysis followed by inflammation, 612
on elevated regions in phthisis, 640
Webster, Mr. Frederick T. death of, 131
Dr. query on the formation of the nitrates, 538
Weeding, Dr. Samuel, death of, 591
Wels, accounts of the, 292
Wells, Mr. Soelberg, Treatise on Diseases of the Eye, notice, 23
Long, Short, and Weak Sight, notice, 261
Mr. Spencer, on the inventor of the ovariotomy clamp, 289
on a third hundred cases of ovariotomy, 468, 586
Western Medical and Surgical Society, meeting of the, 642
Westminster Hospital, reports on cases treated at the, 10, 90, 223, 355
Westrop, Mr. on the mythic age, 593
Whitehead, Dr. on a case of infantile tetanus, 344
Wilks, Dr. lectures on diseases of the nervous system, 1, 58, 83, 135, 267, 323, 377
observations on the lectures of, 465
Will, doctrine of the, Drs. Beale and Laycock on the, 622, 681
Williams, Mr. Essex Thomas, poisoning of, by strychnia, 605, 613, 676, 696
Wills, Mr. Charles Thomas, death of, 131
Wilson, Mr. James, on "Sweetbreads," 161
Winckel, Professor, *Klinische Beobachtungen zur Pathologie der Geburt*, notice, 590
Winn, Dr. Hereditary Disease, notice, 397
Women, the London University examinations for, observations on the, 40
study of science by, Miss Becker on the, 320
Subjection of, Mr. Mill on the, review, 683
Wood, Mr. John, on extroversion of the bladder and epispadias, 287
Mr J. G. Bible Animals, review, 310
Mr. Herbert, death of, 318
Workshops Regulation Act, question of working the, 37
Drs. Aldis and Whitmore on the working of the 659
Wormley, Dr. Micro-Chemistry of Poisons, review, 309
Wounded in War, international aid for, congress for the 303, 603
Wounds, treatment of, by the antiseptic method, 142, 300
dry-earth system in, 390
Wray, Dr. Septimus, death of, 564
Wride, Mr. George, death of, 318
Wright, Mr. Alfred, case of extra-uterine fœtation, 34
Dr. Henry G. death of, 103
Mr. P. case of large fœtus, 618
Wünderlich, *Das Verhalten der Eigenwärme in Krankheiten*, review, 19
Wurtz, Prof. History of Chemical Theory, review, 372, 679
report on clinical instruction in the German Universities, 578, 664

Y

Yellow fever at the Cape de Verd Islands, 119

Z

Zenker, Prof. on the oxyuris vermicularis, 75
Zymotic diseases, Dr. Kennedy on, 366

LIST OF ILLUSTRATIONS.

1. Fibro-plastic Tumour of the Elbow-joint, 10
2. Vulcanising Apparatus of Dentists, 29
3. Helmholtz's Myograph, 43
4. Marey's Single Myograph, 44
5. Diagrams illustrative of Muscular Action, 44
6. Diagrams illustrating the Process of Ossification, 58
7. Illustrations of the Effects of the Exposure of Animal Substances to a High Temperature, 84
8. Formation of Bone, 112
9. Diagram illustrating Pneumothorax, 113
10. Muscular Fibres of the Bladder of the Green Tree-Frog, 164
11. Diagram illustrating the Compression of the Lung by Air, 166
12. Minute Structure of Muscular Fibres, 216
13. Band of Fibrine looping up the Tricuspid Valve, 243
14. Dr. Galezowski's *Strabomètre*, 401
15. Caudate Nerve Cells, 403
16. Ganglion Cells, 404
17. Dr. Wills Richardson's Tubular Presse-Artère, 435
18. Impacted Fracture of the Neck of the Thigh-bone, 458
19. Results of Excision of a Myeloid Tumour of the Upper Jaw, 464
20. Broca's Diagram of the Convex Surface of the Brain, 488
21. Extra-capsular Fracture of the Femur, 517, 518
22. Diagrams of the Water-supply in Holland in relation to the Cholera, 627, 628
23. Mr. Bird's New Inhaling Pipe, 672
24. New Forceps, 672

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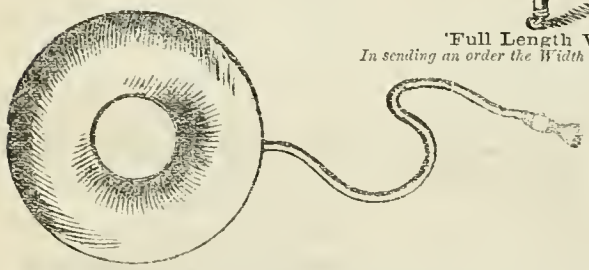

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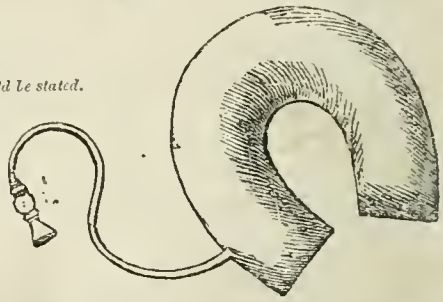

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